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# What competencies should early childhood educators possess for the future? An expert judgement approach

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**Introduction:** The objective of this research was to identify and discuss the professional competencies essential for early childhood educators to effectively navigate current challenges and anticipate future ones. The study aims to contribute to the development of a competency framework tailored specifically for early childhood education.

**Methods:** A proposed set of general teaching competencies was subjected to validation by a panel of experts, including early childhood teachers and academic professionals specializing in this field. The process involved adapting and refining these competencies to suit the early childhood education stage.

**Results:** Expert consultation confirmed the relevance and appropriateness of the proposed competency dimensions for early childhood educators. The experts emphasized several critical aspects, including the importance of building relationships, providing emotional support, employing nonverbal communication, and fostering family involvement. They also highlighted the significance of observation and educational documentation in the early years.

**Discussion:** The findings underscore the need for reflection on the specific professional competencies required for early childhood educators, which is crucial for enhancing both initial and ongoing teacher training programs. This research contributes to the ongoing dialogue about the competencies necessary for educators, emphasizing the development of teaching practices that address the unique demands of early childhood education.

## KEYWORDS

early childhood education, skills development, teacher education, teacher competencies, validation

## 1 Introduction

Today's teachers are facing a context of constant change, with an increasingly accelerated pace (Hartmut, 2010), and a crisis of values and identity where individuals, personal gain, and material achievement are being prioritized more and more (Baudrillard, 1998; Lyotard, 1998; Deleuze and Guattari, 2004; Hooks, 2020). This constantly changing and evolving condition is forcing a rethinking of the educational function of schools and the role of teachers (Bauman, 2017). Moreover, in the field of education, the demands placed on teachers are increasingly complex, requiring them to be able to deal with a wide range of problems (Michel, 2019). In

this situation, it is essential to discuss what competencies are desired in future teachers. Many international bodies recognize the benefits of having a competency framework for teaching (European Commission, 2012; UNESCO, 2016; OECD, 2021). More specifically, the European Commission (2012) recommends that all nations define the competencies expected of these professionals. OECD (2021) further emphasizes this recommendation by urging education policies to promote better coordination between teachers through the establishment of common criteria. Not only does this enhance educational quality but it also leads to greater recognition and facilitates accreditation. UNESCO (2016) also considers it crucial that different teachers share quality standards, which will enable dialogue, teacher training and reflection processes.

In education, the concept of competencies is understood not only as the mobilization of a set of attitudes, values, skills, and knowledge in a specific situation and context, but also as having an important ethical and social commitment, from a holistic and reflective perspective (Rosales, 2010; UNESCO and Operti, 2022). Despite this, there is limited consensus in the literature on what teachers should do, that is, what is meant by “good practice.” Moving beyond the notion of a single ideal teaching role, various studies consult students, teachers, and Academic Committees, revealing that there is no homogeneous view (Zabalza, 2012; Villarroel and Bruna, 2019).

## 1.1 Headings theoretical foundations

In recent decades, there has been growing interest in research related to teaching competencies (Tobón, 2005; Perrenoud, 2014; Sánchez-Tarazaga, 2016; European Commission, 2019). Despite the increased focus, the literature underscores the need for a contextualized examination of this subject, taking into account both the contemporary era and specific socio-cultural contexts. While there is a keen interest in competencies, there remains a gap in thoroughly investigating competency frameworks as a whole, instead of limiting research to individual competencies. This requirement for a more profound understanding is particularly evident in Early Childhood Education (ECE), where a comprehensive grasp of competency frameworks is essential to navigate the unique challenges and opportunities posed by children in this critical developmental stage.

Our study is anchored in the theoretical framework proposed by Melief et al. (2010) and Farró (2022), which delineates five pivotal roles of teachers in the educational community and 37 teaching competences that help to concretize and contextualize these roles. These roles and competencies form the cornerstone of our investigation, providing a structured approach to understanding the complexities of teacher competencies in modern education. This competency framework emerges from the long-standing research and experience of the authors in teacher training and an analysis of the necessary teaching competencies to be taught in the initial formation of Spanish teachers, which, although not specifically developed for ECE teachers, are fully applicable.

Below is an integrated discussion of these roles, incorporating previous literature into Melief et al.'s roles:

- 1 Participating in the educational community: This role emphasizes the importance of collaboration among teachers for fostering educational innovation, idea exchange, and

professional development. It also highlights collaboration as a key motivator for professionals. This is supported by studies such as those by Durksen et al. (2017), Krichesky and Murillo (2018), Fukkink et al. (2019), and Trujillo González et al. (2020), who underscore the value of teacher collaboration in enhancing educational practices and teacher motivation.

- 2 Managing emotions and feelings in the exercise of the profession: The neuroscientific perspective underscores the critical role of emotions in learning, advocating for the necessity of emotional management skills among teachers. These skills are essential not just for promoting student learning but also for ensuring effective educational interventions, as indicated by research from Peña (2019), Dolcos et al. (2020), and Hatton-Bowers et al. (2022).
- 3 Reflecting on and improving the educational process: This competency necessitates that teachers possess the ability to self-reflect, enabling them to recognize and improve their practice continuously. Such reflection is fundamental for sustained professional development throughout a teacher's career. Santos-González and Sarceda-Gorgoso (2017), Weiss et al. (2021), and Lluch and Cano (2022) all highlight the importance of self-reflection in enhancing educational processes and teacher competency.
- 4 Organizing learning situations: Central to this competency is the ability of teachers to design and implement learning environments tailored to student needs. This role is critical for fostering effective, inclusive education, as supported by Santos-González and Sarceda-Gorgoso (2017) and Zhang et al. (2022), emphasizing the importance of adaptability and innovation in teaching.
- 5 Assessing student learning and performance: Closely related to the organization of learning situations, this role involves the observation and evaluation of student progress and performance. Effective assessment strategies enable teachers to tailor their instructional methods to better support student learning and development, a notion echoed in the research by Santos-González and Sarceda-Gorgoso (2017), Van de Grift et al. (2019), and Zhang et al. (2022).

These roles, encompassing collaboration, emotional management, reflective practice, and the didactic and pedagogical dimensions of organizing and assessing learning, form the bedrock of our theoretical foundation. Our study aims to offer a holistic view of the competencies essential for contemporary Early Childhood Education Teachers (ECETs). This approach not only incorporates the pedagogical and didactic competencies highlighted in the literature but also broadens the scope to include emotional management and community engagement, providing a comprehensive perspective on teacher education (Trujillo et al., 2020; Costa Rodriguez et al., 2021; Wang et al., 2021).

## 1.2 Early childhood teacher training in the Spanish context

In Spain, Early Childhood Education (ECE) is divided into two cycles: the first cycle, from 0 to 3 years, and the second cycle, from 3 to 6 years. While neither stage is mandatory, the second cycle ensures that all children have the right to a place in educational institutions, resulting in an almost universal enrollment rate.

There are two main pathways for individuals seeking to become early childhood educators in Spain. The first pathway involves vocational training, which prepares individuals to work with children in the first cycle (0–3 years). This training does not lead to a teaching degree but equips individuals with the necessary skills to support the early development of children.

The second pathway is through a four-year university degree program known as the Degree in Early Childhood Education. This degree qualifies graduates to teach children from birth to 6 years of age, covering both cycles. Specifically, to teach in the second cycle (3–6 years), one must hold this university degree, highlighting the need for specific and comprehensive training to meet the educational needs of this stage. This ensures that professionals are adequately prepared to contribute to the comprehensive development of students.

In the first cycle, both teachers with university degrees and early childhood educators who have completed vocational training coexist. However, teaching in the second cycle is exclusively carried out by those who have obtained their university degree in Early Childhood Education (ECETs).

### 1.3 Purpose and research questions

It is essential for any competency framework to undergo a comprehensive curricular review to ensure its relevance to the intended educational stage and its alignment with the current social and educational contexts (Cheng, 2022; Hayashi, 2022). In this vein, our research was meticulously designed to involve a panel of experts for the evaluation of the proposed framework, which is based on Melief et al. (2010) and Farró (2022) work. This panel's role was to assess the framework's appropriateness, and to provide insightful recommendations and enhancements. Our study aims to scrutinize and affirm a set of proposed professional roles and competencies for ECE through expert analysis and validation. This seeks to answer the following research questions:

- What are the teaching roles and competencies necessary for ECETs to effectively address the challenges posed by the current social and educational context?
- Are the proposed roles and competencies suitable and tailored for the specific stage of early childhood education for 0 to 6 years, considering its unique characteristics?

It is hoped that the results of this work will contribute to cementing and guiding the curricular design of initial training, as well as facilitating the accompaniment of students in both subjects and practice. In addition, it is intended to promote lifelong learning by establishing a clear direction for the continuous improvement of ECETs. Ultimately, it is hoped that this study will allow for a deeper reflection on the roles that are exercised in ECE and contribute to teachers playing their role more effectively and efficiently.

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## 2 Materials and methods

To establish a comprehensive framework for the professionalization of ECETs, this study, based on a mixed-methods

approach incorporating both qualitative and quantitative techniques, initially selected the professional roles and competencies identified by Melief et al. (2010) and Farró (2022), respectively, due to their extensive coverage across various domains. This broad selection was subsequently presented to experts for validation and adjustment, ensuring relevance and applicability to the specific context and stage of ECE. Expert judgement was used, defined as “an informed opinion of people with experience in the subject, who are recognized by others as qualified experts in the field, and who can provide information, evidence, judgements and evaluations” (Escobar-Pérez and Ycuervo-Martínez, 2008, p. 29). A total of 54 experts in ECE, involved in initial university training or affiliated with professional practice in centers, were consulted to assess the dimensions and competencies comprising the instrument.

The project from which this publication derives was submitted to the Research Ethics Committee of the University of the Balearic Islands. In accordance with current regulations (EU-2016/679) on data protection policy in Spain, all study participants were duly informed about the study's objectives, the type of participation requested, and the data processing that would be conducted. This ensures the right to withdraw from the study and revoke informed consent at any time. Informed consent was obtained from all participants and is safeguarded by the project's research team.

### 2.1 Participants

The 54 experts who reviewed the instrument were selected for their proven professional careers linked to the field of ECE, with notable ongoing training (attachment theory, constructive accompaniment, realistic learning, neuroeducation, systemic pedagogy, among others).

The sample of university professors and teachers in the field of education was defined by Delphi convenience (Hsu and Sandford, 2007), critical judgement, and accessibility, and not by statistical criteria. Two groups of informants were used: the first was made up of university lecturers at the national, Spanish, and international level, all of whom were from public universities. Two inclusion criteria were established: university lecturers—active, emeritus or retired—whose research was in the field of early childhood and who had more than 10 years of experience in university teaching. The second group comprised ECETs from various centers across the Balearic Islands who volunteered to participate in the study. Inclusion criteria were: active ECETs at a center collaborating with the University of the Balearic Islands, meaning that they met the educational quality criteria set by the Balearic Islands Ministry of Education, and that they had more than 5 years of experience in the ECE stage.

Regarding the characteristics of the sample, it should be noted that the average age of the experts was 38 years (TD = 2.8 years), 90% were female and 8% male (2% stated that gender was not relevant).

The experience levels of the participants, including both ECETs and academics, was distributed by frequency in the following way:

- 11 people: between 5 and 10 years.
- 24 people: between 10 and 20 years.
- 11 people: between 20 and 30 years.
- 8 people: between 30 and 40 years.

Table 1 describes the experts' place of work and their professional category.

TABLE 1 Experts' place of work and professional category.

Professional setting	Professional category	n	%
University	Reader	2	3.70
	Lecturer	3	5.55
	Associate lecturer	6	11.11
	Emeritus professor	1	1.85
	Retired professor	1	1.85
Educational center <sup>1</sup>	Group tutor	31	57.40
	Support teacher	10	18.51
TOTAL 54100			

<sup>1</sup>Group Tutor refers to the main teacher responsible for a specific group of students, overseeing their academic progress and personal development. Support Teacher refers to a teacher who assists the main teacher by providing additional help.

## 2.2 Instrument

In order to collect the experts' opinions, researchers designed an online template, which included the 5 teaching roles of Melief et al. (2010) and the list of 37 teaching competencies based on Farró (2022).

The online template comprises two distinct sections for each of the 37 competencies related to the teaching role in ECE. The first section presents a closed question, asking study participants to assess the relevance of each competency on a three-point scale, which allows them to indicate their level of agreement or disagreement. The second section is an open-ended question, providing participants with the opportunity to offer any comments or insights they have regarding each competency.

## 2.3 Analysis of relevance and appropriateness

Three different yet complementary indicators were used to analyze the degree of agreement between experts on a series of specific dimensions and competences. Three different yet complementary indicators were used to analyze the degree of agreement among experts on a series of specific dimensions and competences. The first of these refers to the frequency tables of the questions, which allow for the observation of the distribution of responses (Table 2). Secondly, the indices of overall agreement and the strength of agreement (Free-marginal Kappa) were analyzed internally for each of the dimensions. Some authors, such as Jakobsson and Westergren (2005), point out that this measure is insufficient because it does not include the agreement expected by chance. Therefore, thirdly, the free-marginal multirater Kappa was calculated, revealing the indicators of agreement and concordance for each of the competencies individually. The free-marginal multirater Kappa is a measure of concordance adjusted for chance, useful when there are multiple evaluators and multiple nominal categories. Our interpretations were based on the Kappa index, following the contributions of Altman (1991), who offers a broad interpretation of the index: Poor for values below 0.20; Moderate for values between 0.41 and 0.60; Good for values between 0.61 and 0.80; Very good for values between 0.81 and 1. Following this classification, behaviors with an acceptable consensus were considered those that presented a Fleiss' Kappa index higher than 0.60, aligning with the categories "Good" and "Very Good."

## 2.4 Content analysis

After completing the quantitative evaluation of the closed-ended questions, which provided us with a general understanding of the agreement among experts regarding specific dimensions and competences, we turned our attention to a deeper exploration. The content analysis of the open-ended responses allowed us to capture the richness and complexity of the participants' perspectives. This methodological shift aided us in understanding not only the level of agreement among experts but also the underlying reasons and nuances behind their views, thereby facilitating a comprehensive understanding of the professional profile required in ECE.

Based on the responses collected from the open-ended questions, a content analysis was conducted (Kibiswa, 2019; Lindgren et al., 2020). Initially, all responses were transcribed and organized by items. Subsequently, an exploratory analysis was conducted to identify themes and categories. This was followed by a more comprehensive analysis to scrutinize patterns, trends, and all suggestions submitted by participants. Finally, based on these insights, adjustments were made to refine the list of competencies, ensuring they were precisely tailored to meet the requirements of the ECE stage. The results are presented with the competencies and suggestions from the experts incorporated. Content analysis proved to be an ideal methodology to extract qualitative information from open-ended responses and to make informed decisions based on expert feedback (Krippendorff, 2019).

## 3 Results

The results of this study are presented in accordance with the research questions.

In reference to the first question on the teaching functions and competencies necessary for ECETs to effectively address the challenges posed by the current social and educational context, the results show a high percentage of agreement in determining the teaching competencies established by Farró (2022) as valid in the development of the teaching role in the ECE stage. The percentage agreement among the sample on acceptance without changes was 82.08%, with a free-marginal Kappa coefficient of 0.73, which, according to Altman (1991), represents very good concordance strength. The results do not differentiate between groups (ECETs and academics), as no significant differences were found among them.

Farró (2022) competencies are structured in five roles (Melief et al., 2010), and we also established the general agreement indices and strength of agreement internally in each of the roles (Table 3).

Table 2 shows the indicators of agreement and concordance for each of the competencies individually based on the response frequencies:

Each of the competencies shows a high degree of consensus, with the exception of three of them which have an overall agreement percentage of less than 70%. These are competence 19, which refers to the contrast between the competence model and the transmissive model; 27, on didactic design oriented towards a final product; and 35 on assessment—all showing a lower degree of agreement and with clear proposals for modification.

Referring to the Free-marginal Kappa coefficient and taking Altman (1991) interpretation values, there is no competence that can be considered to have weak concordance strength but, rather, all of them have good (0.60–0.80) or very good (0.80–1) scores, with the exception

TABLE 2 Indicators of agreement and concordance for each competence.

Role	Competence	Acceptance frequency	Acceptance with changes	Rejection frequency	Percentage overall agreement	Free marginal Kappa
1	1	46	6	2	72.80%	0.58
1	2	50	4	0	85.25%	0.78
1	3	52	2	0	92.31%	0.88
1	4	50	4	0	85.25%	0.78
1	5	53	2	0	92.31%	0.88
1	6	50	4	0	85.25%	0.78
1	7	48	6	0	78.82%	0.68
2	8	50	4	0	85.25%	0.78
2	9	51	3	0	88.71%	0.83
2	10	53	1	0	96.08%	0.94
2	11	50	4	0	85.25%	0.78
2	12	51	3	0	88.71%	0.83
2	13	51	2	1	88.55%	0.83
2	14	48	6	0	78.82%	0.68
2	15	47	7	0	75.84%	0.64
2	16	50	3	1	85.02%	0.78
2	17	48	6	0	78.82%	0.68
3	18	49	5	0	81.96%	0.73
3	19	38	7	9	51.14%	0.27
3	20	51	3	0	88.71%	0.83
3	21	51	2	1	88.55%	0.83
3	22	47	3	4	74.90%	0.62
3	23	51	3	0	88.71%	0.83
3	24	49	4	1	81.65%	0.72
3	25	50	4	0	85.25%	0.78
4	26	48	4	2	78.20%	0.67
4	27	33	17	4	45.25%	0.18
4	28	50	4	0	85.25%	0.78
4	29	51	1	2	88.55%	0.83
4	30	51	2	1	88.55%	0.83
4	31	51	3	0	88.71%	0.83
4	32	50	1	3	85.02%	0.78
5	33	49	5	0	81.96%	0.73
5	34	49	5	0	81.96%	0.73
5	35	45	8	1	69.73%	0.55
5	36	50	3	1	85.02%	0.78
5	37	47	6	1	75.37%	0.63
	N	54				

of the first one—referring to asking questions about the organizational model of the institution—which presents a value of 0.58, just at the upper limit of what is considered moderate concordance (0.41–0.60).

Once the starting point was established and the general agreement of the educational community participating in the study had been

obtained, the content analysis of the contributions made by the experts was carried out. These were collected in the qualitative part of the data collection tool and linked to the option of <Accept with changes> or <Reject>. Table 4 shows the suggestions made by the experts categorized according to roles.

TABLE 3 Free-marginal Kappa results for each role.

Role	Percentage overall agreement	Free-marginal Kappa	Competencies included
1. Actively participating in the educational community	84.47%	0.77	1–7
2. Managing emotions and feelings in the exercise of the profession	85.80%	0.79	8–16
3. Developing professionally—research role	79.30%	0.69	17–24
4. Organizing learning situations	80.60%	0.71	25–32
5. Assessing student learning and performance	78.81%	0.68	33–37

TABLE 4 Themes addressed qualitatively in the expert judgement with Extracted Quotes.

Role	Themes addressed in the qualitative assessment
Actively participating in the educational institution	<ul style="list-style-type: none"> <li>- Emphasizing the importance of school documents to generate methodological changes (e.g., “not only <i>know the educational project</i>, also changes it if it is needed”)</li> <li>- Explain that the educational community includes teaching and non-teaching staff, students, and families (e.g., “To also include families as part of the educational community.”)</li> <li>- Add items such as: involvement, cooperation, initiative, and coherence with the educational project</li> <li>- Improve competencies to establish better relations between educational centers and families</li> </ul>
Managing emotions and feelings in the exercise of their profession	<ul style="list-style-type: none"> <li>- Importance of verbal and nonverbal, respectful, and assertive communication</li> <li>- Teachers must have great emotional management skills in order to be able to accompany children’s emotions</li> <li>- Need for flexibility and adaptation to the requirements of the moment in all areas of early childhood education (e.g., “Having a flexible attitude and being receptive to children.”)</li> <li>- Need to improve initial training in emotional competencies</li> </ul>
Professional development—research role	<ul style="list-style-type: none"> <li>- Importance of continuing professional development and constantly keeping oneself up to date</li> <li>- Educational innovation based on scientific evidence</li> <li>- Importance of constant self-assessment (e.g., “Use self-assessment methods”)</li> </ul>
Organizing learning situations	<ul style="list-style-type: none"> <li>- Importance of the learning process rather than expected products (e.g., “Remove the focus of activities on a final product”)</li> <li>- Emphasis on students’ interests and their motivation</li> </ul>
Assessing student learning and performance	<ul style="list-style-type: none"> <li>- Assessment at this stage is complicated and cannot be reduced to a learning sequence; the processes are diverse and variable, and the teacher must be able to design a formative assessment that is relevant to this cycle</li> <li>- It is essential to carry out assessment based on observation and recording and documentation tools (e.g., “Evaluate primarily based on observation”)</li> <li>- Through the accompaniment of the adult, it is possible to plan instances of self-assessment by children</li> </ul>

All suggestions provided by the experts (Table 4) were thoroughly evaluated and considered by the research team. It is noteworthy to mention that a considerable number of comments exhibited concurrence, reinforcing the significance and necessity of each modification implemented.

In response to the second research question: “Are the proposed functions and competencies appropriate and adapted to the specific stage of early childhood education from 0 to 6 years, taking into account its unique characteristics?,” nuances were added that address the specific needs of the ECE stage. Terms were also adjusted to ensure that the competencies are coherent with the contemporary context, according to the experts’ indications. The results are presented in Table 5.

## 4 Discussion

The study, in accordance with the literature review carried out, shows the need to establish a competency profile for ECETs. Further, having a definition of the competencies necessary for the performance

of the teaching function can be a tool for reflecting on one’s own practice that is closely linked to the role of the reflective teacher, which is so necessary in the current socio-educational context (Izumi-Taylor et al., 2010; Miranda de Sousa and de Souza Ribeiro, 2021; Weiss et al., 2021). Consensus on this definition of ECE teaching competencies can promote processes of self-assessment, a review of one’s own practice and, therefore, better professional development.

Thus, based on the results obtained, we can affirm, in accordance with the validation by experts, that we have a definition of competencies, based on Melief et al. (2010) and Farró (2022), specified in the context of ECE based on the contributions received (Table 5). Both roles and competencies met with broad consensus, and nuances were incorporated that provide more specificity to the early childhood stage.

Delving further into this definition of the competency profile, it should be noted that, according to the validation by experts, not all competencies were represented with the same value. Active participation in the educational community and Management of emotions and feelings were considered to be the most important. Therefore, the need to increase their presence and development in

TABLE 5 Proposal of concretization based on the roles of Melief et al. (2010) and the teaching competencies of Farró (2022), according to the experts' suggestions.

Role	Competencies
Actively participating in the educational institution	<ol style="list-style-type: none"> <li>1. Analyze the organizational model (regulations, management bodies, sphere of influence, functions, organization, and resources) and act accordingly</li> <li>2. Become involved in the school's educational project and seek correspondence with the school's specific practices</li> <li>3. Comply with one's obligations to the center (punctuality, timetable, justification for absences, etc.)</li> <li>4. Carry out daily tasks in a positive manner and with initiative</li> <li>5. Share ideas and proposals for educational practices with the teaching team, working in a cooperative manner</li> <li>6. Be communicative with the rest of the teaching staff, the school staff, families, and other members of the educational community</li> <li>7. Use friendly and cordial language with the rest of the teaching staff, the school staff, families, and other people in the educational community</li> </ol>
Managing emotions and feelings in the exercise of their profession	<ol style="list-style-type: none"> <li>8. Show interest in getting to know students and enhance their self-image in relation to learning</li> <li>9. Attend to and resolve student demands</li> <li>10. Use assertive language (indicating, guiding, correcting) and avoid the use of expressions of judgement (always, never, nothing...) that generate communicative conflict</li> <li>11. Incorporate nonverbal communication to reinforce the oral message (looking at pupils, approaching them, gesturing to emphasize ideas, etc.)</li> <li>12. Adapt tone and language to communicative needs (classroom, work meetings)</li> <li>13. Be close to learners and manage the activity and session in an assertive way</li> <li>14. Use friendly and cordial language to foster a good atmosphere (classroom, center, work meetings, with families)</li> <li>15. Know how to manage one's own emotions and calm down in moments of tension in the classroom, reorienting the situation in an assertive way (conflicts, carrying out activities, etc.)</li> <li>16. Distance oneself from critical situations by not acting impulsively</li> </ol>
Professional development—research role	<ol style="list-style-type: none"> <li>17. Observe teaching practices and conduct a grounded analysis, whether of one's own or those of colleagues.</li> <li>18. Propose improvements in one's teaching performance and build practical knowledge from observation, reflection, and analysis.</li> <li>19. Compare one's own teaching performance with the competency-based didactic model and current scientific evidence.</li> <li>20. Question one's own representations of what learning and teaching are.</li> <li>21. Verbalize and offer well-founded arguments for the methodological choices and classroom dynamics adopted.</li> <li>22. Justify the planning of classroom tasks in relation to: (a) the learning objectives aimed at developing competencies; (b) the contextualization of scientific concepts in competency-based learning tasks; (c) the organization of activities in didactic sequences (from the familiar to the new; from concrete to processes of abstraction and transfer).</li> <li>23. Show a willingness for continuous training and collaboration with other teachers.</li> <li>24. Show appreciation for the processes of constant learning for professional development.</li> </ol>
Organizing learning situations	<ol style="list-style-type: none"> <li>25. Understand the didactics and educational resources specific to the stage and use them in the classroom.</li> <li>26. Select curricular content in relation to the planned learning objectives and the students' interests.</li> <li>27. Design the different didactic activities of the domain in the form of a sequence of activities.</li> <li>28. Organize learning sequences using the experiences and knowledge of the students to generate motivation, involve them in their learning process, and make it meaningful: from the familiar to the new, from concrete to processes of abstraction and transfer.</li> <li>29. Promote critical thinking among students during the learning sequence: reflection, grounded argumentation, decision-making, and presentation of conclusions.</li> <li>30. Incorporate conversation and interaction to meaningfully involve students in constructing their learning (for example, by asking clean questions, inquiry, and induction, etc.)</li> <li>31. Use different types of interactions (with oneself, in small groups, large groups) to energize and manage the classroom and learning.</li> <li>32. Use different types of groupings in relation to learning tasks.</li> </ol>
Assessing student learning and performance	<ol style="list-style-type: none"> <li>33. Place evaluation within the learning process and propose co-evaluation and self-evaluation activities to guide learning.</li> <li>34. Share learning objectives and evaluation criteria with students in understandable and appropriate language.</li> <li>35. Plan spaces and times for observation, recording, and documentation of learning sequences.</li> <li>36. Use tools and strategies for evaluation to self-regulate learning and promote learner autonomy.</li> <li>37. Incorporate spaces for constructive feedback.</li> </ol>

the initial training programs of future ECETs is indicated (Krichesky and Murillo, 2018; Peña, 2019; Dolcos et al., 2020; Puroila et al., 2021).

Specifically, the experts consulted highlight the need for ECETs to be actively involved and coordinated within the educational

community, participate in the development of school documents, and be key factors in initiating or consolidating educational innovations (Krichesky and Murillo, 2018). It is essential to strengthen this aspect given that ECETs have had and still have little representation and active participation in school leadership and

management positions (Osorno, 2018). Along the same lines, the results point to the need to take families into account and promote their participation in the educational center, for which, once again, it will be essential for future teachers to develop communication and relationship skills with families in their initial training (Kurincová et al., 2021).

Emotional management, as the emerging literature on the subject shows, is essential to accompany the construction of identity in early childhood, within a framework of safety and based on processes of bonding with ECETs (Bisquerra and Mateo, 2019; Trapero, 2019), while the importance of initial training in the development of emotional competencies is also highlighted:

(...) initial training should provide a solid background in emotions and especially in emotional competences. This for several reasons: as an essential aspect of the teacher's professional development and by extension to enhance the development of students. (Bisquerra Alzina, 2005, p. 100)

The teaching role centered on the organization of learning situations, despite being the most traditionally consolidated, comes in third place in terms of level of acceptance by the experts. In this role, didactic competence and a range of resources to respond to students at this stage are important; in addition, the need to reduce the requirement for students to close learning sequences with the production of final products which, on many occasions, are tailored more to teaching needs than to students' interests—an idea already claimed by the area of arts education (Aguirre, 2015; Álvarez-Uría et al., 2015)—is also pointed out. In this sense, the importance of the process and not only the result is highlighted, so that students have a shared learning objective, achieving true meaningful learning, whether or not this is in the form of a final product.

The role linked to research into one's own practice is one of the most common teaching roles in the current literature (Miranda de Sousa and de Souza Ribeiro, 2021; Núñez-Rojas et al., 2021; Weiss et al., 2021), but the appraisal received by the participating experts places this role in fourth place, thus indicating the need for the educational community to be made fully aware of its relevance and to integrate it effectively into educational practice. Despite this, it should be noted that most of the key competencies of this role show a very high degree of acceptance ( $n > 80\%$ ); and that the qualitative contributions show a high degree of sensitivity in pointing out the importance of innovations being based on scientific evidence, the need for constant self-assessment on behalf of teachers, and continuous training. Studies point to initial training and the curricular internship period as privileged moments for developing this teaching role (Cheng, 2020; Weiss et al., 2021; Martín Gómez et al., 2022).

Finally, the role of assessing student learning lies in last place, showing a clear debate about the importance or not of promoting student self-assessment in ECE. It should be noted that the literature points to the self-regulatory function of self-assessment, thus contributing to the acquisition of lifelong learning management strategies (Sanmartí, 2010), and that this is possible from an early age (Lara, 2016). In this framework, the experts argue for a complex and comprehensive assessment, understood more as a form of educational practice and not as a value judgement.

## 5 Conclusion

In conclusion, the results of this study indicate that it is necessary to reflect on the competencies needed by an ECETs who is prepared to face contemporary challenges. These insights pave the way for identifying the essential modifications in initial training programs, ensuring these competencies are thoroughly developed. Moreover, this analysis not only broadens our understanding but also indicates that the study's outcomes could play a crucial role in guiding the review and improvement of regulatory requirements, the accreditation process for ECE services, and the mechanisms of teacher registration, thus making a significant contribution to the advancement of the field. Furthermore, our study highlights the unique characteristics of the ECE phase and underscores the availability of specialized research. This research aids in identifying competencies that are precisely tailored to meet the needs of this particular age group, underscoring the importance of a focused approach in ECE.

Building upon this, the process undertaken in our research clearly delineates the pivotal roles of ECETs as follows:

- Actively participate in the educational institution and in the processes of educational innovation, encouraging the participation of families.
- Manage emotions in professional practice, emphasizing emotional accompaniment, the promotion of children's autonomy and self-concept, and communicative elements.
- Reflect on one's own educational practice, generating proposals for improvement, and keeping up to date both individually and collectively.
- Design a teaching-learning process adapted to children's needs.
- Observe and document constantly, as basic tools for teachers.

Despite the benefits of the present paper, in terms of its contribution to the field of professional development of ECETs, in which there are significant gaps, it should be noted that this is an incipient study, that the subject should continue to be delved into in order to establish not only the teaching competencies and indicators that define ECETs, but also the evidence that enables them to assess and self-assess for their progress and improvement. It should also be noted that the experts consulted are limited to a very specific geographical area (Spain, Italy, and Brazil), so the results clearly cannot be universally extrapolated. With a view to the future, it is also intended to continue researching and identifying new parallels between the established teaching competencies and the initial training of future ECETs; all these efforts are aimed at contributing to the training, development, and improvement of the educational community, encompassing both initial training and continuing education, as well as informing administrative decision-making.

## Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author/s.



## Author contributions

CP-M: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Supervision, Writing – original draft, Writing – review & editing. VM-L: Data curation, Formal analysis, Methodology, Writing – original draft, Writing – review & editing. MF-R: Conceptualization, Supervision, Validation, Writing – original draft, Writing – review & editing. MOB: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Supervision, Writing – original draft, Writing – review & editing.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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