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Research Article

Building anti-racist competences in early childhood education: Collaborative design and impact of a professional development program

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Abstract: The preschool period plays a pivotal role in fostering positive intergroup attitudes and nurturing a healthy self-image in children. With racism on the rise globally, early childhood educators often feel unqualified to address issues of race, diversity and justice, leaving our youngest children vulnerable. In Flanders, there is a notable lack of support and training to build anti-racist competences and implement social justice education in early childhood settings. This study addresses these challenges by co-constructing and evaluating a systeshic, high-quality professional development program specifically tailored to early childhood educators. Utilizing the framework of Educational Design Research, the program was co-developed with early childhood educators based on literature reviews, classroom observations, and interviews. This process led to the identification of six design principles for anti-racist professional development: (a) Diversity content & pedagogical knowledge, (b) intercultural skills, (c) learning materials, (d) community of learners, (e) guided critical reflection, (f) policy and shared vision. These design principles formed the foundation for the subsequent creation and evaluation of a professional development program to strengthen anti-racist practices in early childhood education. A pilot study involving 10 early childhood educators demonstrated significant self-reported improvements in several areas, including: (a) increased use of sensitive and inclusive language, (b) heightened awareness of biases and perspectives, (c) enhanced anti-racist teaching skills, such as addressing racism and designing anti-racist activities for children, (d) strengthened collaboration with colleagues and parents, and (e) greater courage, confidence, and willingness to act against racism in practice. These findings underscore the potential of evidence-based, contextually adapted, and collaboratively designed professional development programs to foster inclusive, anti-racist early childhood environments. The study contributes to the field of early childhood education by emphasizing the importance of community-based, co-constructed approaches to enhance educators' anti-racist competences.

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Introduction

Racism is on the rise in Europe, posing a significant threat to the well-being and development of both adults and children (European Union Agency for Fundamental Rights, 2024). Studies show that exposure to racism and discrimination from a young age can lead to long-term psychological, social, and educational consequences. When young children experience or witness discrimination, it can undermine their sense of belonging, damage their self-esteem, and erode trust in social institutions, reinforcing inequalities that persist into adulthood (e.g. Benner et al., 2018; Hackett et al., 2020)

Young children are often seen as naturally innocent, 'color blind' and unaware of racial issues, with limited ability to understand concepts like race, bias, and discrimination (Husband, 2012). Because of this,

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early childhood education has traditionally been left out of or was marginalized from broader social justice movements (Nguyen, 2022). Contrary to this popular belief that preschoolers are too young and innocent to 'see race', previous studies demonstrate that infants as young as three months old can distinguish between racial groups based on facial features (Katz & Kofkin, 1997; Kelly et al., 2005). By the age of two, children start to categorize people by race, and by three to five years old, they begin to express racial preferences, often favoring their own racial group while demonstrating implicit or explicit biases against others (Hirschfeld, 2008; Muñoz et al., 2025; Van Ausdale & Feagin, 2001). These are not innocent occurrences, as previous studies demonstrated that preschoolers already use skin color as a criterion for making social decisions, influencing whom they choose as friends and whom they exclude from activities (Hirschfeld, 2008; Swanson et al., 2009; Van Ausdale & Feagin, 2001; Winkler, 2009). At this young age, children already apply racial categories in their social interactions, friendships, and play dynamics (Killen et al., 2001). Children's self-image is also closely linked to their early understanding of race. Research shows that by the age of five, children of color not only recognize racial differences but are also aware of the bias and discrimination that come with them (Husband, 2012). This early awareness plays a key role in shaping their identity and self-esteem (Swanson et al., 2009).

Young children do not develop biases on their own; they pick them up from the racial norms and messages embedded in broad society. Since this happens at a very young age, it is important to actively challenge bias through intentional anti-racist teaching (Nguyen, 2022). Early childhood education is never neutral but holds a critical dual potential: it can either maintain and reproduce these inequalities or become a space where children learn to question and challenge them.

Educators play a key role in implementing anti-discrimination policies and fostering a positive sense of self and belonging in young children (Caplan et al., 2016; Hard et al., 2013; Nolan & Lamb, 2019). Yet, previous studies show that although educators are generally willing to foster an inclusive learning environment through anti-racist actions, they are often missing the necessary skills and resources to do so effectively (Arneback & Jämte, 2022; Makoelle, 2019). Teachers, for example, often hesitate to engage in discussions about race, bias, and discrimination. Several factors contribute to this reluctance, including a lack of racial literacy, discomfort with the topic, fear of saying the wrong thing, uncertainty about children's intentions and meanings, and feeling underprepared (Beneke & Cheatham, 2019;). Additionally, systemic barriers such as rigid curricula and limited professional development opportunities exacerbate the challenge. This avoidance can result in a "color-evasive" (formerly known as colorblind) approach, where the diverse cultural identities of children are ignored rather than valued and integrated into the learning environment (Annamma et al., 2016). However, ignoring race and ethnicity does not make racism disappear; instead, it allows biases to persist unchallenged and reduces racism to isolated acts committed by 'malicious individuals' (Ahmed, 2012). This perspective fails to acknowledge systemic racist structures and power dynamics, framing racism as an individual issue rather than a structural one, often leading to the dismissal of its presence and maintaining the status quo (Kendi, 2019; Loukola, 2025).

Effective anti-racist pedagogies go beyond good intentions and the will to change; they require hands-on strategies to challenge both structural racism and individual biases. Approaches can range from an emancipatory, norm-critical, and intercultural perspective to more relational, democratic, and knowledge-focused strategies (Arneback & Jämte, 2022).

Anti-racist education is grounded in the recognition that racism is deeply embedded in educational systems and must be actively challenged (Ladson-Billings, 1998). As Ladson-Billings (1998) argues, adopting an anti-racist approach requires educators to take bold, and at times unpopular, positions in order to advocate for transformative action within the classroom. This shift necessitates a move beyond good intentions towards structural change, equipping educators with explicit strategies to question and dismantle both interpersonal racial bias and systemic racism. When designed with equity at the forefront, spaces of early childhood education can offer young children an early experience of a more just and inclusive society.

Professional development programs (PDP) that explicitly engage with anti-racist pedagogy are

increasingly present in international contexts, although they remain uneven in scope, depth, and impact. In-service professional development initiatives addressing race and racism have gained visibility in recent years, partly in response to renewed public debates about structural racism following the 2020 protests against anti-Black racism (Pollock et al., 2022). While these initiatives signal an important shift towards engaging educators in conversations on racial equity, the landscape is contested: alongside such efforts, political and parental groups have mobilized to restrict or ban training that explicitly addresses race and racism. At the same time, professional development that explicitly engages with issues of race and racism among practicing teachers remains a relative underexamined field of research (Matschiner, 2022).

Across many countries, much of the professional development efforts that addresses race and racism is still characterized by fragmented, short-term interventions. Programs are often organized as one-off workshops, frequently delivered by external experts, and tend to reiterate introductory material; what has been called a perpetual return to 'Racism 101' (Matschiner, 2022). These forms of professional development rarely seem to sustain the long-term, critical engagement required to challenge systemic and structural racism in education (Matschiner, 2022; McManimon & Casey, 2018)

To support teachers in this role, professional development programs for anti-racist early childhood education must go beyond superficial diversity training and provide structured opportunities for teachers to engage with anti-racist pedagogy, reflect on their teaching practices, and integrate strategies that actively challenge discrimination. Such programs should be grounded in critical pedagogy and social justice principles, empowering educators to create learning environments where all children feel seen, valued, and respected (Derman-Sparks et al., 2010; Ladson-Billings, 1998). Without these targeted interventions, even the most well-intentioned teachers may struggle to create classrooms that genuinely counteract racial bias and discrimination.

Problem Statement

Despite the growing academic recognition of the need for anti-racist education in early childhood settings (Derman-Sparks et al., 2010, 2023; Escayg, 2020) there is a gap in professional development programs in Flanders that equip educators with the knowledge and skills to implement such practices effectively. Many existing PDP in Flanders focus either on multicultural education and inclusion in early childhood or on anti-racist education for older children, without addressing the specific strategies required to challenge systemic racism and unconscious biases in early childhood classrooms.

To bridge this gap, there is a need for professional development programs that are both grounded in research and practically applicable. To ensure relevance and usability, these programs should be co-developed with practitioners and people of color to ensure relevance and sustainability. The goal of this study was therefore to develop and a high-quality PDP aimed at improving anti-racist competences among early childhood (EC) educators and to critically evaluate the design, implementation, and impact.

Research questions:

1. What are the key design principles for an effective anti-racist professional development program in early childhood education?
2. How do preschool teachers perceive their knowledge, skills and attitudes regarding antiracist education after participating in the professional development program?

Positionality and Ethical Considerations

Given the critical role that positionality plays in shaping research perspectives and outcomes, particularly in the context of anti-racist work, we explicitly outline our own positions to acknowledge how our identities and experiences influence our approach to the research process and its interpretation (Kakar et al., 2023).

The first two authors identify as white women, belonging to the racial majority group in the Flemish context, while the third author identifies as a member of a minoritized group, as a Muslim, and as a woman

with a migration background. The first author has over ten years of experience in early childhood education in Flanders, both as an educator and later as a teacher educator. Having worked as an early childhood educator, the first author recognized a significant gap in her own and her colleagues' anti-racist competences in everyday EC classroom practices. This realization was a key driver in her commitment on the subject and later for this research, aimed at equipping other EC educators with the tools and understanding needed to engage with crucial topics such as identity and diversity. All three authors bring extensive experience in teacher education and a shared commitment to fostering an anti-racist approach in both our professional and personal lives. This commitment has deeply shaped our perspectives and influenced the design of this study, ensuring that it is grounded in a strong awareness of the structural inequities we seek to address.

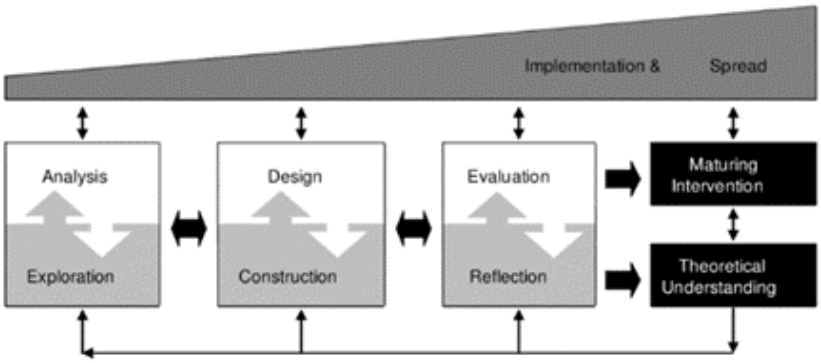
This study was conducted in line with the ethical principles of informed consent, voluntary participation and confidentiality. All participating teachers were provided with clear information about the purpose of the research, their rights, and the use of data, and written consent was obtained prior to their involvement. Anonymity was safeguarded through the removal of personal identifiers, and data were analyzed anonymously and stored securely. The participatory design of the project further ensured that teachers' voices were respected and that they could withdraw at any stage without consequences. Ethical approval for the study was granted by the Ethical Advisory Committee for the Social and Human Sciences at the University of Antwerp.

Method

Educational Design Research

To create a practical and valuable PDP for early childhood educators while also contributing to the literature on anti-racist early childhood pedagogies, we adopted a design-based research approach. More specifically, we applied the method of Educational Design Research (EDR) (Figure 1; McKenney & Reeves, 2018), an iterative and practice-oriented methodology that helps design, test, and improve educational programs for real classroom settings. EDR integrates both theoretical and practical innovation, focusing on refining the intervention while gaining a deeper theoretical understanding (McKenney & Reeves, 2018).

Figure 1
Educational design research



A key aspect of EDR is the close collaboration between researchers and educators from the start, which ensures that the programs developed are directly useful in everyday classroom life (McKenney & Reeves, 2018). EDR has proven to be an effective approach for the design and evaluation processes of PDP for teachers (Boel et al., 2023; Dede et al., 2008). It contributes to theory development as "it privileges ecologically valid studies that embrace the complexity of investigating learning in authentic (as opposed to laboratory) settings." (McKenney & Reeves, 2020). Using this method allowed us to create a PDP that was based on solid theory while also being practical and relevant for early childhood educators.

Another central feature of EDR is that data collection, data analysis and results are not separate

sequential steps but rather iterative processes with impact on the different phases of the project: insights from one step directly inform the next phase of the design. Therefore, rather than presenting the analysis as an isolated step, we describe how data were analyzed within each of the three main EDR phases. This approach allows us to preserve the methodological integrity of EDR and provide transparency about the analytical process at the same time.

Table 1 below summarizes how data collection and data analysis unfolded in each phase, and how analytical insights informed iterative refinement of the PDP.

Table 1
Data collection, analysis, and iterative refinement across the three phases of EDR

Phase (EDR)	Data collection	Data analysis	Iterative outcomes
Analysis & Exploration	10 classroom observations, 10 teacher interviews, 10 principal interviews, literature review	Thematic analysis (Braun & Clarke, 2006)	Identification of 6 design principles
Design & Construction	4 co-design sessions with 8 EC educators (design partners); advisory feedback from experts	/	Development and refinement of PDP prototype aligned with design principles
Evaluation & Reflection	Pilot with 10 educators (5 half-day PD sessions); thick observations, pre- and post-questionnaires, 2 focus groups	Thematic analysis (Braun & Clarke, 2006)	Refinement of PDP content; identification of perceived impact on teachers' knowledge, skills, and attitudes

In what follows, we will first introduce the participants in the study and describe the roles they assumed during the different phases within the EDR methodology. We will then guide you through the methodology of this study, using the three phases of EDR, followed by the results of each phase.

Participants

The research project took place in Flanders, the Dutch-speaking part of Belgium. In Flanders, early childhood education is organized for children between the ages of 2.5 and 6. In the 2023-2024 school year 99.3% of 5-year-olds in the Flemish Region were enrolled in early childhood education (Statistiek Vlaanderen, 2025). Many Flemish cities such as Antwerp, where the research team is situated, are superdiverse in terms of ethnicity, language, culture, and religion. Antwerp, for example, has a population which consists of 173 different nationalities. 49% of children in Antwerp's early childhood education do not speak Dutch at home (Stad Antwerpen, n.d.). The PDP was developed through a collaborative effort involving many stakeholders, including student-teachers, teachers, school principals, and other experts. These experts comprised two teacher educators with expertise in diversity, one staff member from the Centre for Innovation in the Early Years (VBJK), one university professors specializing in early childhood education and interculturality, one professor with expertise in anti-racism and multilingual education, and a staff member from an NGO focused on intercultural education (Studio Globo). As outlined in participatory research literature, stakeholders can assume roles with varying levels of involvement throughout the design process, such as 'users', 'informants', 'testers' or 'design partners' (Druin, 2002; Ponet et al., 2023).

Ten early childhood educators and ten school administrators were involved in the initial *analysis and exploration phase* of the project as 'informants', mapping the context and identifying needs. Their insights provided essential groundwork for understanding the professional development needs in early childhood education.

During the *design and construction* phase, a core group of 8 early childhood educators played a more in-depth role as 'design partners,' actively shaping the content and sequencing of the PD initiative over four half-day sessions. These educators were carefully selected based on their prior expertise and proficiency in intercultural or anti-bias practice in early childhood education. At the same time we made sure diverse perspectives in terms of age (23-46y), years of experience in EC education (0-18), ethnic-cultural (self-described as 'white,' 'native Flemish,' 'Amazigh,' and 'Jewish'), and religious affiliations (Orthodox Jewish, Muslim, and atheist) were represented. This deliberate choice aimed to introduce multi-

perspectivity into the research process, ensuring a broader and more inclusive perspective in shaping the anti-racism PDP.

The selection process involved an open call, to which 29 candidates responded, alongside targeted invitations to individuals with established track records in the field. To ensure complementarity and alignment with the project's goals, the researchers conducted individual selection interviews with prospective candidates. These interviews focused on assessing educators' baseline knowledge of diversity and bias, their attitudes and experience toward engaging with anti-racist pedagogy, and their willingness to critically reflect on their own practices. The purpose was not to exclude participants based on a deficit model, but rather to ensure that the group composition represented a range of perspectives and experiences, and that participants had sufficient proficiency in the topic of anti-racism to enable meaningful peer learning and contributions to the development of the PDP within the development group. Only candidates who expressed reluctance to engage in critical discussions on race and equity, whose professional role did not align with the project scope, or who overestimated their knowledge or held color-evasive perspectives, were not included. This recruitment strategy allowed for a cohort that was diverse, engaged, and capable of contributing productively to collaborative development of an anti-racist PDP, while reflecting the realities of the early childhood education workforce.

For the *evaluation and reflection phase* of the pilot study, ten teachers participated in the professional development program, registering in pairs from the same school. The participating schools represented a wide range of sociocultural contexts—from predominantly white and ethnically homogeneous institutions to highly diverse schools with multilingual and multicultural populations. This diversity allowed us to explore how educators in different environments experience and engage with anti-racist professional development, and highlighted the importance of context-responsive approaches. In addition, members of the advisory board (both academic and more practice-oriented experts), teachers and students enrolled in our teacher education course *Diversity & Education* were designated 'testers', as they engaged with and critically evaluated early iterations of the PDP.

Analysis and Exploration

In this initial phase of EDR, we analyzed the problem and explored contextual factors, which informed the formulation of the design principles for the PDP. This step ensures the program meets existing needs of educators and their teaching environment. It's important to assess both teacher needs and the context in which they work to create an effective and responsive PDP (McGrady, 2017; Romijn et al., 2021).

We conducted ten qualitative exploratory observations and interviews in early childhood classrooms across Flanders. We made sure to include diverse contexts, such as urban and rural settings, as well as teachers with varying levels of experience, and both teachers who felt confident or uncertain in addressing diversity and equity. The observations were made during a read-aloud of a multicultural children's book and the following conversations with the young children. We sought out to identify good practices, missed teachable moments, and the general nature of the conversations surrounding diversity and equity that took place with the children. Using thick, ethnographic observations, we observed how the educators approached these conversations and how they navigated sensitive topics related to diversity, inclusion, and social justice. Directly following these observations, we conducted semi-structured interviews with the same educators to gain deeper insights into their learning needs, perceived barriers, best practices, and potential opportunities for professional growth in this area. This step provided a nuanced understanding of the challenges and successes that early childhood educators face when engaging with topics of diversity and equity in the classroom.

Next, we expanded the scope of our context analysis by conducting semi-structured interviews with ten school principals. These interviews were crucial for gaining a meso-level understanding of the specific context of early childhood institutions. The discussions focused on the professional development needs and priorities of the school teams, as well as the institutional and environmental factors that influence teaching practices. These interviews were conducted either in person or online via Microsoft Teams, ensuring flexibility in participation while maintaining a high level of engagement with the school leaders.

In addition to the observations and interviews, we carried out a thorough literature review on anti-bias and intercultural teacher professional development. This review included both theoretical and empirical studies (e.g. Agirdag et al., 2016; Dursun et al., 2021; Vervaet et al., 2018), as well as reviews and meta-analyses that provided a broader understanding of effective approaches to PD in and beyond inclusion, diversity and anti-bias education (e.g., Merchie et al., 2018; Romijn et al., 2021).

A thematic analysis was conducted, following the six phases outlined by Braun and Clarke (2006): familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. After becoming familiar with the anonymized transcripts of interviews and observations, the three researchers independently coded the data to ensure reliability and minimize bias. Through iterative discussions, a shared coding framework was developed, after which the codes were clustered into overarching themes and subthemes, reviewed against the dataset, and refined for coherence and validity (Braun & Clarke, 2006).

This analysis combined with results from the literature research, resulted in six design principles that served as the foundation for the design, development, and evaluation phases of the PDP in anti-racist EC education.

Design principles, within the framework of design-based research, are evidence-based heuristics that guide the development and implementation of educational interventions (van den Akker, 1999). By explicitly formulating these principles, we established a structured yet flexible framework that guided every stage of the design process. These design principles were not only central to the initial prototype of the PDP but also played a critical role in evaluating and refining the PDP to meet the needs of educators working towards anti-racist early childhood education.

Design and Construction

Together with eight teacher experts acting as 'design partners', we engaged in four intensive half-day design sessions, during which critical decisions were made about the program's content, instructional activities and evaluation strategies, based on the previous defined design principles. This collaborative approach ensured the PDP was not only based on academic theory but also tailored to the practical needs and expertise of experienced educators in the field. The design and development process for the PDP spanned nine months, during which the program underwent several stages of feedback and prototyping. As we developed each prototype of the PDP, we ensured alignment with the initial design principles, as outlined in the results of the analysis phase (Boel et al., 2023). This iterative process resulted in the final version of the PDP.

During the design sessions the educators contributed their insights, experiences, and expertise, ensuring that the program was practical, contextually relevant, and reflective of the real-world challenges faced by early childhood educators in promoting anti-racist education.

The expert-teachers engaged in brainstorming sessions, where they exchanged their personal and professional experiences, good practices and ongoing struggles with diversity and anti-racism in their classrooms. This shared knowledge helped identify common obstacles and strengths in current practices. Teachers also brought anecdotes from their own classrooms as case studies, which we could use as learning materials in the PDP. These cases often involved sensitive or challenging situations related to diversity, racism, or cultural misunderstandings. Through group discussions, the expert-teachers provided constructive feedback on these cases, exploring anti-racist strategies and solutions that could be applied in similar scenarios. This reflective approach allowed both the researchers and teacher-experts to build a more nuanced understanding of the complexities involved in addressing racial and cultural issues in early childhood education. Additionally, the design sessions included the sharing of practical tools, activities, and resources that the teacher-experts had successfully used in their classrooms. These materials were discussed, refined, and adapted based on feedback from the group, improving their relevance and effectiveness in promoting anti-racist education. Teachers also tested the materials and activities developed by the researchers or other design partners in their classrooms, providing valuable feedback to further

refine and improve the resources.

Reflection and Evaluation

In the third phase of the project, we focused on testing and evaluating the PDP. The eight design partners provided feedback on the first prototype. At each meeting, we piloted fragments and activities of the PDP, allowing us to gather immediate feedback from the design partners. This process enabled us to refine and adjust elements of the content and structure, ensuring that the program was contextually relevant to both the Flemish education system and the local community's needs. Next, a walkthrough of the prototype was conducted with a group of experts in the field, further validating the program's approach and ensuring that it met the expected standards of quality and effectiveness.

Finally, the PDP was tested in a pilot study during five half days with ten participating EC-educators, who were novices in anti-racist early childhood education, and who provided feedback based on their firsthand experience with the program. During this pilot study, we assessed the overall effectiveness of the PDP in facilitating meaningful changes in teachers' practices, knowledge, and attitudes toward anti-racist education. To this end, the researchers conducted detailed, thick observations of the PD sessions during the pilot. These observations focused on the interactions between the teachers, the content, and the training activities. The aim was to capture how well the teachers engaged with the anti-bias training, the teaching strategies used, and the (growth in) nature of their responses to the content. Observers took open-ended field notes on blank sheets, allowing for flexible and context-sensitive documentation of interactions and events. These notes were later coded thematically alongside other data sources.

After each session, the researchers summarized their findings and compiled a list of suggestions for improvements, which were implemented in the final prototype of the PDP. This reflective process was essential to ensure the program's continuous refinement, ensuring that it was responsive to the teachers' needs and aligned with the objectives of the professional development.

In addition to the observations, we conducted open-ended pre- and post-questionnaires, following Nganga (2015) and two focus groups at the ending of the PDP, to gather qualitative data on the perceived impact of the PDP on the teachers' anti-racist competencies. The pre- and post-surveys helped capture changes in teachers' knowledge, skills, and attitudes regarding anti-racist education. The focus group offered a space for teachers to discuss their experiences, reflect on their learning, and provide feedback on the experienced effectiveness of the PDP.

As in the earlier stage of this study (cf. analysis & exploration), we again analyzed the qualitative data to assess the perceived and observed impact of the PDP, using thematic analysis as outlined by Braun and Clarke (2006). Focus groups were recorded and transcribed anonymously. Answers to open-ended questions in the survey were anonymized and compiled into a single file. After individual manual coding, the three researchers compared and discussed their findings until consensus was reached on the codes, which were then structured into overarching themes.

This approach helped identify key themes related to the impact of the PDP on teachers' anti-racist competencies, focusing on their increased awareness, understanding, and application of anti-racist teaching practices. The thematic analysis allowed us to discern how the program influenced their pedagogical approaches, their interactions with children in diverse classrooms, and their personal attitudes towards race and racism. Through this analysis, we aimed to assess not only the immediate effects of the program but also its potential for long-term transformation in teaching practices.

Findings

This section presents the findings of the study, structured according to the three phases of the EDR method: (1) analysis and exploration, which outlines the theoretical and empirical foundations used to develop the design principles; (2) design and development, which describes the PDP that was co-created based on these design principles; and (3) evaluation and reflection, which reports the perceived impact of the PDP on participating early childhood teachers.

Analysis and Exploration

Based on the data gathered in the analysis- and exploration phase, we identified six design principles that served as the foundation for the design, development, and evaluation phases of the PDP in anti-racist EC education. This provides an answer to research question 2, which is: What are the key design principles for an effective anti-racist professional development program in early childhood education? These six design principles, grounded in both empirical research, teaching practices and the lived experiences of early childhood educators, provide a framework for developing a professional development program that is both relevant for the local context and capable of fosters meaningful change in teachers' practices, knowledge, and attitudes toward anti-racist education.

The key design principles that guided the development of the professional development program, along with the underlying rationale for each principle.

Diversity Pedagogical and Content Knowledge

To effectively address issues of equity and social justice in the classroom, teachers must develop a comprehensive knowledge base that encompasses both subject-specific expertise and a deep understanding of cultural diversity. This includes awareness of cultural differences, the mechanisms underlying stereotyping, and the various dimensions of students' social, cultural, and linguistic backgrounds, as well as how these factors influence their pedagogical needs (Dursun et al., 2021; Gay, 2018). Our interviews and observations in early childhood classrooms in Flanders revealed that early childhood educators often experience uncertainty about how to address and value cultural, ethnic and racial diversity in their classrooms. Strengthening this knowledge is essential, as it shapes teachers' instructional practices, lesson planning, assessment strategies, and students' expectations. A striking example of this was evident in how educators handled conversations on religion, skin color, or hair texture. Many expressed discomfort when children raised such topics, as they lacked the necessary knowledge and self-efficacy to facilitate open and developmentally appropriate discussions.

> The children had discussions about Allah and God, like 'Allah is the boss'. I think that's difficult. They can talk about it, but sometimes it becomes too much and then I said 'I don't want to hear the word 'Allah' anymore in this classroom'. Maybe that's wrong. Maybe I stopped the conversation because I don't know enough about it. - *EC educator, 5-year-olds*

This educator's reflection illustrates a broader challenge: when teachers do not feel equipped and miss the knowledge needed to address diversity-related topics, they may limit opportunities for meaningful dialogue and miss valuable teachable moments, even unintentionally silencing or dismissing important aspects of children's identities. These concerns align with findings from the literature, which emphasize the need for targeted professional development for knowledge development (Dursun et al., 2021). The PDP must therefore aim to enhance educators' knowledge of racial, cultural and religious diversity and provide them with practical strategies for integrating these topics into their anti-racist teaching practices.

Intercultural Skills

A key challenge in fostering equitable and anti-racist EC classrooms is not only possessing knowledge about diversity but also having the skills to engage in meaningful and developmentally appropriate conversations about it (Romijn et al., 2021). In our study, many teachers visibly and often explicitly struggled with navigating discussions on race, religion, and cultural differences in their classroom.

> How much should I say about these topics? And how should I say it? How should I guide read alouds? - *EC educator, 6 year-olds*

One teachers explained the complexities they grappled in during everyday practice with striking a balance between acknowledging diversity, normalizing it, 'performing inclusivity' and avoiding unintentional othering:

> I sometimes try to find the balance between talking about it and being open but not emphasizing it. Like in the book:

> 'Look there's a kid in a wheelchair' and not really pointing it out. It's just the world how it is. That's another balance I'm still kind of searching for. That those books are just books and not necessarily 'let's talk about how inclusive we really are'. - *EC educator, 4 year-olds*

These reflections illustrate the complexities teachers face in embedding diversity naturally into their pedagogical practices while avoiding both overemphasis and omission. Developing intercultural skills is therefore critical in equipping educators with the confidence and strategies to navigate these nuanced classroom interactions effectively.

Data from the interviews as well as the observations showed that multiple EC teachers were not sure how to discuss topics such as race, religion, or cultural differences. This uncertainty and lack of skillset often led to avoidance of such conversations, even when they were relevant to the children's lived experiences. This hesitation to engage was particularly evident during the observed read-aloud sessions, where books provided opportunities to discuss themes of race, religion, and cultural diversity. Yet, six out of ten teachers either ignored children's questions related to race, religion, or culture or actively redirected the conversation. These findings align with broader research indicating that many teachers feel unprepared to engage with culturally and linguistically diverse students, leading to educational practices that reinforce rather than challenge existing inequities (e.g. Banerjee & Luckner, 2014; Michel & Kuiken, 2014).

In view of increasing anti-racist competences, it is essential to address skills, actions and behavior in the daily context in our PDP as important components within intercultural competences (also including professionals' knowledge, beliefs, attitudes), as all these aspects are important and interrelated (Slot et al., 2019).

Learning Materials

Observations and teacher interviews highlighted that diverse representation and culturally responsive learning materials were often missing or underutilized in early childhood classrooms. White dominance in educational materials was particularly evident in several observed classrooms, where nearly all picture books, posters, and learning aids featured exclusively white children as the normative representation. Teachers who actively sought more inclusive resources expressed frustration over the limited availability of stereotype-free, diverse materials:

> One time I took 10 picture books from the library. I took a quick look in these books and in the end there were only two that were usable. Multicultural books about the holiday of saint Nicolas which do not contain the stereotypical image of black Pete are very hard to find. I find this stupid. That's why I use a lot of books with animals as characters. - *EC educator, 5 year-olds*

> Now we are learning about body parts. I try to make sure to show different skin colors. I hardly find any body parts [in picture books] that are not white. I spend a lot of time searching to show a broad representation, but it's just very difficult […] - *EC educator, 4 year-olds*

These statements underscore the pervasiveness of whiteness as the default in Flanders' early childhood education system and learning materials such as picture books. The systemic omission of racially and culturally diverse identities in classroom materials is more than just a matter of oversight but reflects a deeper issue: Eurocentricity, where white children and white cultural norms remain the unmarked, universal standard (de Bruijn et al., 2021).

Literature suggests that the use of culturally inclusive and representative materials is critical in fostering an equitable learning environment (e.g. de Bruijn et al., 2021; Derman-Sparks et al., 2010). All educators in our study recognized the importance of using books and educational materials that reflect the diversity of their students' backgrounds. While some teachers actively sought out alternative resources, spending additional time searching for materials that counteract white normativity, others felt unqualified to critically assess the implicit messages embedded in mainstream educational materials. In this regard, the PDP should encourage the critical selection and use of learning materials that are not only diverse but also stereotype-free and inclusive of various social, cultural and ethnic perspectives.

Community of Learners

Conversations among the anti-racist expert teachers during the design process revealed that many teachers who felt the strongest sense of urgency in this matter, felt rather isolated in their efforts to address issues related to bias, discrimination, and antiracism. These teachers noted that discussing matters on inclusivity, ethnicity and structural inequalities sometimes made it difficult to engage with colleagues, as they were met with discomfort, avoidance, or even resistance from colleagues. The literature on effective antiracist education as well as literature on sustainable professional development for teachers stresses the importance of building a community of practice, where educators can continuously reflect and learn from each other (Derman-Sparks et al., 2023; Hard, 2013; Merchie et al., 2018; Romijn et al., 2021). In addition, in the current political climate, individual actions in anti-racist education can leave practitioners vulnerable, not only potentially leading to professional isolation, but even conflicts with institutional policies and contractual obligations (Yıldız, 2021).

Wynter-Hoyte and colleagues (2022) emphasize that solidarity is fundamental to the long-term sustainability of anti-racist education. More than just peer support, solidarity functions as a transformative space in which educators, families, students, and administrators collectively cultivate the resilience and determination needed to engage in this work. Through these collaborative relationships, educators not only draw strength and motivation to persist but also develop the awareness to recognize when self-care and reflection are necessary (Wynter-Hoyte et al., 2022).

Thus, the PDP should foster a supportive learning community where educators can engage in peer-supported reflection and shared learning, enhancing their capacity to implement anti-racist education effectively and sustainably.

Guided Critical Reflection

Anti-racist EC-educators must engage in ongoing, critical interrogation of their own and their schools' policies, beliefs, behaviors and positionality to dismantle exclusionary and racist practices in education (Husband, 2012; Romijn et al., 2021). This critical self-examination is essential for recognizing and addressing racial injustices in education (Husband, 2012). The extent to which educators recognize their own cultural biases, understand the impact of social injustice in education, and value culturally responsive teaching affects teachers' readiness to enact meaningful change (Romijn et al., 2021).

However, not all forms of reflection are equally effective. To achieve a deeper understanding of diversity and (the impact of) racism in education and society, it is essential to engage in critical self-reflection and remain open to reevaluating one's core values and beliefs.

The PDP should, therefore, include structured and guided opportunities for educators to critically reflect on their own practices, beliefs, and deeply ingrained biases, encouraging them to question how these factors may influence their interactions with children and their approaches to teaching (Affolter, 2017).

Policy and Shared Vision

For early childhood educators, implementing anti-racist education begins with a thorough analysis of school policies and curricula questioning whose perspectives are centered and which biases may be (unintentionally) reinforced (Husband, 2012).

As Romijn et al. (2021) suggest, successful PD also recognizes that teachers are part of a larger school community. A team-based strategy and the inclusion of key figures, such as principals and counselors, are vital for creating an environment where new strategies and practices can thrive. Such a collaborative and systemic approach is necessary to facilitate meaningful and lasting change (Romijn et al., 2021).

The teachers in our study also highlighted the crucial role of school policies and institutional support in shaping their practices. One teacher shared how their principal's comment about dividing students based on skin color for equitable learning outcomes illustrated the deep-seated nature of institutionalized racism.

> My other colleagues can make statements like: 'it's always the same, those Moroccan kids, ...' I can get really annoyed by this. [...] . The school however was very interested in this research. It is important that our school leader is open to this. We have a multicultural school, so it is normal that we do a lot with this and make use of the fact that this [professional development project] is present. - *EC teacher, 4 year-olds*

This example illustrates the need for policies that explicitly support anti-bias and anti-racist practices in schools. In addition, according to the literature, professional development is more effective when it is aligned with school policies and a shared vision (Derman-Sparks et al., 2023; Merchie et al., 2018). Teachers' practices are influenced not only by their personal knowledge, skills, dispositions, and goals but also by professional networks, school policies, and national discourses for example. This is why a one-size-fits-all approach to professional development seems unlikely to be effective. Making sure interventions are well-embedded and contextualized means aligning them with the local needs of teachers, families, and children, as well as considering resources, school district and policies (e.g., Romijn et al., 2021; Wildt et al., 2017).

Therefore, the PDP should not focus solely on individual educators. It is essential to engage school leaders in promoting a whole-school approach to anti-racist education, ensuring institutional support for sustainable, long-term change.

Design and Construction

In this section, we will outline the structure, content and pedagogical strategies of the PDP as it was piloted. The design of the PDP was built on the key design principles as mentioned in the previous section and the four core goals of anti-bias education, as defined by Derman-Sparks et al. (2010):

1. **Identity:** Children develop self-awareness, confidence, and pride in their families and social identities, fostering a strong sense of who they are.
2. **Diversity:** Children learn to appreciate and celebrate human diversity, using accurate language to describe differences and forming meaningful, empathetic connections with others across all dimensions of diversity.
3. **Justice:** Children begin to recognize and understand injustice, gaining the language to identify unfairness and realizing that injustice causes harm to individuals and communities.
4. **Activism:** Children cultivate a sense of empowerment and acquire the skills necessary to take action against prejudice and discriminatory behaviors, either alone or in collaboration with others (Derman-Sparks et al., 2010).

Combined with the six design principles, these four clear goals ensured a comprehensive and purposeful approach. The final PDP spans four sessions, each focused on different critical aspects of anti-racist education. By asking at least two teachers from each school to participate in the PDP, we aimed to create a start of a supportive school-based network that could continue to share insights, resources, and strategies after the professional development sessions, fostering a more sustainable and wide-reaching impact on the school's approach to anti-racist education.

Each design principle and goal for anti-bias education (Derman-Sparks et al., 2010) was carefully translated into specific content and pedagogical strategies, ensuring the program aligned with both empirical and practical considerations as outlined during the analysis and exploration phase. In table 2 we present this alignment.

Table 2

Translation of design principles into concrete strategies and content within the PDP

Design principle	Content & Pedagocial strategies
Diversity content & pedagogical knowledge	• Introducing the 4 goals of antiracist education • Input and exercise on sensitive language use • Input and exchange about specific diversity content
Intercultural skills	• Input and excercises on starting & guiding conversations with young children about identity, diversity, social justice; starting from children's books, materials, activities • Noticing and reacting to teachable moments

	• Bringing activism to the classroom
Learning materials	• Input and exercise on representation in the classroom materials and children's books • Sharing of useful recourses (shops, social media, libraries with a focus on diversity in education)
Community of learners	Content • Creating a brave space • Input and exercise on working together with colleagues and parents PDP Strategies • Providing a small group of learners (max. 12), encouraging participation of 2 colleagues
Guided critical reflection	• Reflection exercise on identity/identities • Reflection exercise on representation, celebrating diverse holidays, etc. • Guided discussion on sensitive language use
Policy and shared vision	Content • Reflection exercise on transfer from PDP to school policy level PDP Strategies • Inviting principals or policy member of each school during the first session

We describe the structure and activities within the four days of the PDP to provide the reader an even clearer understanding of the final PDP as it was piloted and the translation of the design principles and the goals of anti-racist education to concrete strategies and content of the PDP.

Day 1: The first session focuses on establishing a sense of urgency and foundational knowledge on identity and development in the early years. It lays the groundwork for understanding the origins and psychological development of bias, discrimination, and racism. The session centers around the first goal of anti-bias education defined by Derman-Sparks and colleagues (2010): fostering a healthy sense of identity and positive self-image in every child.

Teachers begin with reflective exercises on their own identity, biases, and privileges, exploring how these impact their teaching. By questioning their assumptions, particularly those related to white normativity, they are encouraged to think critically about how to actively create a more inclusive and diverse learning environment that supports a strong self-image in every child.

A central activity is the critical analysis of picture books, which serves as a powerful tool to uncover and challenge deep-rooted, often invisible, biases that uphold white normative standards in children's literature and educators' everyday language. This exercise helps teachers identify what makes a book genuinely inclusive and equips them with tools to disrupt normalized biases that may be unconsciously perpetuated.

School leadership participates in this session to establish shared urgency, foster institutional commitment, and support school-wide transfer of anti-racist practices. Together, educators and leaders exchange ideas for translating insights from the PDP into ongoing practices with their school teams, fostering a whole-school approach to anti-racist education.

Day 2: The second session focuses on the second goal of anti-bias education: acknowledging and valuing diversity. This is translated into theory and practical exercises on the use of sensitive, inclusive language and on how to initiate and engage in meaningful conversations about diversity.

Through guided reflection and role-play, teachers explore appropriate language to discuss diversity and practice facilitating such conversations in developmentally appropriate ways. A hands-on activity, in which teachers mix primary colors to represent different skin tones, further supports their understanding of how to engage children in discussions about skin color and identity in safe, affirming ways.

The session also explores how to approach topics such as cultural celebrations and holidays, empowering teachers to meaningfully include diverse traditions in their classrooms and to guide these discussions thoughtfully and respectfully.

Day 3: The third session centers on the third goal of anti-bias education, namely recognizing (in)justice. Teachers engage with theory and practical strategies for initiating developmentally appropriate

conversations with young children about fairness and unfairness. The session deepens insights into effective ways of responding to children's questions about diversity and injustice, with educators practicing these responses in small groups. Attention is also given to guiding conversations with parents, focusing on how to incorporate anti-racist perspectives in parent-school partnerships and navigate differing viewpoints and potential resistance to anti-racist education. Teachers are supported in developing strategies to communicate the value of inclusive education and in sharing their experiences of collaborating across cultural differences.

Day 4: The final session centers around goal 4 of anti-bias education, empowering both educators and children to take action in fostering an anti-racist environment. The session emphasizes how educators themselves can stand up against injustice in education and broad society, how they can integrate these actions into their teaching practices. Specific strategies are provided to help children develop the skills to stand up for themselves and others when they witness or experience injustice. Educators reflect on their own role as agents of change and explore ways to nurture a classroom culture that encourages solidarity, advocacy, and collective responsibility.

To ensure a sustainable implementation of the content of the PDP to teacher's classrooms and wider school communities, the program concludes with offering strategies to work together with their school team towards anti-racist education and developing concrete action plans.

Evaluation and Reflection

During the pilot of the PDP, we gathered qualitative data from the participating teachers through focus groups, questionnaires with open ended questions and observations during the sessions, in order to provide an answer to the following research question: *How do preschool teachers perceive their knowledge, skills and attitudes regarding antiracist education, before and after participating in the PDP?*

The results from this pilot phase demonstrate a promising shift in the teachers' awareness and approach to issues of race, identity, and diversity within their classrooms. More specifically, participating teachers reported growth in the following five after following the PDP.

Increased Use of Sensitive and Inclusive Language

Participating teachers demonstrated an increased sensitivity in their language use, reflecting more on the impact of their language and incorporating more inclusive and culturally appropriate language in their interactions.

One of the participating teachers explains:

> I have to really think about what I should say instead [of what I am used to]. I never mean it in a bad way, but I do have to think about it, and I still need to get used to making that choice.

Another educator stated:

> I also notice that the use of [more inclusive] words is something I still have to grow into. I have to think very much about what to say and I never mean it badly, but I have to think about it and I still have to get used to that choice.

Heightened Awareness of Biases and Perspectives

A notable outcome of the PDP was the increased self-awareness among participants regarding their own social positioning, cultural assumptions, and internalized biases. Several teachers reported being confronted for the first time with their own privilege and normalized worldview. One teacher shared:

> I had never realized that I am privileged as a white person, [...] and I found that very confronting because I had never thought about it before."

> It hit me that I am from Belgium. That others are more aware of their own roots. I assumed that my roots were just 'normal'.

These reflections illustrate how the PDP prompted participants to critically examine their own identities, disrupting long-held assumptions about cultural neutrality or universality. Teachers began to recognize how whiteness and dominant cultural norms often go unnamed and unexamined, shaping both

their classroom practices and interactions with children and families.

This heightened awareness also translated into more intentional classroom practices. One participant explained:

> I try to ensure that when working on a theme, I look through different lenses and highlight sufficient diversity. I make an effort not to focus solely on the white middle class perspective and to introduce more variety. I am much more conscious about the visual materials I use in the classroom and try to make them as diverse as possible.

Such statements reflect the participants' growing capacity to de-center dominant perspectives and adopt a more inclusive and critical lens in their pedagogical choices. The ability to question what is presented as "normal" or "neutral" is a key step in developing an anti-racist teaching identity.

Enhanced Anti-Racist Teaching Skills

All participating teachers reported feeling more equipped to engage with complex topics such as culture, skin color, family dynamics, and stereotypes, recognizing the urgency of addressing these issues head-on rather than leaving them unspoken.

> Since the first session, I have had many more conversations with my children about culture, skin color, family situations, stereotypes, and so on. I'm also getting better at asking focused questions and allowing the children to share their thoughts. I notice that, little by little, I'm helping them to view things from a different perspective. I also use much more intercultural picture books now and I'm actively seeking them out.

This statement illustrates a shift towards a more intentional and reflective approach to teaching about diversity. The teacher's growing ability to facilitate conversations around complex topics like race and culture indicates a move from passive to active engagement with students' diverse identities.

All participating teachers mentioned the increased use of intercultural picture books in their everyday practice. This is not just a change in teaching materials but can be seen as an active effort to disrupt the dominant, Eurocentric narratives and make space for a broader, more inclusive range of stories.

Other teachers also expressed a deeper understanding of how to address diversity and equity in their classrooms. One teacher noted:

> I have learned that [identity and diversity] really needs to be explicitly mentioned and not assumed to be self-evident. [I am] being more aware of children's reactions.

This quote emphasizes the importance of making diversity visible and actively discussing it with students, rather than assuming that children will naturally understand these concepts. Teachers reported becoming more attuned to children's reactions and inquiries, which allowed them to guide conversations on diversity in a more informed and responsive manner.

Strengthened Collaboration with Colleagues and Parents

A notable increase was observed in teachers' abilities to collaborate both with colleagues and families towards anti-racist education. All participants expressed a newfound confidence in engaging in discussions about diversity within their schools, both in culturally divers and predominantly white environments. As one teacher explained:

> I am making sure that diversity and activities are thought about more critically in school work groups.

Two teachers expressed pride in taking on a more visible anti-racist mandate in their school team:

> We feel like the diversity ambassadors at our school. Colleagues come to us with questions and ideas. I'm proud of that.

Another teacher remarked,

> Now I also have the right tools to address and 'persuade' colleagues to deal with diversity, even though it's a predominantly white school.

This highlights the way in which the professional development program equipped educators not only with knowledge but with the skills to advocate for diversity in contexts where it might have been overlooked or resisted.

In parallel, teachers described a shift in how they engage with families, moving away from top-down communication rooted in dominant cultural norms, toward a more dialogical, anti-assimilationist approach. One teacher explained,

> Clarifying that collaborating with parents and proactively asking them beforehand what holidays they think are important to pay attention to in my classroom activities, was a very helpful tip.

Another teacher reflected:

> When it comes to [difficult] conversations with parents, I used to say often and easily 'because it is like this here.' Not with bad intentions, but because I didn't know how to approach it. I now pay more attention to people with a migration background preserving their own identity. They do not need to adopt our Flemish values. And because of that, I might have miscommunicated, due to a lack of knowledge and assumptions.

This quote highlights a significant transformation in the teacher's cultural sensitivity and communication practices. Previously, the teacher relied on a simplified and somewhat exclusionary stance, without considering the complexity of cultural identity. With the program's focus on multiperspectivity, empathy and the value of diversity, this teacher now recognizes the importance of acknowledging and respecting cultural differences, particularly for children and families with a migration background. The teacher's increased self-awareness and commitment to better communication exemplify how the program fostered growth in understanding and articulating cultural sensitivity in interactions with parents.

Greater Courage, Confidence, and Willingness to Act Against Racism in Practice

Teachers described feeling more equipped to initiate conversations about diversity and to intervene when witnessing racism or discrimination in action. As one participant noted on the grown confidence for their everyday practice:

> I feel more confident about having conversations with toddlers about diversity.

Another elaborated on their strengthened ability to respond thoughtfully and effectively in challenging situations, not only in the classroom but also among colleagues and other adults:

> [...] and I have the feeling that I can give more well-founded answers. I will react faster when I see someone say or do something racist, after following the masterclass. I learned that different situations require for different kinds of answers or acts.

These reflections illustrate a shift from hesitation or silence to more courageous, context-sensitive forms of action. Rather than avoiding or minimizing racism, teachers began to position themselves as proactive agents of change within their classrooms and schools.

Additionally, teachers reported becoming more aware of subtle instances of bias and microaggressions in their own classrooms. One teacher shared:

> I am much more aware of engaging in conversations about things I overhear, such as when someone laughs at another person's last name, I now ask myself why they find that funny.

By questioning why certain actions or comments are made, this teacher is positioning themselves as a proactive agent in challenging racist attitudes. It illustrates a heightened sensitivity to microaggressions and the teacher's commitment and capability to address discriminatory behaviors when they arise.

Discussion

The objectives of this study were to a) develop a sustainable, evidence informed, practice-oriented PDP and b) gain insight into the impact of this PDP to enhance early childhood educators' anti-racist competences in Flanders. As these objectives are oriented towards both maturing an intervention and deepening theoretical understanding, we employed EDR as a systematic, participative and iterative research methodology. By starting from a critical analysis of current practices and experiences in early childhood classrooms in Flanders, a thorough literature review and actively involving teachers in the co-design process, the PDP was tailored to the specific needs regarding anti-racist early childhood education in Flanders, increasing the likelihood of sustainable implementation.

Our first research question was *What are the key design principles for an effective anti-racist professional development program in early childhood education?* .

Previous research denotes the frequent lack of explicit and clear descriptions of the design principles underlying PDP (e.g. Vansteelandt et al., 2019). The current study addresses that gap by articulating not only the key design principles and their rationale but also their operationalization and implementation within a PDP on anti-racist education for early childhood educators. By making these design principles explicit, we provide a structured framework that can inform the development of similar initiatives, ensuring they are both research-based and practically applicable in fostering inclusive and anti-racist learning environments. The resulting six key design principles for an anti-racist PDP for early childhood educators in the context of Flanders, Belgium, are:

1. **Diversity pedagogical and content knowledge** – Ensuring that EC educators are equipped with theoretical insights and knowledge on key concepts as diversity, (anti)racism and cultural knowledge as 'halal', holidays and so on.
2. **Intercultural skills** – Supporting educators in developing strategies and skills to engage meaningfully with children and families from diverse backgrounds in conversations and activities.
3. **Learning materials** – Encouraging the use of diverse and inclusive resources, including children's books, classroom materials, and teaching aids that challenge dominant narratives. Critically examining existing materials and knowing where to find resources.
4. **Community of learners** – Creating a collaborative learning environments where educators share experiences, reflect critically, and build collective expertise.
5. **Guided critical reflection** – Embedding structured reflection exercises to help educators examine their own identity, biases, policies and refine their teaching practices.
6. **Policy and shared vision** – Involving school leadership and fostering a whole-school approach to anti-racist education.

Yet, merely listing design principles is insufficient (Rijlaarsdam et al., 2018; Vansteelandt et al., 2019); their effectiveness depends on careful operationalization in alignment with the broader objectives of the program. This study provides a detailed account of how each principle was embedded in both the program's content and pedagogical strategies. In this way, we contribute to the broader discourse and knowledge-development on professional development in anti-racist education. Furthermore, this structured approach enhances the potential for replication, adaptation, and further refinement in diverse educational contexts (Vansteelandt et al., 2019)

To answer the second research question, '*How do preschool teachers perceive their knowledge, skills, and attitudes regarding anti-racist education after participating in the PDP?',* this study explored early childhood educators' self-reported growth through two focus groups and open-ended pre- and postquestionnaires.

The findings indicate a growth among early childhood teachers in five critical areas related to anti-racist education:

Increased use of sensitive and inclusive language: A core aspect of antiracist education is the critical awareness of language as a tool for constructing social realities and reinforcing power structures (Freire, 1970).

Therefore, it's hopeful that teachers in this study demonstrated a heightened sensitivity to the racial and cultural implications of their language. They reported making deliberate efforts to replace traditionally normative or harmful language with more inclusive alternatives. This demonstrates an emergent critical language awareness, wherein teachers begin to interrogate how both implicit and explicit linguistic choices perpetuate or challenge racialized power dynamics in the classroom

While this is a positive outcome, it is also crucial to recognize that critical awareness of one's language is an ongoing process requiring continued reflection and practice. As one participant noted, the conscious choice of words and ways of speaking to and about children remains challenging, highlighting the importance of ongoing support in developing these competencies.

Heightened awareness of biases and perspectives: The PDP also encouraged deeper self-reflection, particularly in terms of the participants' own racial identities and privileges. Educators' heightened awareness of their positionality as mainly white individuals within predominantly white institutions illustrates a central tenet of antiracist education: for teachers to confront their own biases and acknowledge their complicity within racial hierarchies. Reflections from participating educators in the PDP align with research on white normativity (Bonilla-Silva, 2006) and the ways in which whiteness remains unmarked, positioning white identities as the default standard. Through different strategies and reflective exercises, the PDP facilitated the initial stages of racial identity development (Helms, 1995), encouraging participants to critically interrogate their own racial socialization.

The discomfort expressed by teachers upon realizing their racial privilege mirrors broader discussions on white fragility and resistance to confronting structural inequalities. Importantly, this awareness translated into more inclusive classroom practices. Teachers reported actively looking through "different lenses" when designing themes or activities, making efforts to decenter whiteness and create space for multiple cultural narratives. This shift indicates that identity awareness was not only internal but also pedagogically enacted.

Enhanced anti-racist teaching skills: Anti-racist education requires a fundamental transformation of pedagogical practices, ensuring that curricula actively disrupt white dominance and center historically marginalized voices. Participating teachers indicated that the PDP enabled them to develop concrete anti-racist educational skills, including the ability to identify and address racism in classroom interactions, start and guide conversations on diversity and design purposeful and developmentally appropriate anti-racist learning activities.

Additionally, participants became more intentional and confident in selecting and adapting classroom materials to ensure that diverse racial and cultural identities were not only represented but affirmed. They critically analyzed children's books, visual displays, and curricular resources, removing or modifying materials that reinforced stereotypes and integrating content that fostered racial justice and inclusion.

By fostering guided critical self-reflection, pedagogical examples and cases to practice on, the PDP empowered teachers to move beyond performative inclusion and towards transformative, anti-racist teaching practices. However, for these changes to be sustained, anti-racist education must be embedded within broader school structures, ensuring that individual efforts are reinforced by collective institutional commitment.

Strengthened collaboration with colleagues and parents: The educators in this study reported a growth in their ability to collaborate with both colleagues and parents in fostering anti-racist education. This shift reflects a recognition of their role as advocates both within divers and within predominantly white educational spaces. Several teachers for example highlighted how after one of the sessions of the PDP, they consulted families about important holidays broadening their own perspectives and leading to more meaningful and representative festivities.

Beyond individual classrooms, participants also reported initiating conversations in school-wide working groups, ensuring that diversity became a central consideration in broader pedagogical discussions. These findings suggest that the PDP not only empowered teachers individually but also created ripple effects, strengthening collaboration at multiple levels within the school community. Notably, several teachers also reported that, after the PDP, they were consulted more often by their peers for guidance on inclusive practices, positioning them informally as 'diversity ambassadors' within their schools. This recognition suggests the beginning of leadership development in anti-racist education among

participants.

This also further highlights the potential of collective learning communities (Wynter-Hoyte et al., 2022), where educators, families, and students engage in shared resistance against white-dominant schooling norms. These networks can serve as sites of resilience, where difficult conversations about race and equity can unfold within a framework of mutual support. By embedding antiracist education within collaborative structures rather than isolating it as an individual endeavor, schools can move towards lasting institutional change, ensuring that diversity, equity, and inclusion are not merely aspirations but sustained commitments.

Greater courage, confidence, and willingness to act against racism: Participants reported an increased sense of confidence and agency in addressing racism and bias in their daily teaching practice. This newly developed assertiveness was not limited to overt forms of racism but extended to subtle, everyday expressions of bias. This increased vigilance toward microaggressions suggests that their understanding of racism expanded to include both overt and covert forms, and that they feel more equipped to intervene in nuanced, context-sensitive ways. This growth in teachers' courage and willingness to act aligns with Dei's (1996) argument that while being non-racist requires little or no action, being anti-racist requires social activism. While traditional multicultural education often frames activism as an endpoint, anti-racist education positions it as a fundamental component (Husband, 2012). The participants' increased confidence in addressing racist comments from colleagues, materials from publishers and in discussions with young children, demonstrates a shift from hesitation to (pro)active intervention. This evolution highlights the importance of professional development programs that go beyond mere multicultural education and not only build awareness but also equip educators with concrete strategies to confront inequities in their daily practice and society.

Limitations

While the findings of this study offer valuable insights, it is important to acknowledge several limitations that should be considered when interpreting the results. First, the study relied on self-reported data, which captures participants' perceived changes in awareness, attitudes, and practices, but does not offer direct evidence of behavioral change in the classroom. Although these perceived learning gains are valuable, future research should explore how anti-racist strategies are implemented in practice. Longitudinal designs, ethnographic fieldwork, or video coaching could provide more in-depth insight into how the PDP translates into sustained pedagogical transformation.

Second, the educators who participated in this study self-selected into the PDP, indicating a pre-existing willingness to engage with anti-racist education. While this was a deliberate choice to pilot the program with motivated educators, it limits the study's applicability to less willing or more resistant teacher populations. Future work should explore how such programs might be received and adapted in more heterogeneous or even reluctant professional contexts.

Third, the sample size was relatively small, which restricts the generalizability of the findings. Although rich, context-specific insights were gained, caution must be exercised when extending conclusions beyond the studied group.

Finally, as with any design-based research process, the program was co-constructed with practitioners and tailored to the local Flemish ECE context. As such, the results should not be interpreted as evidence for universal solutions, but rather as an invitation to engage in similarly situated, collaborative processes of professional learning.

Conclusion

This study sought to explore the development and impact of an evidence-informed, practice-oriented PDP for early childhood educators in Flanders, aimed at enhancing their anti-racist competences. By applying EDR as the methodology, this research succeeded in both maturing an intervention and

deepening the theoretical understanding of how professional development programs can foster anti-racist educational practices in early childhood settings. Our study underscores the importance of developing anti-racist professional development programs for education, that are thoughtfully and systematically designed, starting from clear goals and well-defined design principles. When these elements are closely aligned, the chances raise that such programs truly support early childhood educators in making meaningful and lasting changes in their practice.

One of the key strengths of this PDP was that it was not merely implemented for educators, but developed *with* practitioners and experts who hold both professional and lived experiences in challenging racial inequities. This co-construction was crucial because anti-racist work must be grounded in the realities of those doing the work. As such, we do not advocate for the universal adoption of this specific PDP. Rather, we argue for the importance of locally rooted, collaboratively developed professional learning trajectories, in which anti-racist education is not treated as a standardized training, but as an ongoing, situated, and courageous practice.

True transformation in education does not emerge from ready-made solutions but from the willingness to engage in discomfort, to listen deeply, to (un)learn together, and to commit to structural change; one PDP, one conversation, one classroom, and one act of resistance at a time.

Declarations

Authors' Declarations

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