Scientific Information and Validation Criteria in Kindergarten Teachers: An Exploratory Study in Chile

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Abstract: Teaching is a demanding and complex exercise, exposed to the direct or immediate resolution of multiple problematic situations, whether pedagogical, relational, or socio-affective. The teacher's personal resources are often insufficient to cope with the profession's demands. The research reports that there is a gap between research and educational practice. Hence, the objective of this research was to analyze the criteria used by early childhood educators to attribute validity to the written sources of information that guide their pedagogical decisions. The present study follows a qualitative research methodology. The sample for this study was non-probabilistic and consisted of 18 early childhood educators who participated through semi-structured interviews and discussion groups. The data obtained were analyzed by inductive categorization using NVivo 14. The findings revealed that the validity criteria assigned by the educators about the sources of information related to theoretical aspects is mainly attributed to the texts and authors they know, while those referring to practical aspects are attributed to their own experiences or the other educators at the same level. The results showed that specific information and obtaining it in the shortest possible time were the criteria that determined the use of information sources.

Keywords: *Early childhood educators, early childhood education, evaluation criteria, sources of information.*

Introduction

Teaching is a demanding and complex exercise, exposed to the direct or immediate resolution of multiple problematic situations, whether pedagogical, relational, or socio-affective (Montero & Gewerc, 2018). The personal resources of the teacher are often not sufficient to cope with the demands of the profession. Thus, the search for and selection of specialized information sources could play a role in the understanding and resolution of these types of problems. Does the teacher use this mechanism when facing new problems? If so, with what criteria does he/she evaluate the information and later use it in the classroom? In this sense, there is a consensus diagnosis regarding the gap between scientific information and educational praxis (Kostoulas et al., 2019).

Indeed, the literature argues that teachers based their pedagogical work mainly on common sense, ideas constructed from their practice, such as experiential knowledge, communication with peers, or through official documents or other bibliographic sources (Sinnema et al., 2011; Tardif, 2004); while information coming directly from scientific sources would play a minor role in their reflective processes (Hiebert et al., 2002; Van Schaik et al., 2018).

This is mainly explained by the fact that teachers are interested in information that can provide specific and practical answers to their problems (M. Taylor, 2013). However, teachers, regardless of the level or specialty, do not seek guidance for their educational work in scientific evidence (Blanco-López et al., 2018; Perines & Campaña, 2019), which is why they see this type of sources as distant from their professional practice. Most of the research in this line has been conducted with elementary and middle school teachers (Broekkamp & van Hout-Wolters, 2007; Murillo Torrecilla et al., 2017; Ratcliffe et al., 2005). Early childhood educators, on the other hand, have received less attention.

Currently, there are a wide range of information sources, that are not entirely reliable from a scientific perspective. Hence, the need for personal resources (such as skills or criteria) to discern appropriate and relevant information from

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inappropriate, false, or erroneous information becomes evident. Also, considering that teaching is nowadays expected to be a profession based on scientific information sources (Cain et al., 2016; Slavin, 2002), mainly because of the reported benefits such as improved teaching and student learning (Diery et al., 2020).

Thus, in the present research, based on the available evidence, that for educators, research findings are not useful, presumably because they are disconnected from their practice (Gore & Gitlin, 2004; Joram et al., 2020), limiting the use of these sources in their educational work and also conditioning the commitment of their peers to research. Therefore, it is critical to understand what factors may shape both teachers' appreciation and perceived irrelevance of research. For this reason, the objective of the research is to characterize how early childhood educators select and validate the written information sources that help them to understand and address the issues that emerge from their educational work.

Teaching is a complex and demanding exercise, which confronts education professionals with a wide variety of challenges, both pedagogical and socio-affective (Montero & Gewerc, 2018). The adequate management of these problematic situations often exceeds the personal resources available to the teacher, highlighting the importance of the search for and selection of specialized information as a support tool. However, there is a significant disconnect between the available scientific information and its practical application in the educational setting, raising questions about the effectiveness with which teachers incorporate new knowledge into their practice (Kostoulas et al., 2019).

Despite the acknowledged tendency of teachers to base their work on direct experience and common sense rather than scientific evidence (Hiebert et al., 2002; Sinnema et al., 2011; Tardif, 2004; Van Schaik et al., 2018), the integration of theoretical and practical knowledge is essential for continuous improvement in education. Given this premise, the present study focuses on early childhood educators, a group that has so far been less explored compared to their peers in primary and secondary education (Broekkamp & van Hout-Wolters, 2007; Murillo Torrecilla et al., 2017; Ratcliffe et al., 2005), to investigate how they select and validate the sources of written information that assist them in addressing emerging issues in their educational work.

The specific aim of this research is to characterize the processes by which early childhood educators' access, evaluate, and apply expert information in their practice, to understand how scientific evidence can be effectively integrated into early childhood education. It seeks to bridge the identified gap between educational theory and practice (Gore & Gitlin, 2004; Joram et al., 2020), contributing to the professional development of teachers and the enrichment of educational quality. This approach not only responds to a critical need for focused research at the preschool level but also presents a valuable opportunity to explore the potential contributions of scientific research to the field of education, highlighting the importance of informed, evidence-based praxis (Cain et al., 2016; Diery et al., 2020; Slavin, 2002).

Literature Review

Scientific Evidence in the Work of Chilean Early Childhood Educators

In the case of Chile, kindergarten education has been considered part of the educational system since the 1990's as declared by the Ministry of Education (MINEDUC). This level is comprised of children from 0 to 6 years of age, and its main objective is to systematically promote the learning and comprehensive development of infants and toddlers (MINEDUC, 2013, 2014). This educational level is structured in two cycles and three levels, which are nursery, middle level, and transition level (see Table 1). This level is provided by the National Kindergarten Board (JUNJI), Integra Foundation, Municipal Education Corporations, Private Subsidized Institutions, and Private Paid Institutions (MINEDUC, 2014).

Table 1. Levels and Sublevels of Kindergarten Education in Chile

Cycle	Level	Subdivision
First cycle	Nursery room	Nursery minor
		Nursery senior
	Middle Level	Lower middle level
		Upper middle level
Second cycle	Level of transition	First Level of transition (pre-kinder)
		Second Level of transition (kinder)

It is important to note that kindergarten education is not mandatory in Chile, however, the second level of transition is considered a requirement for entry into primary education since 2013, established by Law 20.710. The professionals in charge are kindergarten educators, and they must have a professional degree. In Chile, the law establishes that careers and their training programs can only be taught by accredited institutions (Law 20.129, 2019), along with the participation of nursery education technicians, who must have a professional technical degree.

The first university curriculum for kindergarten education in Chile dates back to 1944. The curriculum included subjects such as psychological, biological, and sociological foundations, as well as a scientific research course. In general, the curriculum presented a scientific approach that represented 17% of the formative time (Universidad de Chile, 1946).

This scientific approach gave a different nuance to their work, since in this formative process, educators experience new experiences and knowledge, which contributed to their professional development and the transformation of their professional identity (Ivanova & Skara-Mincāne, 2016).

Since the second part of the 1980s, kindergarten education began to acquire a greater educational value, based on evidence from research in the area, which reported long-term benefits both in the cognitive dimension and socio-emotional development, where the professional work of educators is fundamental in the comprehensive development of infants (Huaiquián-Billeke et al., 2016). The literature argues that these benefits, both in the development of cognitive and social skills, must be linked to quality standards to achieve good educational development, since those programs that aim at the care and not the learning of infants tend to have a lower impact on children, showing that training programs and educators are fundamental in the educational processes (Pianta et al., 2009).

In this sense, a descriptive study conducted by Arteaga González et al. (2018) focused on the professional work of kindergarten educators, which included the participation of 156 Chilean kindergarten educators, shed light that kindergarten education is a profession with high levels of stress and with working conditions problems, associated with the high number of children to whom they are in charge of, the work overload or the little time for distraction during their working day. Although there are political efforts focused on improving preschool education in Chile, scientific evidence plays a secondary role in pedagogical decision making, and they are not always focused on the work of these professionals.

Evidence-based education in early childhood, as with teachers in general, is elusive (Farley-Ripple et al., 2018). In fact, the National Report on Teachers for Early Childhood Education in Chile (Pardo & Adlerstein, 2015) indicates the urgent need to favor the access and quality of scientific information in preschool education (Pardo & Adlerstein, 2015). For this reason, it is beneficial to think about the possibility of connecting such knowledge with classroom work, thus basing pedagogical practices on the available scientific evidence.

It is important to highlight that the literature argues that the quality of early childhood education programs is related to the implementation of evidence-based practices (Farley et al., 2018), which have been broadly defined as instructional practices that have been shown to improve child outcomes through rigorous research (Buysse et al., 2006; What works Clearinghouse, 2014).

Particularly for early childhood education, evidence-based practice is considered to be a decision-making process in which educators and families decide jointly regarding practices (Buysse et al., 2006; Farley-Ripple et al., 2018). Buysse et al. (2006), define evidence-based practices, specifically in early childhood as "a decision-making process that integrates the best available research evidence with family and professional wisdom and values" (p. 3). Thus, the objective of this research was to analyze the criteria used by early childhood educators to attribute validity to the written sources of information that guide their pedagogical decisions.

Finally, this study addresses the problem that early childhood educators do not base their work on written sources by investigating how these professionals select and validate specialized information for their educational practice. Focusing on the preschool level, the research proposes to address the processes of accessing, evaluating, and applying theoretical knowledge from written sources. In doing so, it seeks to understand the barriers and facilitators that influence the effective integration of scientific research in preschool education.

Methodology

Design and Participants

Consistent with the proposed objective, a qualitative research methodology (Creswell & Poth, 2017; Denzin & Lincoln, 2013) of sequential design in two complementary stages was chosen. The sample for this study was non-probabilistic and consisted of 18 early childhood educators chosen under the criteria that they were educators with at least one year of professional experience. Of the total number of participants, six were part of the semi-structured interviews and twelve participants were part of the two focus groups (6 in each group). This research underwent a review process by the Ethics Committee of the Universidad Católica del Maule, a process that guarantees protection and benefit to all the participants throughout the research, safeguarding their background, which was only known to the researcher.

Data Collection Technique

In the first stage, this study used the focus group as a technique. Two groups were formed with 6 educators. Each discussion group, based on a case that represents a problematic situation of a behavioral and/or academic nature, discussed to contrast the criteria used when selecting sources of information.

The second stage was complemented by the application of semi-structured interviews (Buys et al., 2022; S. J. Taylor & Bogdan, 2008). The purpose of this technique was to analyze the criteria with which the participants attribute validity to the different types of information that guide their decisions in terms of problems in the educational context. Each

interview sought to reconstruct how the participants search for, select, and use the information from the sources evaluated, to complement the data obtained in the focus groups.

It is important to note that due to the effects of the COVID-19 pandemic, the semi-structured interviews had to be conducted online during the first and second semesters of the year 2022. Also, it was necessary to consider safeguarding some factors regarding their application, which included problems with the access of participants, data collection, and data quality (Scott-Andrews et al., 2022).

Procedure

The two focus groups (Baden et al., 2022; Pineda et al., 2022), had the participation of six educators each. The number of participants was considered according to the effects of the COVID-19 pandemic. Therefore, the aim was to favor dialogue in the virtual groups (minimizing distraction), provide documentation with information, and try to ask the participants if they were familiar with the Zoom platform beforehand (Eigege et al., 2022). The first discussion group was created with more heterogeneous participants, i.e., with educators belonging to different kindergartens (private and/or subsidized), Junji, and Integra, and the second with more homogeneous participants about the type of agency of each educator (see Table 2). This arrangement was done to determine possible differences when validating the information associated with the attribute "type of garden", which contributes to the factors of homogeneity and social heterogeneity, seeking a perspective based on possible differences, coincidences, and particularities, favoring the richness of the discourse (Alonso, 1996; Fernández-Prieto et al., 2019).

Table 2. Conformation of the Focus Groups

Heterogeneous Group	Homogeneous Group
2 educators from Junji kindergarten	
2 educators from Integra kindergarten	6 kindergarten educators of the same type of unit
2 educators from private and/or subsidized kindergartens	

In the second part, the semi-structured interviews were developed (Buys et al., 2022; S. J. Taylor & Bogdan, 2008), which sought to favor the research process, mainly because this technique has the advantage of adapting to the participants, favoring the possibility of clarifying emerging terms in the focus groups, together with making it possible to identify ambiguities. Each interview aims to reconstruct how the participants search for, select, and use the information from the sources evaluated, to complement the data obtained in the focus groups. Hence, information obtained from each narration and agreements reached by the groups, in search of clues that will allow us to recognize their validity criteria are highly relevant (see Table 3).

Table 3. Unit Analysis

Unit analysis	Description
Validity criteria	Criteria with which early childhood educators assign validity to relevant information to address their classroom problems, either relevance, credibility, usefulness, accessibility or timeliness.

Data Analysis

Content analysis (Abela, 2002; Graneheim et al., 2017) was used for data processing, which made it possible to examine the transcribed material, by dividing the text into content units and giving way to a descriptive treatment, to convert the studied phenomenon into data that can be analyzed and build with them a body of knowledge about the validity criteria attributed by the early childhood educators to the different sources of information. Concerning the content analysis guidelines and verification strategies, two coders read and analyzed the transcripts to find units of meaning, in terms of codes, that relate to the a priori categories that emerge from the literature.

Findings/Results

To consider the information obtained in the study, a first approximation was made to the data that emerged from the participants' discourses, so consultation was made based on the most significant words obtained in each case, resulting in a word cloud. In each consultation it was necessary to develop a process of purification of the list obtained (empty words), to obtain the 50 most significant words for the research, giving way to the process of generating the category system through inductive coding. In the word cloud (see Figure 1) it is possible to observe the main categories in the center, in red, where the size and tone of each word refers to the frequency and presence in the stories, i.e., the larger the size, the greater the frequency of the word in the stories of the participants.

Figure 1. Example of a Word Cloud of the Corpus of the Information Obtained in the Second Stage

Before the coding of the final corpus of files created with the Nvivo14 program, the word cloud was developed, which provides a first overview that serves as an orientation regarding the validation criteria for the sources of information. After the first coding process of the data obtained and the subsequent development of a list of categories, the axial coding of the data was carried out, starting with the coding of a main node, in which the categories are interwoven according to their respective dimensions and properties (Strauss & Corbin, 2002).

Table 4. Example of Categories and Sub-Categories Obtained in the Second Stage

Mega- Category	Category	Sub-Category
	Reference Authors	Previously known
		Specific Information
	Websites	Information Adaptability
		Non-Academic Search Engines
		Academic Sources
		Specific Information
		Less Time
Information sources		Institutional websites
	Texts	Current news
		Mathematical Barrier
		Trust
		Importance of the task
		Year and appointment Indicators
		Specific Information
		Information that can be understood
		Recognized
		Theoretical Support

Once the tree of codes for the main themes has been developed, its organization and classification are directly related to the sources of information referenced by the participants. Following, and as a result of an in-depth analysis of the content of the interventions generated in the semi-structured interviews and discussion groups by the educators participating in the study, a list of the emerging categories and a brief description of each one of them is detailed, in all the references described in the text, fictitious names were used, thus respecting the confidentiality of each one of the educators.

Table 5. Glossary of Categories Generated from the Semi-Structured Interviews and Focus Groups

Category	Sub-Category	Description
Reference	Previously known	Refers to the authors being recognized by the participants.
Authors	Specific Information	It refers to providing information that can be applied to their problems.
Websites	Information Adaptability	Information can be made available in different formats
	Non-Academic Search Engines	Refers to general search engines like Google
	Academic Sources	Refers to academic Articles and/or specific search engines like Google academic.
	Specific Information	Refers to providing information that can be applied to their problems.
	Less Time	Refers to the fact that the answers can be obtained quickly.
	Institutional websites	Websites of universities or governmental institutions
Texts	Current news	That it be by the times in which the problems occur.
	Mathematical Barrier	Refers to when mathematics limits understanding or access to written sources.
	Trust	Refers to the perceived security of a written source.
	Importance of the task	Refers to tasks that require more detailed information.
	Year and appointment Indicators	It refers to the timeliness and validity of the texts.
	Specific Information	It refers to information that can be applied to their problems.
	Information that can be understood	Refers to information that educators can understand.
	Recognized	It refers to the familiarity of the texts to the participants.
	Theoretical Support	Refers to the fact that decisions can be based on information contained in books

Reference Authors

Regarding the category identified as "Reference authors", a very significant point was recognized in the criterion called "**previously known**", followed by "strategies for the level". Analyzing the criteria with the lowest number of references, "topicality", "information applicable to the educational context" and "authors recognized at the educational level" were observed.

Regarding their stories, it was identified that the author of a text was very important for them, indicating that it is crucial to read classic authors "...for example, authors of kindergarten education that one normally uses or in the field of emotional education or the field of special education ASD, etc. *Authors that are like the most sought after, I don't know, Montessori, Vygotsky that generally one looks for information about them, the methodology they work with*" [Jazmín].

In addition, the interviews stated that knowing the authors allowed them to decide which text to consult, as Camila mentions "... *for example, quotes from authors referring to the area I am looking for, I know several authors who specialize in the area, so based on that, I say this is useful for me or this is not useful for me.* This is how the idea of the importance of the university in the training process develops, fundamentally because it is the first approach to referential authors of the level.

Websites

Regarding the category identified as "Web sites", two significant points were identified in which most of the reports were concentrated: non-academic search engines and adaptability of the information, with a secondary criterion referring to the applicable information.

This approach showed a clear tendency to value as a criterion the information available mainly in non-academic search engines such as Google, with the characteristic of recognizing the adaptability of these Websites or, in other words, that they are sites adapted to the new times, where it is possible to access a large amount of information.

Together with the above, the educators maintained a clear tendency to value the information applicable to their educational level, which was undoubtedly the transversal to the study, and when evaluating the high points that emerged from the educators' narratives. For example, it was possible to visualize the importance recognized to the various types of information found on the Web "...*The truth is that I look for it here on the Internet, on Google, I read what the teacher says, what Google says, what the blog says...*" [Angélica].

It is important to recognize the role of non-academic search engines as pointed out by the participants, Google has the characteristic of presenting information that helps them to understand a diagnosis, which is of easy access through their cell phones "... *I think that when the diagnosis arrives, one tends to go to Saint Google and enter the textual diagnosis, as the*

doctor would do, and then one begins to go through different health or education Web pages, looking for activities that can be done with this type of difficulty or how to support it " [Sandra].

Texts

Concerning the category identified as "texts", the use of books and, to a lesser extent, scientific publications, stood out. It is possible to identify a significant point on which most of the sharing of the participants was concentrated, which was information applicable to the context, highlighting a secondary criterion that referred to concrete strategies.

This approach showed a clear tendency to value the practical or applicable information present in the texts, with the characteristic of recognizing specific information that helps them in a practical way to solve their problems. In addition to the above, the educators - as in other sources of information such as Websites - valued information applicable to their educational level. When evaluating the high points that emerged from the educators' narratives, it is possible to sustain that the educators recognized that usefulness depends on how reliable the books are "...*A useful source, that is reliable, whether it is based on a book, that has to do with the subject matter, authors who are relevant or already famous, etc., and that provides tips that can be applied to reality, practical, I think that is the most important thing*" [Jazmín].

Parallel to this, the appreciation arose that in the texts, specifically in scientific research, the applicability of the information is fundamental. As Jazmín mentioned, it is practical and easy to understand information "...*Also the subject of the studies, that they are applied and that, as I was saying, information that I can put into practice".*

Discussion

Validity Criteria

When analyzing the validity criteria of the participants, it is possible to infer that these criteria moved without a major distinction between written sources (texts, referent authors, and websites). In these cases, the criteria that stand out are those related to specific information obtained in less time, situations in line with the findings of Kostoulas et al. (2019). In other words, their criteria operated by adapting to the need for information according to the reality of their educational contexts. The above is similar to that proposed by Virkus and Mathiesen (2019), who point out that teachers when developing specific searches on the Internet, operate with criteria regarding objectivity, clarity, and the organizational structure of the information they need.

In line with the above, we agree with the study carried out by Hendriks et al. (2021) who argue that teachers from their initial training evaluate their ways of obtaining information adaptively, meaning that when they seek a theoretical explanation, they access an experienced researcher. While, when they require practical information, they consider that a fellow teacher with more classroom experience is the right one. As reported in the literature, in the case of educators in the United States, they often turn to the National Association for the Education of Young Children (NAEYC), intending to obtain resources and guidance to implement evidence-based practices (H. F. Taylor et al., 2022).

Educators Validity criteria

For educators, a particular criterion stood out when validating the websites, which refers to the time factor. This criterion is linked to the importance given to the immediate availability of information connected to the evidence that early childhood educators lack the preparation to develop evidence-based practice (LaBrot et al., 2022). This criterion is related to what the literature has reported in terms of the time pressure to which educators are subjected, stating that the lack of time and the exhaustion derived from their long working hours have negative repercussions on their professional and work development (Hyseni Duraku et al., 2022; Skaalvik & Skaalvik, 2009). This situation leads us to reflect on the demands of educational work, as Williams and Coles (2007) argue that teachers use the quickness with which information is obtained and the accessibility of sources as criteria.

Similarly, Landrum et al. (2002) argue that teachers consider professional journals and university courses to be less reliable and limited-access sources compared to their fellow teachers. The latter are validated based on shared experiences and teamwork. Even Bråten and Ferguson (2015) reinforce the idea that teachers, from their initial training, evaluate sources based on experience and practice rather than theory.

It is essential to underline that the conceptualization of evidence-based practices in the domain of early childhood education has not yet been precisely delineated and is often erroneously intermingled with different methodologies (Farley et al., 2018). This lack of clarity underscores the need to establish rigorous validation criteria to facilitate educators' access to robust scientific sources. This strategy is aligned with existing literature suggesting that teacher training is a determining factor in the effective incorporation of Evidence-Based Practices (EBPs) in educational settings (H. F. Taylor et al., 2022). In line with this perspective, Kallitsoglou (2020) persuasively argues that any research on the adoption and implementation of evidence-based practices in the early years must consider teachers' attitudes, as these exert a significant influence on the process.

Finally, the findings of this study pointed to the importance of generating links between the information requirements of early childhood educators, their validity criteria, and scientific sources, to build bridges between the gap reported in scientific research and teaching practice, both teachers in general and early childhood educators in particular, a situation that is consistent with different studies (Borg, 2010; Broekkamp & van Hout-Wolters, 2007; Groß Ophoff et al., 2017; Perines & Campaña, 2019; Vanderlinde & van Braak, 2010; Van Schaik et al., 2018).

Conclusion

Finally, this study delves into the complexity of the relationship between theory and practice in education, challenging the notion promoted by evidence-based education that presupposes a direct adoption of scientific sources by educators. As evidenced by the findings and discussed in previous work (Chafouleas & Riley-Tillman, 2005; Galindo Domínguez et al., 2022; Kaestle, 1993; Van Schaik et al., 2018), the gap between research and practice cannot be attributed exclusively to educators' reluctance to integrate scientific knowledge, but also to the structural and dissemination limitations faced by educational research.

The results indicate a preference of educators for sources and authors with which they are familiar, highlighting the significant influence of their initial and continuing education. This pattern suggests an opportunity for training institutions and publishers to rethink how scientific content is presented and distributed, ensuring that it is both accessible and relevant to the needs and contexts of early childhood education.

The time criteria, as a determining factor in the selection of information sources, highlights the importance of considering the practical realities of educators. The urgency for quick and accurate answers (Galindo Domínguez et al., 2022; Van Schaik et al., 2018) reflects the dynamics and demands of today's educational environment, suggesting that any effort to bring research closer to practice must address this fundamental aspect.

This study therefore seeks a reconsideration of how academia can better serve the educational community by promoting a more effective integration of research into teaching practice. This involves not only producing accessible and applicable research but also fostering a culture of collaboration between researchers and educational practitioners that enables true co-creation of knowledge. In doing so, it can not only bridge the gap between theory and practice but also enrich both fields with valuable and applicable evidence, thus fulfilling the commitment to improve education for all learners.

Recommendations

The present research was exploratory, therefore, based on the review of the literature and the findings reported in this research, it is possible to develop future studies based on comparisons with similar research, with the participation of educators at the same level, in different educational contexts and considering the effects of the Covid-19 pandemic on their information seeking processes.

The effectiveness of early childhood educators' pedagogical practices, which are fundamental to children's cognitive, social, and emotional development, depends on updating them with recent research and evidence. Key to this implementation is knowledge of research validation criteria, enabling educators to access and critically evaluate reliable scientific sources. This process enhances the selection of studies relevant to their educational context and promotes a critical perspective towards the evaluation of evidence. It emphasizes the importance of approaches that integrate improved and critical access to scientific information.

Limitations

Firstly, the sample was limited to preschool educators from some regions of the country, so it is necessary to expand both the size and the heterogeneity of the participants to obtain results that are more representative of the general school context. Secondly, from a methodological perspective, it is important to complement the research by applying a quantitative methodology that can complement the qualitative analysis proposed from a mixed approach.

Authorship Contribution Statement

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