



Investigating primary pre-service teachers' perceptions of nonfiction picturebooks

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Abstract

This study explores the factors contributing to the imbalance between fiction and non-fiction materials in primary school classrooms, with a specific emphasis on the perspectives of prospective teachers. Employing a qualitative research approach, the investigation involved 30 student teachers who had completed the Children's Literature course at a Spanish university. Semi-structured interviews, with questions validated by expert judges, were utilized to gather responses, which were subsequently transcribed and analyzed through coding, following a categorical framework refined post-response analysis. The primary findings indicate a restricted exposure to nonfiction picturebooks in familial and educational settings. Despite positive emotional responses from trainee teachers, the study reveals an inadequacy in their training, hindering the development of a comprehensive understanding and the reinforcement of self-efficacy for integrating nonfiction materials into future teaching practices. Furthermore, the research underscores a disparity between the perceived significance of nonfiction picturebooks for enhancing children's multimodal reading and the inclination of trainee teachers to prioritize fiction due to a lack of confidence and previous exposure. As a result, the study proposes a reassessment of teacher training programs, recommending a more thorough focus on nonfiction materials and continuous professional development to address the disparity between beliefs and actual classroom practices.

Keywords Reading · Nonfiction · Picturebooks · Children's literature · Teacher beliefs

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1 Introduction

Research on nonfiction reading has notably advanced in recent decades, propelled by the implementation of the Common Core State Standards and the Next Generation Science Standards in the United States. These standards underscored the significance of incorporating nonfiction books into elementary and secondary classrooms (Brugar, 2019; Cain, 2015; Job & Coleman, 2016; Vaughn et al., 2021). Concurrently, a range of educational initiatives surfaced to address the imbalance between nonfiction and fiction presence in literacy development. This adjustment was deemed necessary due to the prevalence of fiction books in classroom settings (Duke, 2000; Feldt, 2010; Shimek, 2021). In a noteworthy development, the National Council of Teachers in English issued a Position Statement on the Role of Nonfiction Literature (K-12) in January 2023. This statement emphasized the crucial role played by nonfiction books in shaping children’s learning trajectories and reading skills, particularly in fostering critical and informational literacy (Hadjioannou et al., 2023).

Nevertheless, despite earning praise in the academic world, nonfiction books are underutilized in schools. There’s a noticeable gap between including nonfiction book reading and following the official curriculum guidelines in education, as noted by Boudreau and Beaudoin (2015) and Vaughn et al. (2021).

1.1 Defining the concept of “nonfiction picturebook”

In recent decades, there has been a noteworthy surge in the popularity of nonfiction picturebooks, a transformation that has markedly reshaped conventional “children’s learning books of the past” (Grilli, 2020: 11) into what has been described as a “pictorial turn” (Von Merveldt, 2018), emphasizing the pivotal role of visual elements. This evolution has prompted scholarly endeavors to define the term “nonfiction picturebook,” predominantly employed in Anglo-Saxon contexts, and scrutinize its textual and visual characteristics. Works by Sanders (2018) and studies led by Grilli (2020) and Goga (2021) particularly exemplify this analytical trend.

However, the term “nonfiction picturebook” is not without ambiguity, given its negational construction, as highlighted by researchers such as Watkins and Liang (2014), Goga (2020), and Von Merveldt (2018). The proposed alternative, “informational book,” proves insufficient, as it implies a unidirectional flow of information from the author or illustrator to the reader, potentially diminishing the reader’s active engagement with the book’s meaning (Goga, 2020).

From a broad perspective, nonfiction picturebooks diverge from fiction picturebooks in their narrative structure, lacking a central focus on characters. Nonetheless, they share multimodal, visual, and compositional attributes with their fiction counterparts (Taberner, 2022). Recent nonfiction picturebooks prioritize visual components, such as illustrations and typographic designs, aiming to offer aesthetic experiences alongside knowledge dissemination (Gill, 2009; Goga, 2021). Accompanying this visual emphasis is language crafted to actively involve the reader and stimulate curiosity (Sanders, 2018). Ultimately, the interplay between visual and verbal elements generates polysemy, inviting readers to actively participate in the construction of meaning (Grilli, 2020).

1.2 Characteristics of nonfiction picturebooks

Given their pronounced reliance on imagery, nonfiction picturebooks have been deemed as artistic creations (Grilli, 2021), as their design is executed “in a radically creative way [...] ingenious, imaginative, and deviceful” (Grilli, 2021: 22). However, images serve not only to generate aesthetic experiences and visual captivation among readers (Young et al., 2007) but also to distinguish nonfiction picturebooks from being merely factual literature, where information and content accuracy are paramount (Sanders, 2018). On the contrary, these works possess the capacity to evoke mysteries, introduce new perspectives, and prompt open-ended questions for young readers rather than supplying closed answers (Sanders, 2018).

Furthermore, from a literacy perspective, scholars widely recognize the utility of these books (Colman, 2007, 2011; Duke, 2000; Stewart & Young, 2019). They empower young readers to engage with informative texts, not limited to fiction, facilitating the expansion of vocabulary, enrichment of knowledge about their surroundings, and enhanced access to written content (Boudreau & Beaudoin, 2015; Duke, 2000).

In this context, proficiency in interpreting images appears to enhance reading comprehension (Ladd, 2012; Boudreau & Beaudoin, 2015; Narančić Kovač, 2021) and fosters autonomy in reading (Cristini, 2014; Piacentini, 2019). The utilization of clear language, considering the prior knowledge of young readers, also contributes to these aspects, as emphasized by Gill (2009). Hence, new nonfiction picturebooks exhibit a broad potential readership, encompassing early ages where mastery of textual decoding is not a prerequisite, given the support of illustrations (Boudreau & Beaudoin, 2015; Cristini, 2014; Grilli, 2020).

Similarly, beyond literacy skills, engaging with nonfiction picturebooks nurtures the development of diverse competencies, including civic, social, scientific, or technological skills, given the varied thematic offerings in the publishing market (Boudreau & Beaudoin, 2015; Duke, 2000; Yopp & Yopp, 2000).

Nevertheless, several researchers highlight that these books are not necessarily impartial tools for transmitting content, as they inherently carry an implicit ideology conveyed through strategies supporting the veracity of facts (Panaou & Yannicopoulou et al., 2021). For instance, an analysis of works awarded the *Orbis Pictus* from 1990 to 2019 reveals a pronounced focus on European white males, portraying agency as an act occurring in adulthood and perpetuating a traditional and passive notion (Vaughn et al., 2021). Furthermore, these books appear to be grounded in heteronormative constructions, suppressing queer content to minimize its presence among readers (Crisp, 2017). Despite attempts to promote certain themes in a modern and inclusive manner, such as patriotism, these books may inadvertently perpetuate ideas that could be exclusionary or hierarchical in determining who is legitimately considered part of a national community (McDermid, 2020).

1.3 Children’s reading experiences with nonfiction picturebooks

Building upon prior research examining the form and content of nonfiction picturebooks from a discursive standpoint, a novel research trend has emerged, aligning with Reception

Theory principles. This strand focuses on investigating the multimodal evolution of contemporary nonfiction picturebooks and scrutinizing the reading experiences of children with these literary works (Barnyak & McNelly, 2016; Mayne et al., 2017; Muela & Laborda, 2023; Pérez-Martínez & Muela-Bermejo, 2024). These studies delve into how readers construct meaning from these works, assess them, and emotionally engage with them—an emphasis previously predominantly applied to fiction reading (Feldt, 2010; Pérez-Martínez & Muela-Bermejo, 2024).

The research findings highlight the advantages of engaging in fragmentary or selective reading of nonfiction picturebooks as a means to inspire readers, including those facing specific reading challenges (Muela & Palomar, 2021). This approach allows readers to access content based on their specific needs, either seeking answers to their questions or satisfying their curiosity, without adhering strictly to a linear reading pattern (Courchesne, 2017). Furthermore, it encourages collaborative reading experiences (Feldt, 2010; Alexander & Jarman, 2015), wherein the construction of knowledge is facilitated through production, negotiation, and collaborative practices among readers (Graff & Shimek, 2020). Nevertheless, the involvement of an adult mediator appears to enhance the potential of these experiences, eliciting more complex reader responses (Pérez-Martínez & Muela-Bermejo, 2024).

Engaging with nonfiction picturebooks also appears to significantly improve vocabulary identification among readers (Barnyak & McNelly, 2016) and facilitate children's comprehension of intricate informational texts. This comprehension extends to recognizing the distinctive features of these texts and enhancing their ability to respond to cognitively demanding inquiries (Chaplana, 2016), including those related to informed consents, which hold considerable ethical implications (Mayne et al., 2017). Moreover, these books assist children in creating visual diagrams and maps to effectively convey and showcase their acquired knowledge, utilizing both visual and verbal means (Kersten, 2017).

Finally, nonfiction picturebooks seem to contribute to the improved understanding and interpretation of images, allowing children to incorporate their own and others' prior knowledge into their interpretation of the content. Children engage with these books repeatedly, exploring different directions, resulting in a reading experience that is multimodal, recursive, and intricate (Shimek, 2021).

1.4 Teachers' beliefs regarding the reading of nonfiction picturebooks

Despite recognizing the advantages of reading nonfiction picturebooks, there has been insufficient examination of the opinions held by practicing teachers, particularly in the context of classroom practices and beyond academic research. In 2018, Sanders highlighted that many adults (including teachers) evaluated these books based on accuracy, reliability, and their capacity to pedagogically convey complex concepts through authoritative sources, neglecting the potential of their multimodal reading features. Despite a clear inclination towards fiction readings, which appear to dominate both classrooms and school libraries (Duke, 2000), there is still a limited number of studies delving into the perspectives of active and prospective teachers regarding these innovative multimodal editorial proposals, which emphasize visual resources and aim to enhance literacy and reading skills among younger students.

One of these studies was conducted by Hartsfield (2021), who employed qualitative methods to investigate teachers' perspectives on nonfiction picturebooks and

literacy. The research focused on a sample of 14 active American elementary school teachers, each possessing more than 10 years of teaching experience, at the conclusion of the 2018–2019 academic year. Through participation in a collaborative workshop and completion of a questionnaire, the study aimed to ascertain how, when, and how frequently these teachers incorporated nonfiction materials into their classrooms. The findings highlighted teachers' positive attitudes toward contemporary children's nonfiction, emphasizing aspects such as presentation, potential appeal, and learning opportunities. Teachers expressed enjoyment in reading these materials and conveyed enthusiasm for the selected corpus, particularly appreciating its aesthetic value. However, the study identified a need to address the imbalance between fiction and nonfiction readings in elementary school classrooms, because some teachers exhibited tendencies toward self-censorship or preventive censorship, particularly concerning controversial topics present in these books (Hartsfield, 2021).

On an alternative note, Romero et al. (2021) presented an additional perspective to the aforementioned research by conducting semi-structured interviews with both practicing and pre-service teachers, comprising a sample of 18 participants, including 4 in training. The objective was to lay the groundwork for a child reader development model supported by nonfiction picturebooks, with a pivotal emphasis on the insights of educators. Their study underscored the importance of teacher training to acquaint teachers with these novel reading materials, comprehend their characteristics, and advocate for diverse nonfiction reading strategies in forthcoming educational practices. Participants expressed eagerness for engaging with these books, particularly attracted to their visual elements, and acknowledged their potential for enhancing vocabulary and fostering literacy development in children (Romero et al., 2021).

In a recent study, Campos and Colón (2022) conducted comprehensive interviews with 17 participants, comprising 5 active teachers, 3 pre-service teachers, along with librarians and school administrators. The primary objective was to investigate the impact of nonfiction books in the educational context and analyze the beliefs ingrained in the participants' training or professional development. The findings unveiled that participants conceptualized the nonfiction book through six fundamental ideas: information, reality, art, hybridization, interdisciplinarity, and hypertextuality, aligning these concepts with active teaching methodologies. Furthermore, they underscored the visual potential, fragmented information organization, and the stimulation of curiosity in nonfiction books, deeming them advantageous for cultivating children's informational competence and critical thinking. Ultimately, the participants recommended the integration of nonfiction book reading in classrooms, emphasizing the extensive range of titles available from contemporary publishers (Campos & Colón, 2022).

Notwithstanding the positive perception of teachers towards nonfiction picturebooks in research studies, the ongoing uneven utilization of these materials in classrooms poses challenges to their effective implementation. It is imperative to harness teacher education programs in universities for targeted discussions on the incorporation of nonfiction readings. This approach aims to encourage a more balanced approach between fiction and nonfiction in educational settings. Our study aims to thoroughly investigate the beliefs of pre-service teachers regarding these works, with the goal of identifying potential barriers or resistances in practice. Through this exploration, we seek to open new lines of research that contribute to understanding the dynamics of fiction and nonfiction use in the classroom.

2 Focus and method

2.1 Focus and research questions

Aligned with the preceding section, this study aims to delve into the factors contributing to the imbalance between fiction and nonfiction materials within primary school classrooms, focusing on the perspectives of trainee teachers. This realm of investigation is relatively emergent, marked by a scarcity of existing studies. Consequently, we have formulated the following research questions: What attitudes, beliefs, and pre-existing knowledge are demonstrated by prospective primary school teachers in relation to nonfiction picture books within our research context? Are there identifiable factors within these beliefs that may clarify the prevailing inclination towards fiction as opposed to nonfiction in classroom readings? Our inquiry unfolds in two dimensions: firstly, delving into the pre-existing knowledge possessed by trainee teachers about nonfiction picture books before their specialized training; and secondly, probing into their post-training beliefs and intentions concerning the integration of these books.

2.2 Contextualization of the study and selection of participants

This investigation was conducted upon the conclusion of the Children's Literature course within the second year of the Primary Education degree at the University of Saragossa (Spain). The study involved 30 students aged 19 to 20 years, addressing the mandatory curriculum of our university's Primary Education degree. This particular course provides specialized training in children's literature preceding students' entry into professional practice, a distinctive feature not consistently found in comparable international university education programs. The course is credited with 6 ECTS, equivalent to 60 face-to-face hours.

The course curriculum delves into children's literature across various genres, encompassing folk tales, novels, poetry, and picturebooks. Within the 60 h, a specific focus is dedicated to picturebooks (both fiction and nonfiction). This segment explores the historical evolution, visual and textual resources, diverse reading strategies for classroom use, among other aspects. The study incorporated five practical sessions specifically centered on nonfiction picturebooks, structured as follows.

The initial two sessions provided theoretical insights into the recent evolution of nonfiction picturebooks, detailing their compositional elements, visual and textual resources. A diverse corpus, comprising international nonfiction picturebooks, was introduced to the classroom to illustrate and elaborate on each theoretical aspect. All books had Spanish translations, except for one (Supplementary information 2). The subsequent two sessions allowed students to explore this corpus of nonfiction picturebooks in small groups (4–5 individuals). They engaged in reading, shared perspectives, facilitated discussions, and proposed classroom reading approaches based on their selected books. The final session involved students presenting their collective work to the entire group, consolidating insights gleaned from the analysis of nonfiction picturebooks.

2.3 Data collection techniques

As a data extraction technique, a semi-structured interview was utilized, following Kvale's (2001) phased model. The interview was collaboratively designed by the researchers in three phases. In the first phase, a draft was proposed based on three macrocategories

corresponding to constructs developed in the literature on nonfiction picturebooks reading: contact and previous experiences with nonfiction picturebooks, knowledge and current positioning regarding nonfiction picturebooks after completing the Children’s Literature course, and intention to use nonfiction picturebooks in future teaching practices. It was ensured that these three macrocategories contained a balanced number of questions (4 for the first, 5 for the second, and 6 for the third) and were refined in the subsequent phases.

To validate the appropriateness of the questions posed in the phase 1 design, a phase 2 expert judgment was conducted. Expert selection was carried out through the biogram procedure, considering both their academic background and teaching experience, as well as their relevance to the study (Cabrero & Llorente, 2013; in Padilla-Hernández et al., 2019). Thus, three criteria were considered: (1) Academic background in Language and Literature; (2) Teaching experience in the language and literature field with knowledge of nonfiction picturebooks; and (3) Experience in university training in Children’s Literature and Reading. The six expert judges, holding degrees in Hispanic Philology (four with a doctorate), possessed over 15 years of teaching experience related to reading and literature, and taught university courses in Children’s Literature and Reading. A digital copy of the interview draft was provided to the six expert judges, containing a Likert scale with three dimensions (relevance, clarity, and neutrality) to evaluate each question, following the criteria of Padilla-Hernández et al. (2019). This scale ranged from 1 to 4, with 1 indicating “Very Inadequate” and 4 indicating “Very Adequate.” Below each question, a “Comments” section was included for each judge to add qualitative feedback (example in Fig. 1).

When the judges completed this question rating scale, their scores were evaluated through a dual procedure. Firstly, the mean (\bar{x}) and standard deviation (σ) of the judges’ responses to each question, as well as the total sum of opinions for each macrocategory, were calculated using the Statistical Package for the Social Sciences (SPSS). Questions 1–15 were assessed by the judges within the range of “Appropriate” to “Very Appropriate,” so none of them needed to be eliminated. However, question 16’s elimination was suggested by 5 out of the 6 reviewers, deeming it “Very Inadequate” (“Would you assess reading or working with the nonfiction picturebook in your future practices? Why?”). Therefore, it was excluded in the phase 2 development of the interview question set.

Inter-judge agreement was assessed using Lawshe’s (1975) Content Validity Ratio (CVR), improved by Rubio et al. (2003, in Delgado-Rico et al., 2012) for Likert scales 1–4. The Content Validity Index (CVI) was calculated by dividing the number of judges who rated a 3 or 4 by the total number of judges, resulting in CVI = 1 (> 0.80) (Davis, 1992; in Delgado-Rico et al., 2012), thereby conferring content validity to the interview.

During phase 3, which occurred one week after the conclusion of the Children’s Literature course, the researchers conducted individual interviews with the 30 participants at the University of Saragossa (Spain), utilizing questions validated by the judges. These interviews, lasting approximately 25 min each, were audio-recorded with prior informed consent from each participant. Following this, complete transcriptions were created for subsequent coding using NVivo v.12 software.

Fig. 1 Sample of the rating scale provided to judges for question validation

Questions											
1. Were you familiar with nonfiction picturebooks before you read them in the course?											
Relevance				Clarity				Neutrality			
1	2	3	4	1	2	3	4	1	2	3	4
Comments:											

2.4 Data analysis

To conduct the interview coding, a node system was initially designed based on the three macro-categories structuring the interview questions. Following this, the researchers meticulously reviewed the interview transcripts and formulated the final categorical framework derived from the respondents' answers, further refining the original three macro-categories. The ultimate coding scheme included 6 macro-categories, 13 categories, and 50 subcategories, detailed in Sect. 3 of the Supplementary information.

With this categorical framework, the researchers, reaching consensus, proceeded to code the interviews for each student. Assigning corresponding codes to each response, they supplemented the analysis with qualitative notes to provide an extensive description of the thematic analysis performed during coding.

3 Results

The results have been sorted into six main categories using the final analysis framework: (1) Previous personal experiences with nonfiction picturebooks, (2) Emotional response after reading nonfiction picturebooks in the Children's Literature course, (3) Current knowledge about nonfiction picturebooks, (4) Self-perceptions after reading nonfiction picturebooks, (5) Beliefs about reading nonfiction picturebooks in Primary Education and (6) Future practices with nonfiction picturebooks in Primary Education. When presenting the results, quantitative data on category saturation is integrated with noteworthy examples of student interventions to provide context and enhance the percentages.

3.1 Previous personal experiences with nonfiction picturebooks

The majority of students (73.3%) indicated prior exposure to nonfiction picturebooks within their familial environment. However, this exposure was comparatively limited in contrast to their engagement with fiction literature. Responses such as "Yes, I had heard a bit about them but [...] honestly, I don't remember much" (Student 3) and "I knew about them, but I had very little contact with this type of books; for example, both at home and in school, I saw more fiction books than nonfiction ones" (Student 23) highlight this limited familiarity. Remarkably, 21.4% of respondents profess a lack of awareness regarding the term 'nonfiction,' although they do recollect encountering informative books in their childhood, as expressed by a student: "I had contact with nonfiction books, but maybe at the time, I hadn't given them a specific name" (Student 14). In the school setting, the prevailing situation is the "Absence of nonfiction picturebooks at elementary school" category (63.7%). A notable 88.3% of students assert their lack of exposure to nonfiction picturebooks throughout both their primary and secondary educational phases. In contrast, a mere 5.8% report sporadic encounters within the classroom or school library, affording them occasional opportunities to peruse such materials.

3.2 Emotional response after reading nonfiction picturebooks in the Children's Literature course

Given the limited prior exposure to nonfiction reading, 60% of the students experienced a positive emotional response after the sessions, characterized by surprise at the visual

appearance of the nonfiction picturebook (64.3%): “When you presented the books, I was pleasantly surprised, for instance, by *Iluminanatomía*, which had three colors; I found it impressive” (Student 19), “I was deeply impressed; I remember one called *La Orquesta*, which seemed highly appealing for showing it to a child, just with the colors it had. They have been a discovery for me; I bought a lot because I liked them a lot” (Student 28). In their positive emotional reactions, students also emphasized their interest in how the books addressed different topics (35.7%): “I thought they were very well-crafted, providing children with very interesting information. It wasn’t just about getting to know the animals; it also motivated them to learn more things” (Student 29). These responses will be examined in the subsequent paragraphs, establishing connections with the ensuing macrocategories, where a significant interdependence has been identified.

3.3 Current knowledge about nonfiction picturebooks

In terms of their theoretical comprehension of nonfiction picturebooks post-Children’s Literature course, 34.2% grappled with defining them, attributing this difficulty to either a lapse in terminology recall (21.3%) or a confusion regarding the distinction between fiction and nonfiction (12.9%): “But nonfiction books... I don’t know... Like, for example, if I read these romantic novels, is that a nonfiction book?” (Student 9). Nonetheless, the majority (65.7%) could articulate a definition, either juxtaposing them against fiction books (35.7%) or underscoring their informational intent (30%): “A book that deals with topics unrelated to fiction and doesn’t follow a story with a specific character but explains different types of content” (Student 4), “A book that reflects information on a specific topic” (Student 10).

Furthermore, a substantial majority of the students (77.3%) conveyed an awareness of a discernible evolution in present-day nonfiction picturebooks in comparison to their recollections from family or school settings, albeit such instances were infrequent. This evolution was notably pronounced in formal attributes (48.5%): “I think books have been evolving, and now they have more visual stuff that can catch your eye” (Student 4). An 18.2% discerned a clear continuity between the nonfiction picturebooks of their childhood/adolescence and those examined in these university sessions. This percentage precisely corresponds to cases where students had more extensive prior exposure to this genre. In contrast to the majority, they sought parallels in the informational treatment of content, while others directed their attention towards the innovations presented by contemporary illustrations and designs.

3.4 Self-perceptions after reading nonfiction picturebooks

The reading sessions within the Children’s Literature course did not appear adequate in bolstering their perceived self-efficacy when it came to choosing nonfiction picturebooks. This inadequacy was evident as fewer than half of the respondents felt self-sufficient post-course completion (43.59%). Conversely, 56.41% opined that the acquired knowledge was insufficient for their forthcoming teaching career: “I think I’d need more info to check out other nonfiction picturebooks” (Student 11), “Right now, I feel like I don’t have enough info to explain” (Student 15). The saturation of this category implies a necessity for more

comprehensive training, enabling pre-service teachers to confidently select and utilize non-fiction books in their future teaching practices.

3.5 Beliefs about reading nonfiction picturebooks in Primary Education

Within this category, it is necessary to underscore that all informants (100%), held the belief in the potential benefits of nonfiction reading for elementary school students. A unanimous agreement emerged, wherein these books were collectively perceived as valuable tools for acquiring specific content (49%). These resources were seen as capable of either substituting for, or at the very least, complementing traditional textbooks. This capacity stems from their ability to stimulate a child's curiosity by aligning with individual interests and capitalizing on visual appeal. Consequently, the visually engaging presentation could elicit a positive emotional response at the outset of the reading, thereby serving as a facilitator for a more accessible comprehension of the content in subsequent stages.

However, the remaining subcategories exhibited minimal attention, resulting in pre-service teachers neglecting potential benefits highlighted in academic literature, such as the enhancement of vocabulary (5.8%) or the promotion of reading habits (11.5%). Only 4.8% recognized nonfiction picturebooks as a tool for developing informational literacy and research methods, with just one student proposing the idea that recent nonfiction picturebooks facilitate restricted access to information and undergo scrutiny against authoritative sources. This contrasts with the abundant and often uncritically verified content accessible online: "It's like [nonfiction picturebooks] are the internet for kids because there is information in them and many curiosities about each topic. But, of course, you search bees on the internet and everything comes up, without limits" (Student 29).

In terms of beliefs regarding the suitable age to commence reading nonfiction picturebooks, a comprehensive outlook is apparent, encompassing early readers. The majority of students (68.2%) posit that it is feasible to gradually introduce the reading of these books during Early Childhood Education, precisely owing to the visual support offered by images for text decoding: "You can learn from a young age; in fact, I think the younger they are, the more questions they have, and the more you can answer them" (Student 9), "They can read it without knowing how to decode, if the book contains illustrations and images that allow them to extract information" (Student 19). Nevertheless, they contend that it is imperative for the corpus selection to consider the child's reading development (37.8%). This implies that, as the reader enhances their decoding skills, more intricate or typographically dense books should be chosen: "It depends because there might be books adapted for young children, but others may not be so attractive to them if the information is not well presented. They may pay more attention to the illustrations, and a 5th or 6th-grade student might also read the text" (Student 16). Conversely, only 15.9% deem prior reading mastery essential and find it more practical to confine the reading of nonfiction books to the second and third cycles of Primary Education (8–12 years) to maximize their content: "In the end, this initial foundation is necessary, right? Because if not, we wouldn't be working from reading but from a more artistic observation" (Student 14).

Finally, the category "Preparation of the student before reading nonfiction picturebooks", addressing certain remarks emerging in interviews concerning reading decoding (critical attitude, information selection skills), proved inconsequential to the participants and duplicated content from preceding categories. Consequently, its exclusion from the results analysis was deemed necessary.

3.6 Future practices with nonfiction picturebooks in Primary Education

The emotional response to the visual appeal of nonfiction picturebooks, grouped in the second macro-category, seemed to influence participants' perspectives on "Future practices." This influence was noticeable as comments related to illustrations of the books used in the classroom shaped their responses.

Among participants, 67.9% collectively expressed a preference for prioritizing visual appeal and curiosity when choosing books for future students (38.2% and 29.7%). They saw the visual allure of new nonfiction picturebooks as a way to make reading more accessible and engaging, facilitating comprehension of challenging content: "Just as other books have a plot that hooks you, here it's the pure curiosity of choosing a book about something that interests you, material [...] that grabs your attention" (Student 18), "They are very creative; they make you want to read them" (Student 11).

Conversely, 13.3% favored selecting books based on informative content to encourage research initiation, and 18.7% emphasized promoting active (7.8%) or manipulative (10.9%) reading: "I think it's a good means to introduce them so that they can later investigate other topics or content themselves" (Student 20), "I would also choose them because they differ from other more narrative books in that some are manipulative, and that is entertaining for children; they interact with them" (Student 3).

Concerning appropriate methodologies for reading nonfiction picturebooks in Primary Education, prospective teachers preferred active, participatory methods, and group activities (52.1%). These approaches aim to encourage shared reading experiences and facilitate opinion exchange: "I don't think anything will arise with individual reading because, in the end, with group reading, children will have more questions, more doubts, and curiosities to share with their peers [...] I believe they work better with methodologies that give more prominence to the child and are more communicative, creating a dialogue in class" (Student 29). However, a portion of participants (22.3%) believed active mediation by teachers is necessary to comprehend potentially complex book content: "It is necessary to have tutoring, follow-up to verify that the content is also being understood because sometimes we assume things are correct that later are not. Support in these readings is good" (Student 14). Additionally, they pointed out the interdisciplinary nature of these books (16%), emphasizing their role in connecting literacy subjects with content from other disciplines, promoting collaboration between subjects: "You can blend Literacy lessons with what students are checking out in Social Sciences or Natural Sciences, for example" (Student 1).

Alternatively, analyzing the data with a yes/no count revealed that 97% of the participants (29 out of 30) expressed the intention to incorporate nonfiction picturebooks into their future teaching practices. Among those less interested, they regarded these books solely as a supplementary tool: "Never say never, but I don't think my main tool would be a nonfiction picturebook. I believe there are many more contents to expand for elementary school children before these books, but they can always be a reinforcement" (Student 25).

Despite the almost unanimous intention to incorporate nonfiction picturebooks into their teaching practices, opinions varied when asked about the importance they would assign to nonfiction compared to fiction books. While 46.9% believed in the necessity of maintaining a balance between fiction and nonfiction in classrooms, 37.5% indicated a preference for predominantly using fiction books. This discrepancy highlights a contradiction: although nearly all students initially supported the use of nonfiction

picturebooks, over a third shifted their stance during the elaboration of their responses, leaning towards the belief that fiction should continue to play a more prominent role in their teaching: “I would give more weight to fiction because I believe they should let their imagination run wild first” (Student 15), “I’d give more emphasis to fiction because, even though it’s true that there are nonfiction books that are appealing and kids might like them, I believe a story with characters, a plot, and a narrative is more engaging” (Student 2).

4 Discussion

The aforementioned findings address the initial research inquiry focused on exploring the attitudes, beliefs, and knowledge of prospective elementary school teachers in relation to nonfiction picturebooks subsequent to their completion of specialized training. Moreover, these findings provide valuable insights illuminating the apparent prevalence of fiction-oriented readings within primary school classrooms.

Primarily, a discernible scarcity of nonfiction picturebooks is identified within the familial contexts of the participants, contributing to a restricted exposure to such literary materials. This scarcity manifests not only in their households but also in the educational institutions they have traversed, aligning with the assertions posited by Duke (2000), Feldt (2010), and Shimek (2021). This revelation implies the influential role of childhood experiences in molding deeply rooted convictions regarding the significance of fiction, thereby establishing a potential destabilizing factor that exerts an impact on the prospective teaching practices of educators.

Secondly, in the examination of the elicited responses, the noteworthy occurrence of positive emotional responses among prospective teachers toward nonfiction picturebooks is underscored—materials to which they had not been previously exposed, a fact corroborated by Campos and Colón (2022). These reactions were primarily characterized by sentiments of surprise and curiosity, with the distinct visual impact of the new nonfiction picturebooks identified as the primary conditioning element, as proposed by Von Merveldt (2018). Participants accentuated the distinctiveness and aesthetic allure of these materials, acknowledging their capacity to engage children through impactful visual elements, aligning with the assertions made by Gill (2009) and Goga (2021). Moreover, some participants highlighted the significance of the accessibility inherent in the presentation of informational content in nonfiction picturebooks, echoing the perspectives of Colman (2007, 2011), Cristini (2014), Boudreau and Beaudoin (2015), Stewart and Young (2019), and Grilli (2020). This aspect, for the participants in this study, reinforces the efficacy of these materials in conveying information to children effectively, facilitating comprehension, and fostering a more participative pedagogical approach—a proposition already advanced in academic literature (Feldt, 2010; Alexander & Jarman, 2015; Pérez-Martínez & Muela-Bermejo, 2024).

Moreover, prospective teachers underscored the motivational impact these books could have on the learning process, highlighting a positive correlation between the engaging presentation of information and the stimulation of childhood curiosity. This perspective aligns with the theoretical framework presented by Sanders (2018). As a result, nearly unanimously, they exhibited a favorable inclination toward integrating nonfiction picturebooks into their future teaching practices.

Nonetheless, a crucial implicit belief emerges from these findings. The future educators translated their personal aesthetic and multimodal encounters with nonfiction picturebooks into a predominantly utilitarian view as conveyors of knowledge, aligning with Sanders' (2018) earlier observations. This suggests a notable divergence between their experiential sentiments as students and their intentions as prospective educators, prioritizing knowledge transmission over the creation of holistic multimodal experiences for children (Shimek, 2021). This disconnection could also elucidate their preference for fictional works, where they indeed highlighted the cultivation of creativity, fostering imagination, and fortifying reading habits through engaging aesthetic-literary experiences. The inclination toward traditional models from their primary education seems to prevail, rather than fully incorporating the knowledge gained during their university training into their prospective teaching approaches. Consequently, it is pertinent to propose that university training endeavors to reconstruct the pre-existing belief systems of teachers, considering the pedagogical advantages of these materials widely acknowledged by researchers, as indicated by Hartsfield (2021) and Romero et al. (2021).

In this regard, the results indicate that, despite the incorporation of five dedicated practical sessions featuring nonfiction picturebooks as part of the Children's Literature course, it proved insufficient to instill a comprehensive understanding and assimilation of the concept among all students. This inadequacy is likely attributable to the inherent complexity, ambiguity, and absence of well-defined boundaries associated with nonfiction picturebooks, aspects previously cautioned by Von Merveldt (2018) and Goga (2020). While participants noted a discernible evolution in their perception, particularly in visual aspects, when comparing the materials studied with those remembered from their childhood, these sessions fell short in reinforcing the perceived self-efficacy of future educators in the selection and incorporation of nonfiction picturebooks in their forthcoming educational endeavors.

Consequently, advocating for a more comprehensive university or postgraduate education focused explicitly on bolstering teachers' self-efficacy in utilizing nonfiction picturebooks is posited as an appropriate strategic line, aligning with the findings of Romero et al. (2021) and Campos and Colón (2022). Within this framework, there is an emphasis on the significance of teachers cultivating confidence in the selection and integration of these materials into their educational settings. Furthermore, the continuation of postgraduate education among active teachers is recommended, involving ongoing training courses that incorporate nonfiction picturebooks (Hartsfield, 2021). This educational approach aims to empower teachers to apply their acquired knowledge consistently in their classrooms, effectively mitigating the existing imbalance between the prevalence of fiction and nonfiction readings. This, in turn, facilitates a more extensive array of learning opportunities for children and young readers.

5 Conclusion

As limitations of our study, it must be acknowledged that the sample is confined to one course at a specific university. However, given that this is a qualitative, exploratory study, our intention is not to generalize the results to a broader population. Instead, we aim to open avenues for research and work that will allow us to examine the reasons behind the gap between fictional and nonfictional books in the classroom. Therefore, it is essential to extend this research to new geographical contexts, which would help broaden our global perspectives and assess whether contextual specifics (both editorial and educational)

influence the selection and proportion of these works. This would involve replicating the study with other groups of teachers and conducting meta-analyses of data, which could provide valuable insights for the research and educational community at large.

Furthermore, the results highlight a pressing need to reevaluate and expand the training of future teachers regarding nonfiction picturebooks during their undergraduate studies. These initiatives would serve as an important starting point for change, with observable consequences in the medium and long term. By shifting the belief system of teachers, who currently tend to favor fiction books as primary classroom materials, we are more likely to achieve a balanced presence of fiction and nonfiction readings for children. This balance can enrich their reading education, as evidenced by theoretical studies published in recent decades. Therefore, it is crucial that teachers become more competent and confident in incorporating nonfiction books into the classroom, a goal that can be achieved at the university level.

Lastly, this study underscores the need for further research in different contexts to explore the effective use of nonfiction books in primary schools. A systematic review could be particularly enlightening in assessing the current scenario with methodological precision. Understanding how teachers' beliefs translate into practical applications through direct observation is essential for grounding pedagogical practices in empirical evidence. Comparative studies of specific classroom practices can provide effective strategies to prepare educators to seamlessly integrate nonfiction books into their teaching.

In conclusion, this study reveals that the beliefs of pre-service teachers still tend to favor fiction. Therefore, it is imperative to enhance their training, analyze classroom practices, and establish educational pathways that enable them to better understand and effectively use nonfiction books in the classroom.

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Declarations

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