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UNDERSTANDING DIFFERENTIATION IN EARLY CHILDHOOD EDUCATION AND CARE

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ABSTRACT

Arpita Palit: Understanding Differentiation in Early Childhood Education and Care
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Early childhood education and care (ECEC) settings are becoming increasingly diverse as children enter ECEC learning environment with diverse developmental levels, backgrounds, interests and support needs. Though nowadays ECEC is more diverse, differentiation is not explicitly defined in the Finnish ECEC curriculum and this may question about how ECEC teachers and educators can provide support to every child in everyday pedagogy. This study aims to address this gap and aims to explore how ECEC teachers/adults define, implement and reflect on their differentiation in teaching.

For this research, qualitative data were collected through semi-structured interviews. Seven ECEC professionals including teachers and other educators who work directly with the children in Tampere early childhood education settings. The five O model of differentiation was selected as through five dimensions, this model conceptualizes differentiation, allowing to analyse differentiation in terms of everyday pedagogical practices in ECEC settings. The interviewed data were studied thematically using the Five O model of differentiation (Roiha & Polso, 2021), which includes 1) teaching arrangements, such as flexible grouping and collaboration among professionals through co-teaching; 2) learning environment refers to both physical and psychosocial space; 3) teaching methods includes using different pedagogical approaches to support diverse learners; 4) support materials refers to the resources and tools can be used to scaffold learning for diverse learners; 5) assessment refers to monitor learners progress and adjust pedagogy accordingly.

The results showed that differentiation is practiced through small-grouping, flexible arrangements in the learning environment, and the creation of a psychosocial environment. Educators emphasized the importance of providing individualized support, offering guided, free play and positive feedback. Differentiation is perceived through regular pedagogical work, not as a separate instructional strategy. However, this research also explores how differentiation is often implemented intuitively by educators in regular pedagogies rather than through formal frameworks.

Keywords: Differentiated teaching, ECEC, Finland,

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CONTENTS

1 INTRODUCTION

In a learning environment, learners present different learning needs across different level of academic or learning achievement, making it important for educators to adapt or change their teaching pedagogies according to the need of the learner. Addressing diversity in the learning environment in terms of learners' needs and interests have become unavoidable (Subban, 2006, p. 936) as nowadays learning spaces are more diverse including learners with disabilities, pupils speak languages other than English, some facing emotional issues or some with gifted knowledge (Tomlinson, 2001b, p. 12).

In the setting of ECEC, different learning needs can become evident in young children as they enter learning environments with their differences in backgrounds and developmental progress. According to the European Commission (2015), teachers confront with multicultural groups of learners who are not different in terms of their abilities but also factors like socioeconomic background, language, culture, and life experiences can also impact on the diversity of learners (Miškeljin & Sharmahd, 2018). Moreover, in terms of abilities, some learners can grasp concepts quickly whereas some may take more time to completely understand and finish regular class tasks. When the majority learners may find the activity easier, teachers often move forward leaving those learners who struggling to complete the task. As a result, those learners may skip the tasks and move on with the educator without achieving the learning of the previous materials. When teachers try to spend more time with those who need more supports to understand the content, fast learners may feel disengaged and under-challenged.

Addressing these challenges in a learning environment is undoubtedly challenging because these kinds of variations in learners' learning and needs can come from a wide range of characteristics including interests, learning styles, needs, cultural background, language, attitudes and self-regulation strategies (Suprayogi, Valcke and Godwin, 2017, pp. 291-292). However, this kinds of disparities and diversity in the need of learners in a learning environment demands the importance

of developing strategies which would cater both the high and low achievers not leaving any learners behind.

Differentiated teaching is not merely about assigning extra tasks or help learners when permits. According to Sun and Xiao (2021), Differentiated teaching is essentially a learner-centred approach that aims to tailor instruction to meet the diverse needs of every learner (p. 187). This approach modifies strategies for teaching and learning to ensure that learners' learning requirements are addressed equally, thereby enabling their full development (Sun & Xiao, 2021, p. 187). Differentiation in teaching can take different forms. For example, grouping learners according to their abilities or interests, providing extra or different exercises, offering essential supports for struggling learners, modifying time allocations for each task, and giving independent tasks can be some ways to practice differentiated teaching in a learning environment (Heacox, 2012) Moreover, the idea of differentiated teaching aims to recognize and address each learner's unique needs. This teaching practice contrasts with approaches such as Universalist and egalitarian, where learning is seen as a collective process (Raveaud, 2005, p. 474). For example, in the Universalist approach, the group of learners is taught together, treating all of them equally, rather than making any adjustments or differentiation to meet individual needs (Raveaud, 2005, p. 475).

In a learning space, teachers may expect learners with diverse needs, and often a special educator helps address the issues of special needs and challenges. However, what if a special educator is unavailable or absent? In that case, it is the mainstream teachers who need to solve the matter. A study done by Lumby and Coleman (2016) reported that many learners may go unsupported or face negative consequences if a special educator remains absent or if the teacher in the mainstream learning environment lacks skills required to manage diverse learners' groups (Hammersley-Fletcher, 2018, p. 3).

Differentiated teaching is an example of inclusive education. Therefore, mainstream teachers must be well-prepared to fulfil the demand for all learners in a learning environment, so no learners feel left out or unattended. Differentiated teaching empowers teachers to tailor their teaching strategies, creating an inclusive, supportive, and adaptable learning environment for all diverse learners (Laari, Lakkala, and Uusiautti, 2021, p. 599). Differentiated teaching can prevent learning

difficulties and promote equity, ultimately improving learners' outcomes (Laari et al., 2021, p. 599); for instance, in a study where half of the participants received differentiated teaching, while the rest received a traditional whole-class instructional method, and by the end of this study, the learners who received differentiated teaching performed better than those in the instruction group (Laari et al., 2021 pp. 599-600). Therefore, teachers need to know well what is being taught and how learners will understand it, and critically evaluate the way that learning is demonstrated. By considering all these aspects when interacting with learners, teachers can adapt and choose the most effective strategies for their teaching.

In terms of ECEC, these broader dimensions of differences in learners are also mentioned in the study Bendroth Karlsson et al. (2011) that children enter the learning environments having differences in terms of their developmental progress, their experiences and understanding how they perceive the world (p. 58). Moreover, there are factors, such as the kinds of conversations children may have at home with the parents, their regular routines and the materials they engage with, create variation in early learning among children (p. 9). This variation reinforces the importance of differentiation in ECEC. The national core curriculum (2022) emphasizes "to promote equality and equity among children (p. 11). Moreover, it states that all children should receive support and teachers' pedagogical activities need to respond according to children's needs (pp. 12-13). Though inclusion is mentioned in national core curriculum of ECEC stating every child has the right to participate and be supported (p. 13), yet it does not explicitly define how teachers or ECEC educators/adults should differentiate pedagogical activities to support diverse learners' needs. This creates pedagogical gap as it is not clear how the ECEC teachers and educators/adults understand and implement differentiation. Through exploring ECEC teachers and educators/adults' understanding about differentiation, this study provides insights that can support pedagogical activities, professional development and ongoing implementation of inclusive ECEC in Finland. Therefore, to explore how ECEC teachers or adults differentiate their teaching styles in the ECEC settings, this study aims to investigate the differentiating practices that teachers use in Finland. The objective of this thesis is to answer the following question:

How do teachers/adults in ECEC settings in Finland define, practice, and reflect on their differentiation in teaching?

2 DEFINING DIFFERENTIATION

Differentiation has been represented and described in various ways. One broad approach highlights variances in students' competencies. Differentiation is a method of teaching where teaching practices are adjusted according to students' abilities through the use of structured processes, helping to monitor academic progress and draw data-driven conclusions (Roy et al., 2013, p. 1187). Adopting instructional strategies and monitoring student progress are the two primary components of differentiation (Roy et al., 2015, pp. 111-112). However, these theories do not take into consideration other factors that could contribute to understanding relevant dimensions of differentiation, such as students' interests, learning styles, language, and cultural backgrounds.

Differentiation is often represented as a teaching strategy to deal with students' needs. While differentiating instruction, it is essential to recognize students' previous knowledge, level of readiness, language abilities, and interests, as this understanding can help the teacher cater to the varying abilities of students within the same classroom (Hall, 2002, p. 2). Like previous studies by Roy et al. (2013) and Roy et al. (2015), this definition not only emphasizes the understanding of differences in students' diverse abilities but also includes other aspects, such as students' interests and learning preferences. Moreover, many definitions of differentiation tend to focus more on how differentiation helps teachers to make a collection of teaching strategies. For example, differentiation is defined as a way of tailoring instructional methods or practice in the classrooms to address different learners (Benjamin, 2002). It is also defined as a teaching practice that is more flexible and fairer for students with diverse needs (Benjamin, 2002). It works against the idea of a single, effective teaching method when teaching students in a classroom, as it promotes aligning the method with the students' individual needs (Kaplan, 2007, p. 16). Viewing differentiation solely as a collection of teaching strategies undermines its broader aspects and significance. However, what is positive about Kaplan's (2007) definition is its focus on creating a flexible and fair classroom for students and expanding the scope of differentiation to understand students' needs better.

Differentiation has also been defined through a broader lens, moving beyond the more limited definitions mentioned above. One of the more comprehensive definition of differentiation is provided by Tomlinson and colleagues (2003), who define differentiation a based on principles where teachers do not only teach through differentiation but also proactively modify curricula, teaching activities/methods, teaching resources and students' learning outcome to address the diverse needs of not only individual students but also small groups of learners so that it maximizes the opportunities for each person's learning in a classroom (p.120). From the given examples where differentiation has been defined more as a teaching practice identifying students' abilities and needs, Tomlinson and colleagues' (2003) view is different in terms of not only recognizing students' variance but also utilizing proactive learning to create a learning environment where all students feel challenged and supported to reach their full potential. Moreover, in this definition, it is not merely about understanding students' needs and interests or abilities and taking actions accordingly, but instead that differentiation is viewed as a proactive rather than a reactive process (Tomlinson et al., 2003).

Another advanced definition of differentiation is an approach to accommodating student diversity by addressing students' abilities, learning styles, and readiness levels, while also making modifications to teaching content, strategies, and the environment to maximize students' growth. This approach might involve examples such as grouping and individualized homework to ensure more positive outcomes for every learner (Suprayogi, Valcke, & Godwin, 2017, p. 292). Similarly, the five dimensions of differentiation depict teaching practices that bring differentiation through content, instructional strategies primarily associated with different learning styles, the classroom or learning environment, products or students' outcomes, and teachers who make the decisions and choices to differentiate (Reis & Renzulli, 2018, p. 88). In my view, though Reis and Renuzulli's (2018) definition has many similarities with Tomlinson et al. (2003) in terms of defining differentiation through content, process, product and environment, theories of Tomlinson et al., (2003) and Suprayogi and Valcke (2016) offers a more holistic approach addressing students' readiness, interest and learning profile to produce maximum growth of learners.

In ECEC, differentiation is understood more differently from primary or higher education where structured curriculum including academic performances often assist

teachers to adjust their teaching instructions based on varying abilities of learners. Unlikely ECEC systems mostly in countries like Finland, do not have academic subjects but focuses on holistic goals emphasizing child agency, wellbeing, participation and learning through play (Pramling et al., 2019, p. 19). Therefore, differentiation in ECEC is more pedagogical process than instructional. Stacy claims that teaching in early childhood education is guided by children's interest and needs rather than following any rigid framework. Moreover, based on observation and documentation of each child's needs and interest, ECEC educators discuss and decide about what activities or materials can be offered to children next (National Association for the Education of Young Children, 2009). According to Bendroth Karlsson and Pramling (2011), play and learning are blended in ECEC settings where children are considered as more capable learners and their development grows in different ways rather than fixed age-based stages (pp. 3-4). Moreover, children's voices, their opinions and experiences are central in everyday practices as the ECEC educators need to adapt their teaching focusing on each child's interest and needs (Bendroth Karlsson et al., 2011, p. 167)

This study examines how teachers and other educators/adults in early childhood education and care settings in Finland define and implement differentiation in their teaching practices, if at all. This includes investigating whether they take into consideration children's interests, readiness, learning styles, language abilities, and cultural backgrounds, or any other elements that might influence their approach towards differences among children.

The study focuses on participants' definitions and examples of differentiation, as well as how they conceptualize differentiation in addressing the varied needs of children in ECEC settings.

2.1 Differentiated Instructions or Teaching

Differentiation is often used interchangeably with the terms 'instructions and 'teaching'. Differentiation is more comprehensive, as it covers not only how teachers should teach, but also content, curriculum, learning environment, and student outcomes (Tomlinson et al., 2003). In other words, differentiation addresses the full

spectrum of how education is adapted to meet diverse student needs, not just the teaching strategies.

There is a clear distinction between personalization, differentiation, and individualization (Bray & McClaskey, 2013, p. 2), as differentiation is characterized by a more concentrated focus on specific groups of students. In contrast, personalization and individualization tend to be more individual and student-centred. However, differentiation is an even broader term that includes both the group-level and individual needs (Roiha & Polso, 2021, p. 3). Personalization and individualization are part of a larger umbrella of differentiation (Roiha & Polsu, 2021, p. 3).

Some other scholars believe that differentiation also resembles Universal Design for Learning (UDL), a proactive teaching method designed from the outset to remain accessible to all learners (Roiha & Polso, 2021, pp. 3-4). Similarly, in addition to being a reactive approach, differentiation also acts as a proactive teaching strategy (Tomlinson et al., 2003), making it somewhat connected to UDL.

Differentiation is often contrasted with the idea of adaptive teaching. Though this concept is in contrast to the dimensions of Tomlinson et al.'s (2003) and Roiha and Polso's (2021), Prast et al. (2018) note that differentiation is often connected to macro-adaptations, which refers to planning in advance, while adaptive teaching involves micro-adaptations, referring to modifying spontaneously according to students' immediate needs. However, Tomlinson et al. (2003) and Roiha and Polsu (2021) defined differentiation as encompassing both levels, namely reactive and proactive adjustments to teaching based on students' readiness, interest, and learning profile.

ECEC practice is more considered as pedagogy than teaching or instructions, as it is a holistic set of actions. As Ranta et.al., (2023) explain ECEC is a set of pedagogy that includes teachers' knowledge of learning, professional skills, and the wider culture of ECEC settings (p.2). nevertheless, it also includes adapting learning environments through engaging in interaction, scaffolding, observation, documentation and evaluation. All these elements are beyond the traditional teaching and reflect the multiple pedagogical approaches of ECEC educators (Ranta et.al., 2023, pp. 4-5). Differentiation refers how educators adapt content, environment and the learning process in order to meet diverse needs of learners. This closely aligns

with how ECEC is practiced through ensuring holistic development to support every child's needs. Both of these, differentiation and ECEC, come together through the shared focus on child-centeredness.

2.2 Differentiation and Inclusion

Differentiation and inclusion intersect at a certain level, where both processes are involved in teaching, allowing all learners to meet their needs. What is important in inclusive education is not about trying to fit all students into the education system. Rather, it is about transforming the education system so that it responds to the diverse needs of students (Hammersley-Fletcher, 2018, p. 3). However, the broader sense of differentiation as a comprehensive approach to teaching aligns quite well with the principles of inclusive education. Both differentiation and inclusive education meet at a common point to eliminate barriers for all learners, particularly for those who are marginalized or underachieving, and strive to ensure that everyone learns at their own pace and according to their own needs and abilities.

The story of Matilda depicts how differentiation and inclusion can come together in ECEC settings. In a study Bendroth Karlsson et al. (2011), a child named Matilda construed a music played by her teacher as a story about dolphins and a shark. The teacher played the music and Matilda interpreted it as dolphins and a shark whereas the teacher's goal was to notice musical instruments and the structure of the musical piece. However, the teacher did not ask Matilda to abandon her own way of thinking rather engaged her perspectives and connected it with musical features, for example, saying "the shark is the trumpet" (pp. 245-246). This way of approaching the child and connect the child's thoughts with the learning demonstrates how differentiation can occur in ECEC settings. As the teacher used Matilda's thoughts as a bridge to the learning goal of understanding the musical features. At the same time, it also depicts inclusion as Matilda's ideas were respected and used as a foundation of learning by the teacher. This way inclusion and differentiation can come together valuing individual differences, and ensuring every child can learn at their own pace.

2.3 Early Childhood Education and Care (ECEC) in Finland

Early Childhood Education and Care in Finland is an integral part of the Finnish education system, playing a crucial role in children's development and learning. The primary aim of ECEC is to support children's holistic growth. This holistic growth includes children's cognitive, social, emotional, ethical and physical development (National Core Curriculum, 2022, p. 20). Moreover, Finnish ECEC promotes inclusivity as a holistic approach that applies to all children within ECEC services, which has principles of equal rights for all children, non-discrimination, respect for diversity, and equality (National Core Curriculum, 2022, pp. 4-5). The ECEC curriculum focuses on six main areas of children's growth: thinking and learning emphasizes on creativity and critical thinking; cultural competence, interaction and self-expression focus on building social skills and communication; taking care of oneself and managing daily life include promoting healthy habits, safety and emotional regulation of children; multiliteracy support to build skills in interpreting and producing messages through comprising different literacy such as visual, numerical, media and digital literacy; digital competency is another key area which introduce children with digitalization; lastly, participation and involvement refers to cultivating democratic skills among children, building confidence with active engagement in the society (National Core Curriculum, 2022, pp. 21-23).

The curriculum also comprises three levels: the national core curriculum for early childhood education, local curricula for early childhood education, and individual early childhood education and care plans tailored to each child (National Core Curriculum, 2022, p. 5). Moreover, education, care and instructions work combinedly under the umbrella of pedagogical entity where all these three elements work together to support the child to grow holistically. While education focuses more on culture, values and how children can think critically through developing their own identity and become responsible towards others and the environment, instructions may refer to knowledge, skills through encouraging children to explore based on their interests and needs (National Core Curriculum, 2022, p. 20). Care refers to more physical and emotional safety (National Core Curriculum, 2022, p. 20). Therefore, ECEC environment is composed of physical, social and psychological settings in order to ensure education, instructions and care are covered combinedly (Onnismaa

& Kalliala, 2010). According to the national core curriculum (2022), there are adults working in ECEC settings involve a wide range of professionals mostly responsible for planning, implementing the plan through supervising the regular activities in the learning setting of ECEC (p. 15). The adults include early childhood education teachers, special education teachers, social pedagogues, child carers and other ECEC professionals including a head of the ECEC centre supervising the whole operations (National Core Curriculum, 2022, p. 16).

According to Onnismaa & Kalliala (2010), though Finnish day-care centres are internationally praised, there are some contradictions based on how policies are implemented nationally. For example, socially, the multi-professional culture has led to a “everybody does everything” mentality, resulting in inconsistency in professional identity (p. 273). This lack of clarity may hinder differentiated practices as different adults in ECEC settings have different roles. For example, teachers, are the ones who are responsible for preparing individual ECEC plan for each child; whereas social pedagogues contribute in service-related procedures with children’s families (National Core Curriculum, 2022, p. 8). Therefore, when there is professional inconsistency, providing supports across all the three pedagogical aspects in ECEC-education, instructions and care may hamper. Whereas Onnismaa and Kalliala (2010) did not provide a coherent pedagogical framework for ECEC, they envisioned Finnish ECEC as having a clear sense of child-centred purpose, professional clarity with pedagogical leadership, and honouring its historical and social context (pp. 246-260).

The individual early childhood education care plan supports a more personalized approach, promoting equal opportunities (National Core Curriculum, 2022, pp. 7-8). In Finland, an individual plan is designed for every child to meet their interests and needs. Typically, this is developed by ECEC teachers in collaboration with parents and other professionals, focusing on the child’s strengths, weaknesses, skills, and needs (National Core Curriculum, 2022, pp. 8-9 & 37). The plan follows several steps, starting with observing the child, creating a plan taking into consideration everyone’s observations, and evaluating the previous plan (National Core Curriculum, 2022, p. 8). Then, the team, along with the teacher, ensures that the plan's goals are shared with the child's parents and that the plan is regularly reviewed and evaluated (National Core Curriculum, 2022, p. 9). This indicates the

official purpose of documenting an individual ECEC plan is to form a pedagogical plan on which a child's education and care would be based. Even though the Finnish ECEC requires to have a individual plan for every child, this is not similar to "individualized instruction" as individual instruction is time-consuming and might not be feasible and different than differentiation (Tomlinson, 2016 cited Smith & Chestnutt, 2021). In other sense, Finnish individual ECEC plan is more aligned with what Tomlinson idea of differentiation that the individual plan for each child works as a pedagogical guideline that informs the teachers and educators to learn about children's interest and needs. Learning about each child's needs and interests help the educators to plan acknowledging every child's needs.

Care and education are considered distinct components, where education is not limited to learning but also fosters the child's well-being, individuality, and social participation. Education in ECEC functions like an umbrella, encompassing learning, development, and individual growth by providing support for emotional, social, and cognitive development, while also promoting well-being and identifying children's voices and needs (Harju-Luukkainen, Kangas, & Garvis, 2022, pp.45-46). Whereas teaching can be considered a method within education, focusing primarily in developing learning skills ((Harju-Luukkainen, Kangas, & Garvis, 2022, p. 46). Moreover, education appears to be a shared responsibility, where parents and personnel observe and are concerned about a child's development, and through collaboration, individualized plans are created (Harju-Luukkainen, Kangas, & Garvis, 2022, p. 46). While teaching is a more pedagogical approach, which is often not clearly implied, but rather through structured learning activities and guidance (Harju-Luukkainen, Kangas, & Garvis, 2022, pp. 46-47). For instance, the core curriculum (2018) depicts that the individual plan defines "goals for pedagogical activities" and "measures that support those objectives" (pp. 9-10). As mentioned earlier, the individualized plan works as a guide for ECEC educators and teachers to learn about every individual child and their unique needs and interest. Therefore, it is not just a document or a record of observations, but a pedagogical tool that the educators use to help the child progress towards meeting the goals. Moreover, this refers to teaching that starts with setting clear goals based on children's needs, strengths, and interests. Later, methods or measures are implemented to help the child achieve the goals. Teaching is more individualized, as it does not follow a fixed curriculum for

every child but instead offers support tailored to meet individual needs. Teaching, education, and care in ECEC combinedly make an approach reflected in the individual plans, which are documented not only as records but also “present certain topics that should be considered during the process and consequently define the subject areas that may be understood as belonging to pedagogy” (Karila & Alasuutari, 2012, as cited in Alasuutari, 2020, p. 209).

Despite the collaboration between parents and teachers while creating individual plans for the child, it often creates a power imbalance, as the teacher has more power to structure and direct the discussion. The study by Alasuutari (2020) examines the allocation of space in conversations during discussions between parents and teachers. According to this, teachers have a range of 38-68%, whereas parents have a range of 25-52%, depicting an apparent power asymmetry (p. 213). Moreover, it is the teachers who initiate and guide the discussion, reading from the plan and deciding which topics need to be addressed and which do not. Conversely, the parents “tend to accept or not resist” what the teacher says, again reinforcing the idea of power asymmetry (Karila, 2012, p. 214) (Alasuutari, 2020).

This power imbalance can affect the differentiation concept of knowing your child. Equal collaboration among teachers and parents may result to know about the child even more. Moreover, knowing about how the child is doing at home is equally important to understand the child’s needs and interests. On those bases, the ECEC educators can provide support. If there is an information gap due to power imbalance, the risk of not understanding the whole picture of what the child needs may emerge.

Karila (2012), in her study on a Nordic Perspective on Early Childhood Education and Care policy, mentioned concerns about individual plans, as they serve as an assessment for both the child and the parents. Because it does not view a child’s environment as an isolated subject, but rather assesses how children function within the context of family life. However, there are concerns that these kinds of assessments may produce certain norms about what is considered “normal” or “deviant” in a child’s development, including family conditions (Karila, 2012, p. 588). Moreover, this standardization is reflected in the individual plans for every child and unintentionally creates a homogenized view of childhood, including how children should behave and what they should know at different ages, while ignoring cultural

and family differences (Karila, 2012, pp. 587-588). As a result, there is a risk of reducing the flexibility of ECEC, as it may attempt to fit children into existing structures that may or may not align with the diverse and unique needs of children and their families (Karila, 2012, p. 588). What Karila (2012) argues about the concept of the assessment of family depicts a pressure on parents. As a result, pressure on parents may lead to limited information sharing. Consequently, the teacher will not have enough information about the child's background and real-life context. Partial information about the child will not guarantee a responsive differentiated practice.

The Nordic ECEC model, which focuses more on "play, relationships, building curiosity and shared meaning making" between the children and adults, supports children's autonomy, giving them choices based on their interests (Harju-Luukkainen et al., 2019, pp. 4-5). All these are achieved through collaborative interactions and understanding between children and adults in ECEC. The Nordic countries often oppose introducing official learning standards at a very early age, as it may hinder their 'free development (Ostrem et al., 2009, cited in Karila, 2012, p. 589).

However, the plans may promote formalized and standardized learning, placing more emphasis on "learning outcomes" or "indicators" (Karila, 2012, p. 588). As a result, professionals and early childhood educators may feel uncertain, as this approach clashes with Nordic values, which prioritize individual growth, social and emotional development, and fostering curiosity and independence (Karila, 2012, pp. 588-589). The Nordic core values-play, child-led activity, and freedom to develop at one's own pace might be challenged. Nordic educators have been opposed to the idea of starting formal academic learning in the early stages of children's development, as it could disrupt their free minds, autonomy, and overall growth (Karila, 2012, p. 589).

2.4 Gaps in ECEC

An individual pedagogy plan supports not only the development of children's growth but also works as a necessary aid for early childhood educators in tracking how children adapt and learn. As it is a shared document where ECEC educators record a child's physical, emotional, cognitive, and social development, it can also serve as a guide for future teachers in understanding children's backgrounds and histories.

There are gaps in Finnish ECEC mostly in terms of visibility, identifying and giving support to children with special educational needs. According to Pihlaja (2022), nowadays most of the research on ECEC focus on pedagogy and child-centred practices rather than focusing on structural and systemic issues (p. 16). For example, variation in municipalities identifying SEN children ranging from 0% to 49% is one of the examples of structural issues in ECEC (Pihlaja, 2022, p. 21). Moreover, there are many municipalities who do not have the information on how many children have SEN or what types of needs children have as they do not collect systematic data on it resulting hindrance in decision making or resource allocation (Pihlaja, 2022, p. 21). Another systematic gap was mentioned by Pihlaja (2022) the domination of individual model of disability in documentation and planning. Rather than emphasizing on pedagogical context, it is the disabilities which can more emphasized in individual planning of a child with disabilities (p. 22). Nevertheless, though according to the legislation of Finnish ECEC every child with SEN should have individual plans, only about half of the children with SEN receive such plans resulting poor implementation and inconsistency (Pihlaja, 2022, p. 22)

Heiskanen & Franck (2023) explain the process of documentation in ECEC in Nordic countries like Finland and Norway, how it works as a tool to provide special support to children highlighting systematic gaps. For example, in Finland, the documentation process for providing support follows four steps. To enumerate, stage 1 starts with teachers carrying out a pedagogical assessment working collaborate with parents or other educators and all those findings about the child's need to be documented in the child's ECEC plan (Heiskanen & Franck, 2023, pp. 168-169). Stage 2 refers to administrative decision comes from the municipality specifying what type of support the child should get, and after the decision is made the parents of the

child can appeal within a timeframe (pp. 168-169). Stage 3 refers to drafting the ECEC plan by the teachers, including support measures for the child. Final stage refers to the reviewing the support measures annually; the teacher along with the guardian of the child assess the effectiveness and update the document ensuring the child receives the support (pp. 168-169). This documentation process may create barriers in accessing support, what the author mentioned as “bureaucratic burden” of documentation referring as a gap in clarity and implementation (pp. 176-177)

2.6 Diversity, Differentiation and Individual Pedagogy in ECEC

Finland’s society believes on being the ‘homogenous nation” where everyone is equal. Finnish ECEC practices are equally influenced by this notion; however, this may not show the real scenario and facade inequalities and differences within the people (Millei et al., 2019). Though the individual pedagogical plan undoubtedly meant for the betterment of a child’s physical, social and emotional growth, it sometimes can overlook the systematic issues for example, poverty or any kinds of socioeconomic disparities as the individual plan is very much focused about labeling differences as individual traits and ensures that each child gets proper attention based on their needs but this can unintentionally ignore the social and economic factors of the child. Recent ECEC curriculum in Finland emphasizes more on diversity and inclusion and categorize children in cultural, linguistic and social backgrounds. The purpose is to integrate them into Finnish culture through learning language or following the cultural practices. To integrate with a new culture, these are necessary; however, all of these can also ignore the factors like economic inequalities or any biases in education. For example, a child struggling due to economic issues at home might be considered as having “developmental delays” (Millei et al., 2019). This “developmental delays” links with differentiation as when a child struggles in learning, the individual plan of the child label the child’s difficulties as more personal developmental issue rather than considering socioeconomic disadvantage. As a result, the individual plan may not fully reflect properly what the child’s needs are.

In Finland's National Core Curriculum for Early Childhood Education and Care (ECEC) 2018, children with advanced abilities are not addressed as a group that requires additional support. And this also differ from the National core curriculum for basic education (Finnish National Education Agency) which acknowledge children with advanced abilities are addressed. Moreover, there are not particular programs within ECEC setting in Finland for those children with unique needs (Stolt et al., 2022, P. 52-53). As a result, without having national guidelines, teachers or educators in ECEC setting may feel challenging to identify the children who requires differentiated teaching (Stolt et al., 2022, P. 61). All these issues emphasize how differentiation in ECEC is not followed by pedagogical guidelines but also may shaped by social assumptions on equality and diversity. The individual plan may inadvertently present structural challenges such as poverty, inequality as personal developmental delays of a child. Moreover, the issue of not identifying children with advanced abilities may complicates educators' understanding to support advanced learners.

2.7 Comparing Differentiation Frameworks with ECEC in Finland

There are several differentiation models in education and some focused more on teachers, some more on classroom and physical environment, some on psycho social environment to support effective differentiation practices. Among all those different approaches of differentiation teaching or instructions Tomlinson's theory of differentiation (2001, 2003, 2014) has been touted as one of the best leading models (Cited in Heng, 2022, p. 1286). It suggests that teachers need to adapt four key elements of differentiation which are content, process, products and the learning environment so that it can meet students' diverse readiness, interest and different learning profiles (Tomlinson, 2014, p.128). Content refers to what students learn taking into consideration students' present learning state and interest while the process focusses on the learning activities using various kinds of peer grouping, scaffolding or other methods, products are the ways that students demonstrate their learnings, and the learning environment refers to classroom (Tomlinson, 2014, p.120-132).

On the other hand, Finnish Early Childhood Education is based on Frobel and Pestalozzi's pedagogical philosophy which focuses on play and self-directed learning of child development. In this model, the teacher's role basically is to create a supportive environment with "minimal direct intervention" unless to address any inappropriate behavior among children (Harju-Luukkainen, Kangas, & Garvis, 2022, p. 32). Unlike the other countries which emphasize on cognitive development and school readiness, Finland ECEC does not have prioritizes academic development rather focus on learning through interaction, sensory and creative activities through ensuring every child can learn through exploring their interests, experiences and cultural contexts (National Core Curriculum, 2022).

Research refers that there is a strong connection between play and language development emphasizing the role of symbolic thinking. In a study (Weisberg et al., 2013) about play and language development, it is mentioned that play has distinctive features as children engage voluntarily for enjoyment, often with no specific goals (pp. 41-42). It does not involve only a single type of action, but it includes language, imagination, movement, and social interaction (p. 42). In actual play, children take active roles in deciding about the play rather than relying on adult guidance; on the other hand, when adults create an environment supporting a learning goal, it becomes guided play, which also allows children the freedom to explore (p. 43). Adult's scaffold but do not dictate the play. Play involves symbolic thinking, where objects represent something else, and research shows a correlation between play and language skills, as it often leads to better language comprehension (p. 44). Though in another study by Harju-Luukkainen et al. (2022), it is mentioned that the play theory of Finnish ECEC aligns with Vygotsky's (1978) zone of proximal development, where children learn by engaging with other children or adult support, play is considered as a "spontaneous and self-motivated" activity, it may overlook the dimension of learning outcomes (p. 239-240). For example, understanding and assessing the deeper role of play in children's cognitive and social development might be a challenging task for educators and ultimately result in play being seen as recreational rather than a part of the learning process. Guided play, a pedagogical approach, stays in between direct instruction and free play. Teachers play a role of facilitators, but not instructors, creating a flexible environment where children can actively participate and explore through play. Studies shows that often educators use

strategies in guided play include commenting on children's work, co-playing with them, asking questions, and connecting materials which can encourage new ideas (Weisberg et al., 2013). Basically, in a guided play, teachers or educators can provide the structure of play but child gets the freedom to experience the play. Moreover, in early childhood education settings, teachers or educators can play a significant role through communicating with children through guided play. Building a strong relationship between teacher and student create trust and a shared experience.

Differentiation in Finnish ECEC is followed by the unique relationship between differentiation models like Roiha and Polsu's (2021), Tomlinson's (2014) and Finnish play-based ECEC. Both of the models highlight the importance of how teachers adjust content, process, product and learning environment respond to children's different needs and interests. In contrast, Finnish ECEC focuses more on holistic development emphasizing learning through play, social interaction and exploration. Though these two concepts differ, play offers multiple pathways for children to engage and the Finnish ECEC concept of play-based and child-centered supports differentiated learning opportunities that take into consideration children's needs and interests.

While ECEC in Nordic countries follow Frobel's philosophy in their play-based learning setting, there are misinterpretations which led to more "unstructured free play" rather than a guided play (Broström, 2017, p. 55). Frobel's idea referred to emphasize more on self-selection where children select and control their play and follow their interests. However, in some of the Nordic settings of ECEC, without any intervention, teachers let children to play freely neglecting the role of facilitators (Broström, 2017, p. 55).

The ECE pedagogy in Finland is focused by social development, play and interaction. To be more precise, there are five different pedagogical approaches can be found in ECE, which are pedagogy through interaction focusing on child-teacher relationships, secondly, pedagogy through scaffolding which supports children's participation and agency. Thirdly, pedagogy through didactic focus more on how educators or adults plan and structure the learning. Fourth, pedagogy through expertise which ensures educators have professional knowledge and teambuilding. Lastly, pedagogy through future orientation which aims to prepare children for future

challenges. To implement all these pedagogical approaches, teachers need to have wide range of competencies which are meta, professional and practical competencies (Ranta et al., 2023, p. 10). According to Ranta et.al., (2023), meta competences refer to curriculum guidelines, subject knowledge, methods of teaching strategies and understanding children's developmental theories. The authors also defined professional competencies that focus on how educators plan and design the goals according to children's interest, organizing the learning environment, analyzing own teaching and modifying according to needs, and communication with parents and other professionals. Lastly, practical competencies, most popular among the Finnish early childhood educators, include teaching skills referring to using appropriate teaching methods, child-centeredness focusing on adapting strategies to children's needs, interaction and sensitivity referring to engage with children meaningfully. Moreover, increase participation, peer-supported learning and providing feedback also are involved in the practical competencies. Moreover, existing ECE researches often mention about pedagogy without clearly define it and its approaches. While some of the researches attempt to do so, they overemphasize on practical competencies without considering meta and professional aspects (Ranta et. al., 2023, p.60-74).

Teachers' competence and pedagogical skills are necessary for differentiation as educators with knowledge and competence would be able to respond according to diverse learners needs. Ranta et al. (2023) illustrates meta competences—understanding the curriculum, and developmental theories would help ECEC teachers and educators to identify variation in learners needs, readiness (p. 10). Professional competencies refer to planning which need to be based on what children want, reflecting their interests and organizing the learning environment according to that in order to ensure effective learning (Ranta et al., 2023, p. 10). Lastly, practical competencies also align with differentiated teaching which includes adjusting teaching methods, flexible grouping, and providing materials or resources appropriate to individual needs (Ranta et al., 2023, pp 60-74). Likewise, Roiha and Polsu (2021) also depicts differentiated as a holistic teaching pedagogy in which teachers use varied resources, methods, modifying the learning environment to meet learners' needs but at the same time responding in a way that ensures all these meet learners' readiness, interests and learning profiles (pp. 1-4). Therefore, ECEC

teachers and educators' meta, professional, and practical competencies ensure that teachers and educators are able to implement all those five O dimensions of differentiation.

Encouraged by Tomlinson's theory of differentiation, Reis and Renzulli (2015) created a model "five dimensions of differentiation" includes content, instructional strategies, the classroom or learning environment, products and the teacher. They added three more dimensions: instructional strategies referring to different teaching techniques based on different students learning profiles, the classroom basically referring to physical learning environment and the teacher's role, action in differentiating instructions based on students' needs, interest and abilities (pp. 7-10). Even though the naming elements are different, the sub elements refer to the same meaning like Tomlinson's theory of differentiation. On the other hand, Reis and Renzulli's (2015) theory focused more on the physical setup of the learning environment over broader early childhood education settings or 'macro-level' teaching setup. More emphasis on physical environment highlights that there is a need for attention in psycho-social learning environment (Roiha and Polso, 2021). On the other hand, ECE educators in Finland possess three essential competencies, supporting children's skills, creating a learning community, motivating strategies, helping children develop their own skills while also addressing the needs for whole group of children (Ranta et al., 2023). What might distinguish the differentiation theory from ECE is that Finnish ECE emphasizes process over product, focusing more on the experiences and skills children gain during their play through interacting. Rather than emphasizing on what children create as a product, Finnish ECE values the process-how children engage in play doing interaction, making decisions and regulating their self-control (Harju-Luukkainen et al., 2022).

In ECEC, the individual plan, made based on children's needs and interest, is updated every year taking into consideration of daily observation by teachers, other educators and the child's guardian's perspectives. Unlike the theory of Reis and Renzuli (2015), ECEC settings in Finland involve not only the teacher but also other educators involved in ECEC, experts or other relevant actors if needed (National Core Curriculum, 2022). The national curriculum of ECEC in Finland focuses more on exploration and creativity but does not set standards or goals for children as the child is considered as an active learner, guided by educators who nurture more on

curiosity, exploration and joy in the learning environment. Moreover, in terms of assessment, the objective is not measuring children's outcomes rather implementing curriculum which focus on the well-being of a child, achieved through the systematic observations of educators in ECEC settings (Lipponen et al., 2018).

When children engage in play, positive peer interaction play a crucial role in terms of developing social skills, cognitive and emotional growth of children. Educators as facilitators guide play to create an inclusive and supportive environment for all children. For example, in a study (Reunamo et al) discovered that children who have strong play skills-language proficiency and social communication, are more popular compare to others (2013). Play can nurture a positive interaction between children with or without special education needs. Acceptance by peers equally helps to create a positive self-image and improve social interactions (Syr-jämäki, Pihlaja, & Sajaniemi, 2018) However, children with special needs may involve with solitary or non-verbal play which can be due to having difficulties in emotional regulation and coordination. In that case, the ECEC professionals can create a big difference in fostering an inclusive environment through scaffolding children's participation in social interactions (Syrjamaki et al., 2018, p. 15). Though the studies like (Weisberg et al., 2013) and (Broström, 2017) discussed about how ECEC professionals can act as a guide or facilitators and play an active role in play, Syrjamaki et al. study shows ECEC professionals' roles are crucial in supporting special educational needs children to engage in play overcoming their challenges to interact with other peers. Moreover, multi-dimensional pedagogical types are more effective in terms of supporting special needs children. For example, teachers turn each children's action into group communications rather than one-on-one interactions. Using positive control and AAC system-Alternative and Augmentative Communication, to help in communications (2018).

Nevertheless, inclusive education also plays a great role in developing social, cognitive and emotional skills by integrating all the children including children with disabilities or different needs in the same learning space. One of study by Kesäläinen et al., (2022) aims to see how play behavior related to cognitive skills and vocabulary building among children with or without disabilities, found that similar result about peer support as children with language disorders learn not only from the teachers or adults but also from "more capable peers" who are capable in terms of their cognitive

and social skills during the play. This is explained by the concept of Vygotsky's zone of proximal development which describes how children learn with the support of others who are more advanced. Children with self-regulatory difficulties face challenges more and less likely to develop cognitive skills as same as their peers. Teachers and adults can play a crucial role in "co-regulation" supporting children's self-regulation to manage emotions and focus because children who have lack of self-regulatory skills, face challenges in social interactions. It also recommended teachers or adults to understand "the neural basis of stress" of children to manage their stress level (2022).

In terms of creating an inclusive, a supportive and collaborative environment, teachers play an essential role offering personalized guidelines and encourage collaboration with other professionals. Providing early rehabilitation and support can help children to cope mechanism well (Salminen et al., 2025). In Finland, children with neurodevelopmental disorders receive support from different services; for example, child welfare, disability services, mental health, kindergartens and schools are the basic places where children and their families can get necessary interventions and support. As the responsibility is shared, it is likely that families and professionals may become uncertain about where to seek support. As a result, this study also focused on professional collaboration through consultation, pair work, teamwork and network involvement (2025).

3 METHODOLOGY

This research aims to explore how early childhood educators in Finland define, practice, and reflect on differentiated teaching in the ECEC settings. In addition to understanding the teaching practices teachers use, the purpose is to study how teachers explain the successes and failures of using those teaching practices in the ECEC field in Finland. The main research question is: How do teachers/adults in ECEC settings in Finland define, practice, and reflect on their differentiation in teaching?

This includes investigating whether they take into consideration children's interests, readiness, learning styles, language abilities, and cultural backgrounds, or any other elements that might influence their approach to differentiation. The model has been recreated by Roiha and Polso (2021) after examining the different models of differentiation.

As this is theory-based research, the differentiated teaching definition functioned as a basis of the research, and the questionnaire has been designed based on the five-O model by Roiha and Polso (2021): 1) teaching arrangements, 2) learning environment, 3) teaching methods, 4) learning support materials, and 5) learning evaluation.

3.1 Research question

The study explores:

How do teachers/adults in ECEC settings in Finland define, practice, and reflect on their differentiation in teaching?

3.2 Research design

A qualitative approach was employed, using semi-structured video interviews with educators of ECEC in Finland. This conversational interview method allowed research participants to express their thoughts comfortably. This approach gathered responses from teachers and other educators of ECEC so that it provides their insights about differentiated teaching through face-to-face interviews as the primary data collection method of this research. This method allowed participants to reflect and express their thoughts more comfortably.

This study uses semi-structured interviewing as it provides more flexibility using both the open-ended questions but also allowing freedom to the participants to share their experiences (Hancock et al., 2007, p. 12). This also allows the researcher to ask follow-up questions based on the participants' responses (Brinkman and Kvale, 2005, p. 8). This method of asking questions may also help to reduce the potential risk in the research as it is crucial for ensuring authenticity. Semi-structured interview in qualitative research follows set of open-ended questions, created by the interviewer in order to explore particular themes or the focus of the study.

Potential bias in interviews can originate from power asymmetry, questions framing, ethical concerns, validity of the collected data, which all can impact on the accuracy of the responses. For example, potential power asymmetry can come during interviews when interviewees provide answers which may be expected from the interviewer (Block, 2000). Moreover, ethical considerations will be ensured informing the participants about the confidentiality of their responses and the right to withdraw their responses at any time. All these measures help to provide a comfortable environment which ensures credibility and validity of the data collected (Alhassan and Ali, 2020).

In qualitative research, reflexivity is a tool that can be useful for the researchers to become aware about their role during the process of data collection through interview as reflexivity depicts how we as researchers reflect upon moments of confusion or any emotion during or even after the interview. During the interview, power remains present and can shift between the interviewee and interviewer based on factors like age, education and social roles. As a researcher, it is necessary to be aware of this power shifting to avoid inequal power dynamics. Moreover, being aware of this would help the researcher to create more equal and respectful interactions. Understanding reflexivity as researchers help them to understand how their social positioning impact the interactions with participants and this self-awareness strengthens the quality of the research (Alex and Hammarström, 2008). I maintained reflexivity in this study through maintaining awareness of my role as a researcher and how my identity can impact the data collection and interpretation of the collected data. During interviews, I ensured proper cooperation and interactions. As I was familiar with the differentiated model, Roiha and Polsu (2021) five O model, I reminded myself that I could expect answers that may differ from the theoretical

model. Moreover, during the interviews, there were participants who paused or took time to think or looked for words to answer, and all these made me aware of power imbalance. In those situations, I intentionally asked “can you talk more about that?” to ensure that their answers are not influenced. After each interview, I also wrote a reflective note describing my thoughts about participants’ responses. These notes helped me to identify how my assumptions and replies or questions can shape the participants responses. Throughout the analysis, I avoided prioritizing any of my assumptions that could affect the coding process.

In this research, data were collected from the participants particularly for the purpose of the study. Participants’ personal information were not mentioned in the thesis but each participant was assigned with codes such as ‘Participant X’ or ‘Participant Y’. The data were stored on password protected, encrypted devices and after the study was done, the data were deleted securely. This study involves seven early childhood teachers and educators/adults in Finnish kindergartens. The information was collected through the consent process before the actual data collection happens. All personal data about participants were securely stored and were disposed after the study’s completion.

3.3 Participants

The participants were teachers and other educators/adults of ECEC settings in Finland. Participants will be selected through purposive sampling ensuring that those selected teachers or educators have experience working with diverse children’s groups in the ECEC settings. The study aims to include teachers or other educators/adults from kindergartens in Tampere. A total of 7 participants participated in this study.

3.4 Data collection

As data were collected from interviewing teachers' or educators/adults in ECEC, each of the seven participants were engaged in a 30-40 minutes interview aimed at understanding how they define differentiated teaching, what practices they implement and reflections on those practices. All interviews were conducted in English. After the

interviews conducted, the researcher listened to the recorded audio of the interviews and do the analysis.

As this study is based on five O model theory, questions were on understanding teachers' practices of differentiation in terms of teaching arrangements, learning environment, teaching methods, learning support materials and learning evaluation or assessment while addressing the diverse needs of children in ECEC setting. To keep the alignment with the theoretical and the context of ECEC, the questions were developed through a process. For example, in the beginning, the five themes were chosen as the foundation for the interview. Then, questions were formed under each theme as the main goal of the thesis is to elicit responses from the educators in ECEC about differentiation practices. However, while the questions remained focused towards the main themes of differentiation, there also remain a scope for flexibility to explore if there are any unexpected themes that might arise.

Questions guided the research participants to share their definitions of differentiated teaching, the strategies they employ to accommodate the diverse needs of children in ECEC settings, and examples of their practical experiences after employing those teaching practices to meet the needs of all learners. This process will ensure a complete understanding of the research participants about differentiated teaching in ECEC including questions like, "do you need to adjust your play activity based on the different ways children learn? If yes, how do you make these adjustments?" (a sub theme of teaching methods) and "how do you organize the physical space in your group to allow different children to engage, play and learn in the best way possible" (a sub theme of learning environment).

Besides that, iterative questions will be applied to increase the credibility asking similar questions throughout the interviews (Shenton, 2004 cited in Heng, year). For example, participants can be asked "what resources do you use to support the diverse needs of children?" and later to encourage the participants for more specific response, a question can be asked like "Can you share a time when a particular resource was effective for the diverse needs of children?"

3.5 Data analysis

The interview notes were examined through thematic analysis to identify and report patterns within data. Nowell et al (2017) highlighted how thematic analysis can produce “sensitive, insightful and trustworthy research findings: (pp. 3-4). However, they argued that it is necessary for thematic analysis researchers to demonstrate how they analyze the data explaining transparent documentation of each analytical stage of thematic analysis (p. 2)

For this study, I conducted an inductive thematic analysis followed by Bryman’s four stages of qualitative analysis. These stages include 1) looking for ideas in the collected data, 2) identify codes and create a schema, 3) coding and 4) relating to the existing theories (Joshi, 2015, pp 10-11). The seven transcripts after the interview with ECEC educators were imported into ATLAS.ti 25 as individual data entries. To get familiar with the data set, those seven transcripts were repeatedly read while also searching for initial meanings and patterns. According to Nowell et a. (2017), continues engagement with data can strengthen the credibility of analysis (p. 4). During this stage of reading the data set, I also used the memos within ATLAS.ti 25 to record the observations and notes I had on the data set. After that, I initially highlighted the texts from the data to identify the codes; thus, this data-driven analysis helped me to avoid any predefined categories or codes (Nowell et al., 2017, p. 8). After completion of initial coding, I used ATLAS.ti 25 ‘s code manager and code groups in order to organize the codes and create a pattern. According to Nowell et al (2017), in this stage of data analysis, researchers often may use different grouping tools to help in organizing the data more effectively (p. 8). I used detailed notes to explore and understand the pattern. This not only helped me to remain focused with the data but also helped me to see how codes relate to one another. In this part, I created five main categories, which are learning environment, teaching arrangements, teaching methods, support materials and assessment. Therefore, after I was organized the codes that I found from the data, I recategorized them into these five categories. Then I reviewed through checking the coherence within each theme and checked for how well the dataset represent the theme well. Finally, when the themes were organized by the central concept of each them, then I looked for how these themes can be related to my research question. This stage is aligned with

what Nowell et al. (2017) mentioned as “story” that each theme refers (p. 10). I presented those themes into my final result of this study through integrating with other researches.

3.6 Ethical consideration

Ethical considerations have played an integral part while designing the research plan so that it ensures research integrity for this study. By following the ethical guidelines by the Finnish National Board on Research Integrity (TENK), the study prioritizes that participant are informed and can voluntarily participate being aware about the research objectives and impacts. Moreover, they also were informed about their full rights in withdrawing their information and responses at any time. Privacy and confidentiality were strictly maintained as all the personal data were anonymized and securely stored. After the data collection and analysis, the data were disposed. In general, participants of this study received a participant information document which outlined their rights, ethical standards, study’s objectives and explained how data is used.

4 RESULT

To ensure a clear and structured representation of the data, the findings are discussed following each element of the five O model: teaching arrangements, learning environment, teaching methods, support materials, and evaluation of learning. Moreover, the analysis will explore how differentiation is practiced in Finnish ECEC. Though the term “differentiation” is largely absent from the official core curriculum. Therefore, this will be examined through the lens of educators reported lived experiences and interpretations. Additional findings that may fall outside the five O model will be discussed at the end of this section.

4.1 Dimension: Teaching arrangements

In this dimension of the five O framework of differentiation, Roiha and Polso (2021) include key instructional strategies such as flexible grouping, co-teaching, mutual timetables, and remedial teaching (p. 8).

4.1.1 Small groups in flexible arrangements:

There is a strong convergence across all interviews: the use of small groups emerged as a central and strong practice in early childhood education and care settings in Finland. Participants consistently reported that having a small group helps them to have closer interaction with children, enabling more individualized support and attention for each child to respond to according to their individual and diverse needs. This finding is also very much aligned with Roiha and Polso’s (2021) theory of differentiation. While Roiha and Polso (2021) describe small groups mainly for the context of tutoring and additional support, in terms of ECEC settings, small groups are more as a core principle of everyday pedagogy rather as a supplementary teaching arrangement.

The National Core Curriculum for ECEC (2022) recognized small group arrangements as a fundamental pedagogy, both for regular activities and for providing individual support to all children. For instance, the curriculum mentions that family day care is “ECEC

realized in small groups" (p. 16). Moreover, it says "children have the right to participate in ECEC provided in a small group or a special group if their support needs so require" (p. 54). Essentially, it refers to small groups not only as a pedagogical approach or an extra or optional arrangement, but also as an inclusive right for all children. Furthermore, the curriculum also defines how small groups can be arranged through modifying or reducing the group size or adjusting the number of staff in relation to individual children's needs (p. 59).

In this sense, the curriculum itself highlights the principle of differentiation by ensuring the pedagogical arrangement in ECEC, and with that, supporting every child's diverse ability, needs, and interests. Small groups, therefore, were mentioned by all participants in this study as a practical pedagogy, based on the policy-driven incorporation of differentiation and the ECEC curriculum. This is how the participants mentioned these:

> *"I might make small groups myself where I decide who's going into the groups."(participant 1)*
> *"I try to divide them in small groups."(participant 3)*
> *"I prefer small groups and its helpful to interact."(particiapant 5)*
> *"if I have 12 with two adult or three adults, I don't know who is taking care of whom. So I think small group is another strategy that we can go ahead with."(participant 4)*

While small groups are a consistent response from participants, they also mentioned that these small groups are not always fixed but can be flexibly formed according to the children's needs, interests, readiness, and levels of development. Through these flexible arrangements, educators can modify and adjust group structures according to the children's development and needs. The small grouping in ECEC often depends on several factors, as groups can be organized based on age, skill level, interests, social connections, and many other factors.

For example, in this study, educators reported using flexible grouping more often, but instead of maintaining fixed groups, they emphasized the value of adapting group structures dynamically. Educators frequently reported that flexible grouping was practiced through different approaches. However, the examples participants provided indicate that grouping was usually organized primarily based on age- for instance, "*all three-year-olds will be together, all the fours and all the fives" (participant 1),* with age considered as "*the biggest factor." (participant 5).* Another

mentioned considering age as "*one of the factors considered while grouping" (participant 3).* While participants may consider age-based grouping for children's development, it can also create a learning environment that limits opportunities for interaction among children of different developmental levels. Eikeland and Ohna (2022) found that practices such as ability or age grouping may often be justified as a means of differentiation; however, this can limit learners' growth and create inequities, as they stated that these kinds of grouping "entails widening the achievement gap between learners' groups" (p. 164). Considering age as the primary grouping criterion may hinder opportunities by diminishing the heterogeneity that supports peer learning and engagement. In contrast, flexible grouping, as mentioned by Tomlinson (2017), refers to a group arrangement based on learners' interests, readiness, or learning needs, fostering inclusion through adaptability rather than fixed age-based grouping. Therefore, participants' tendency to have age-based grouping can hinder rather than develop the individual growth of children. Moreover, some participants mentioned these:

> *"I group them depending on the goals they have" (participant 3)*
> *"For example, this group is very literature-based and they like literature like reading stories, whereas last year's was more movement-based."(participant 4)*

The participants' reflections on small grouping in flexible arrangements illustrate how small grouping can be a key tool for differentiation in ECEC. Rather than having fixed groups, participants discussed how they consider small groupings that respond to the diverse developmental, cognitive, and social needs of every child. For instance, one participant mentioned,

> *"If I want to learn something about animals, I can take one group to the gym room, the ones that prefer to learn from a physical point of view, and we do some movement activities. So, they have their own way to learn the topic. Other ones prefer the verbal ones, so we do stories." (participant 6).*

This example reflects how learning-style-based grouping is considered while arranging activities for children, as they are grouped according to their preferred learning styles. These kinds of pedagogical practices align with the foundations of differentiated instruction as discussed by Tomasik and Trudell (2024). Based on

Tomlinson's theory of differentiation, the authors (Tomasik & Trudell, 2024) argue that differentiation is grounded in teachers' actions in addressing the diverse learners in the classroom, which involves adjusting teaching instructions based on learners' learning profiles (p. 3). Learning profiles, as discussed by Tomasik and Trudel (2024), encompass individual learning preferences and styles in which students learn most effectively. According to the authors, "each student brings unique learning styles," which need to be accommodated through differentiation (p. 2). Therefore, offering kinesthetic opportunities for physically oriented learners and narrative activities for verbally oriented learners reflects how the participants apply differentiated instruction to ensure that different kinds of learning styles learners can partcipate well. This also explains how educators adapt their pedagogical methods according to children's individual needs, learning preferences, interests, as educators provide the various ways to participate in any activity. Another mentioned the benefits of having mixed-age small groups, noting that "*combined age groups are that you can mix and match their strengths" (participant 5).* Through this mixing of different age groups, not only is social connection promoted, but also peer learning and scaffolding, where older children can support younger ones as a participant said,

> *"I do them based on their skill levels and their social connections in their group and then also if I've noticed that there's kids who are struggling to find playmates, then I usuallygroup them with the kids that I know that are socially very skillful, so they help them to get more friends and it's been working great". (participant 2).*

The participants created an environment by grouping children based on social competence, a strategy closely related to peer-mediated intervention (PMI) (Strain & Bovey, 2015). Pairing intentionally "socially skillful" children with those "struggling to find playmates" mirrors what Strain and Bovey recommended to select socially competent peers as "agents of intervention" who can model and maintain social behaviors with other children (pp. 292-293). Moreover, these kinds of peer-mediated approaches not only improve the social behavior of children but also enhance empathy and reduce problematic behaviors among children (pp. 308-309). Therefore, the participants' grouping strategy demonstrates how peers can scaffold learning and build social connections. This illustrates differentiation in terms of tailoring social learning as educators adjust different levels of social competence children may have.

These kinds of intentional paring based on children's social competence ensures all children can interact and progress their social competence.

Bendroth Karlsson et al. (2011) mentioned that mixed-age groups are a tradition, whereas in schools, children are often grouped in homogeneous groups, primarily based on age. With this practice in ECEC, the child is in "the centre in preschool" (p.3). Furthermore, the idea of heterogeneous grouping is also emphasized as small groups may help in creating "pockets of less public practices, allowing every child to feel safer to participate and find friends through peer interaction (p. 153). Therefore, small grouping in flexible arrangements reflects the essence of differentiation, making the pedagogy more adaptive.

4.1.2 Assistant and Co-teaching:

A recurring sub-theme under the teaching arrangement dimension was the presence of an assistant in most groups. Educators often highlighted the importance of having either a group assistant or a personal assistant, depending on the specific needs of the children of a group. This inclusion of assistants was viewed positively by the participants as it enabled more individualized support and attention for children. The role of assistants was described as a crucial role in terms of implementing differentiated practices, referring to the support towards children with special needs.

> *"it's possible because we have a group assistant otherwise it would be difficult" (Participant 2). "Assistants a kind of a resource that you use" (Participant 4). "The group has an assistant. So, adults' attention would be more." (Participant 7)*

While assistants have been frequently mentioned, it is noteworthy that interviewees rarely referred to the broader term of collaborative support. Only one participant mentioned having an exceptional educator who occasionally visits to consult with teachers and observe children. This contrasts with the discussions in Finnish education research. For example, prior to 2025, the Finnish three-tiered support system (general, intensified, and special support), later introduced, 'demanding special support, that emphasizes the need for multidisciplinary collaboration across education, social work, and healthcare in order to meet the diverse needs of children (Pesonen, Äikäs, Heiskanen, & Kärnä, 2024, p. 1885).

However, as of August 2025, this three-tiered support system has been replaced by a group-specific and child-specific support system, which is considered more flexible and preventive in pedagogical settings (Yle news, 2025). Some of the participants mentioned co-teaching as follows:

> *"Then I have the next group where I then have two nurses, or me and another nurse, and we are monitoring, watching, guiding" (Participant 1)*
>
> *"Sometimes we break the whole group into smaller ones and we adults get along with each group and then do the activity in different rooms or places".(Participant 5)*

In the context of what the participant mentioned about co-teaching, referring to working alongside another educator. While this term 'co-teaching' does not necessarily mean formal teaching happens in schools, it may refer to multiple educators working together in a shared space, helping children to engage in play or in everyday activities.

The findings under the dimension of various teaching arrangements illustrate that participants primarily define and implement differentiation through small-grouping with flexible arrangements. Participants' responses also demonstrate that differentiation is not understood as a separate teaching strategy but as an integral part of regular daily activities with children. Moreover, it also reveals that rather than considering a fixed instructional design, differentiation is practiced as an ongoing responsiveness to support individual children's development and learning needs.

4.2 Dimension: Learning environment

According to Roiha and Polso (2021), the primary central dimension of their differentiation model is the learning environment, which encompasses both physical and psychological aspects of the learning environment. Whereas the physical learning environment refers to the spaces and tangible components that make it more adjustable and flexible, such as movable seats, reading corners, and group work (p. 8), the psycho-social learning environment refers to the emotions and feelings of the learners (p. 9). Besides, both components of the learning environment, Roiha and Polso (2021) also emphasize the importance of transition

and break periods during learning, as preparing students for these periods can help differentiate the psycho-social environment to support all learners (p. 9).

4.2.1 Creating flexible learning spaces

From the participants' responses, under the learning environment theme, the thematic analysis brought up flexible spaces, peer learning and interactions, positive feedback, and smooth transitions. Among all these, flexible spaces were the most prominent ones, which were responded to by each participant.

> *“I noticed my little ones were hiding a lot and going to different corners, so I flipped a low IKEA Galax shelf on its side. All four of them ended up hiding in the slots, which kept them safe and in one place, so I didn’t have to search for them everywhere”. (participant 1)*

This illustrates how the educators adapt the physical environment in ECEC to meet the children’s needs. The act of transforming the IKEA shelf into something more flexible for the children demonstrates how the teacher is adaptable in adjusting the physical environment to respond to children’s spatial behaviour. This transformation converts an ordinary shelf into a hiding space, meeting children’s emotional need for comfort and safety within the space. One of the participants mentioned,

> *“We have the quiet area where we have books and everything. We have a movement area where, for example, the same Galax boxes can be used for like climbing over, under, and that kind of stuff. We have a building area they like to build. And then we have this lobby area where we have the home area. And they build different homes and they have different things.” (participant 1).*

Here, the participant explains how the entire learning environment is divided into multiple functional spaces or play stations to support varied activities with children. This powerfully demonstrates spatial differentiation, responding to the diverse needs and interests of children. The various areas, including quiet, movement, building, and home play, encourage more participation, allowing children to choose based on their preferences for play or engagement. While responding to the learning space, a participant said,

> *"We have a calm book reading corner, then we have a playroom that's meant to be like where you can throw balls or climb or jump in that room, but only in that room" (participant 2).*

Here is a contrast between calm and active zones, as mentioned by the participant, illustrating how educators use the physical environment to regulate the energy and behavior of children.

4.2.2 Creating a psycho-social environment

Participants responses also reflect Roiha and Polso's (2021) theory of the learning environment, which encompasses not only physical but also psycho-social aspects, promoting relaxation and focus through calm areas. In contrast, playrooms are more suited for physical and active play. A participant mentioned,

> *"Then there is a hallway. In front, we have the calm down corner. If one child has to cry, is upset, he is mad, he can go there. And we talk to them one-on-one". (participant 3)*

The psycho-social environment has been reported by another participant as the "calm down corner," which is designed to regulate emotions, making it a more private and safe space for reflection. One-on-one interaction reinforces a strong, nurturing environment aligned with Roiha and Polsu's learning environment, focusing more on emotions and feelings (p. 5). Understanding learners' emotions and respond to it are essential as learning is deeply connected to emotions, as students' emotions and feelings significantly affect their learning. Research has shown that small psycho-social interventions can help improve students' performance (Yager and Walton, 2011, cited in Roiha and Polsu, 2021, p. 9). Participants mentioned about how they design different corners for children as mentioned,

"So when we design the play area, like we have many corners like kitchen corner, reading corner, transportation corner for playing cars. (participant 4). Spatial differentiation was evident in another participant's responses, as it is considered a tool for diverse learning and play opportunities. Each corner of the physical space is

utilized to meet specific types of learning, social, cognitive, or creative needs as explained by a participant,

> *"spaces for loud activities where children can run and scream, and smaller play areas for animals, cars, or calm table activities. We also sometimes use tables as calm-down spaces—covering them with a blanket so children can come down themselves going in there." (participant 5).*

This response from a participant addressed both dimensions of the learning environment: calm or loud space and the psycho-social dimension. This also illustrates how ECEC educators plan for the emotional safety of children by designing the environment to act as an active participant in supporting children's emotional regulation and behavior.

In addition to flexible spaces, other aspects of the learning environment may not fall under the categories outlined by Roiha and Polso (2021) for the learning environment. In terms of ECEC settings, those aspects are primarily focused on the ECEC environment. These included appreciating the child, creating a safe environment, fostering motivation and encouragement, practicing inclusion, respecting diversity, and supporting communication among children. These aspects are explicitly mentioned in the Finnish National Core Curriculum for ECEC (2022) as the curriculum highlights "each child is unique and valuable…each child has the right to be heard, seen, notices and acknowledged (p. 19). Similarly giving motivation and encouragement is also focused as it states that "every child has the right to good instruction, caring and encouraging feedback…experiences of success and joy" (p. 19). Respecting diversity is reflected as stated "ECEC promotes the democratic values, such as equity, equality and diversity…appreciates diverse cultural heritage (National Core Curriculum, 2022, pp. 19, 30). These principles balance Roiha and Polso's (2021) concept of a positive psycho-social learning environment.

Participants in this study frequently mentioned the use of praise, providing continuous positive feedback to motivate and create an emotionally safe learning environment for children. As one of the participants mentioned, *"…able to receive the praise, then he can make smart decisions" (participant 1).*

Another added,

> *"a kid who couldn't sit down for 20 seconds and then now he can sit throughout the morning circle, but it was like first he sat for 20 seconds, and when that was a great job, he got a sticker, and then 30 seconds, then a minute, then two minutes. So positive feedback works well in the group" (participant 2).*

Similarly, the participant (Participant 4) reported, *"We praised him a lot for what he did. So it became slowly a routine."* These examples illustrate educators' use of differentiated feedback to support individual children and their self-regulation. Similarly, Roiha and Polso (2021) note that differentiation can extend beyond instructional methods, including psychosocial adjustments to enhance learners' confidence, value, and safety (pp. 4-5). In this way, giving positive feedback and praise becomes a form of psychosocial differentiation, encouraging more participation and equity for all the children.

While praise and giving positive feedback were continuously reported and highlighted by the participants to foster a supportive learning environment, another sub-theme that emerged was understanding the emotional needs of children. Understanding emotional needs not only supports the creation of a safe learning environment but also promotes individual well-being.

As one of the participants mentioned, "*we welcome children warmly, sit on the floor with them, and join play if needed. We listen, respond to their needs, and encourage them if they are upset" (participant 7).*

Another mentioned,

> *"We talk about emotions all the time… tell children how their actions affect our feelings: Please don't do that, it makes me sad. We also help children label their emotions, saying, "You feel sad" or "You feel angry," so they can connect words with feelings" (participant 5).*

Participants also emphasized the importance of acknowledging children's emotions, thereby creating a space where children can feel free to express their emotions and feelings. As one explained, " *they know that they can express any emotion with us, no issues. "(participant 3).* This again aligns with the theory of Roiha and Polso's (2021) concept of a psycho-social learning environment, as educators

model emotional literacy and validate various emotions in children. Through this differentiated approach, they provide more emotional security and self-awareness by meeting varying emotional competencies.

This finding aligns quite closely with the OECD (2012) report on Quality Matters in Early Childhood Education and Care: Finland, which emphasizes that high-quality ECEC relies on educators' ability to "praise, comfort, question, be responsive and elicit children's ideas" (Taguma, Litjens and Makowiecki, 2012, p. 9). The use of praise and continuous positive feedback, as mentioned by the participants in this study, also reflects these core features of ECEC in Finland. These practices are also demonstrated by what the OECD mentioned as "sensitive and stimulating interactions with children" (p. 25), reflecting that differentiated feedback in the learning environment of ECEC also supports children's emotional and cognitive development. Similarly, the focus participant's emphasis on understanding and responding to children's emotions also corresponds with the view that "stable, sensitive and stimulating interactions " between the educators and children lead to a "safe, healthy and high-quality learning environment" (Taguma, Litjens, and Makowiecki, 2012, p. 33) what they present as process quality is reflected in what the participants mentioned about their efforts to validate and label children's various emotions and create a safe space for them to express any emotions. All these dimensions of emotions and space influence children's well-being and development (p. 15).

The ideas presented by the participants of this study about creating an emotionally supportive environment also align with what Dahlberg, Moss and Pence (1999) found that high-quality early childhood education is defined as "responsive relationships that recognize children's emotional, social and intellectual capacities" (Yelland, 2005, p. 128). Children's emotions are recognized both in the research and in the participants' responses, and how children's emotions are related to differentiation depends on how educators adapt different ways to respond to individual children's emotions. As seen in the participants' responses, children who prefer to stay in a calm corner may choose reading or the calming corner. In contrast, those who prefer to release emotions through physical activity can choose the playroom. Dahlberg et al. (1999) also stress that early childhood education settings "should create spaces of dialogue where children can express feelings and negotiate

meaning” (p. 129, cited in Yelland, 2005), ensuring that every child feels safe and heard within the learning space.

Looking at the curriculum also makes the argument more clearer and stronger as the National Core Curriculum for ECEC (2022) clearly states that high quality pedagogy relies on taking care of children’s emotional well-being and individualized emotional suppot as mentioned, “children are proivded with opportunities to develop their emotional skills” with that “children are helped in expressing and regulating their emotions” through their regular activities and interaction in ECEC enviornment (p. 24). This underscores the importance of taking care of children’s emotional well-being, as they learn best when their feelings and emotions are addressed. This fosters a sense of security, allowing them to express and interact with others. Therefore, positive emotional experiences are essential for the overall well-being of children (pp. 19 and 31). Therefore, this illustrates that the practices of welcoming, comforting, validating, and labeling emotions are the Finnish pedagogical emphasis considered as inseparable from learning in ECEC. Moreover, when educators mentioned adapting various corners and adjusting their approaches to support children’s needs, they are implementing what the curriculum mentioned about systematic differentiation of activities that respond to individual children’s needs (p. 57).

These findings about learning environments align with the study by Bendroth Karlsson et al. (2011), which states that preschools and ECEC learning environments are shaped by four key factors, namely structure, including physical space and materials. The process refers to how communication and interaction happen among children and teachers, and lastly, the outcomes refer to what children learn or experience (p. 236). Although Bendroth Karlsson et al. (2011) do not explicitly mention emotions within this model of the learning environment, the process dimension can include emotional experience of interactions. In this case, a welcoming environment, understanding children’s emotions, and responding to them actively, along with positive feedback and praise, can create a supportive pedagogical climate in the learning space. Therefore, what the participants mentioned about flexible spaces or corners is more aligned with the structural aspect, whereas understanding the emotional needs of children is more connected with the process aspect.

From the participants' responses, it could be stated that the flexible spaces and having different corners connect well with the structural side, whereas trying to understand different emotions, giving positive feedback, and welcoming connect with the process. Therefore, all these factors contribute to creating a safe learning environment for all children.

In Emilson's study (2009), two different types of learning environments were presented. One is more controlled by teachers, who decide on what to do and how to do it, thereby limiting children's access to agency. In contrast, the other approach is characterized by shared responsibilities, where teachers and children share the same interests and make decisions together mutually. (Bendroth Karlsson et al., 2011, p. 236-237). Similarly, participants in this study mentioned how they balance observation and participation in order to support children's agency, as one participant said,

> *"…I do both. Sometimes I observe - watch how they interact, share, resolve conflicts, and respond to emotions. Other times, I join the play, guiding the imagination and seeing if the children can engage" (P2).*

Another participant mentioned about giving ownership or choices to children in regular activities: *"we often ask the children what activities they want to do"* (P5). These practices by the participants, such as sitting with children, participating in play together, and allowing children to choose or decide which corner or play they would like to engage in, demonstrate that the educators do not control the learning environment; children's autonomy and voices are valued and shape the environment equally.

This study's findings also align with Knauf's (2019) research on ECEC environments, which presented two types of environments: restrained and expressive. Whereas a restrained environment refers to having more open spaces and a minimal amount of materials, offering more flexibility, an expressive environment refers to having areas with a greater variety of materials, showcasing a strong representation of children's work and choices (pp. 48-50).

Participants in this study shared their experiences of creating multiple corners for children, including a reading corner, a peace corner, a kitchen corner, and a car play area. Having different corners not only allows children to play in the areas

they prefer but also makes the environment and materials more accessible to them. This type of environment is similar to what Knauf (2019) explained about the expressive environment. However, what might be the limitations of this environment is that even though expressive environments give children a structured environment with motivating materials, adults are the ones who design the environment and decide “what should be positioned where and how” may limit children’s autonomy (Knauf, 2019, p. 50) . For example, while children can enjoy playing in a car corner or being in a reading corner, they donot get to decide how things are set up or which corner exists, meaning the adults guide children’s choices. From the perspective of equity, differentiation can serve as a tool that responds to individual differences, allowing all learners to have equal and meaningful access to learning opportunities (Smith & Chestnutt, 2021). By allowing every child to select, design, and participate in the play or corner they would like to engage with, this approach reflects differentiated instruction that responds to each child’s interests, rather than applying a one-size-fits-all method. Moreover, in the context of an early childhood education setting, offering choices in play and designing various play areas can be seen as differentiating the physical space dimension, giving children the opportunity to practice agency and have equal access to participate in play or activities at their own pace.

4.3 Dimension: Teaching methods

In their five-dimensional model of differentiation, Roiha and Polso (2021) also identified teaching methods that refer to both the content and the needs of learners. Teaching methods could involve clear instructions, tracking and supporting individual learners’ progress, and creating more inquiry-based and project-based learning (pp. 9-10). Essentially, Roiha and Polsu emphasize that teaching methods should provide flexible opportunities for every learner, tailored to their interests and readiness, through a balance of collaboration and independence (p. 10). Likewise, in early childhood education and care, teaching methods are considered more holistic and child-centred, integrating pedagogy that comprises play, interaction, and the equal participation of all children (Ranta et al., 2023, p. 3). Unlike formal education,

teaching in ECEC happens through play, interaction among children and educators, and daily experiences of children.

Within the context of this study, which focuses on Finnish early childhood education and care (ECEC), several sub-themes emerged under the broader category of teaching methods: child-centred approaches, additional tasks, conflict resolution among children, experiential learning, and play-based learning. There are commonalities with Roiha and Polso's (2021) dimension that refer to inquiry-based or project-based learning, including the adaptation of different instructional strategies (pp. 9-10). These aspects can also be reflected in the distinct nature of Early Childhood Education, where play-based learning and modifications in routines may not be emphasized in the school-based differentiation model. However, these are an integral part of supporting children's development and regular daily activities. Unlike Roiha and Polso's (2021) emphasis on structured study skills or modifications in homework (p. 10), ECEC considers more of the children's social-emotional development and how every child participates in play or other activities.

The most common teaching methods mentioned by educators are related to child-centred teaching practices, where educators observe the children, understand their interests, and support their curiosity and individual growth. One educator described how she adapts unique methods to respond to children's fascination with writing:

> *"My Viskeri were very much interested in writing. They are writing everything. And so, what I did was, I don't teach them how to write. But I put up words around the room. And then I gave= them notebooks. And then I said, you guys want to write, look around the room, there are words. If you can find a word and if you want to write, you can write. And so, they go and they took the notebooks and they started to write the words that they find in the room" (participant 1).*

This highlights how ECEC educators consider children's interests in learning. Instead of following the same structure for writing learning for every child, the participant created an environment that encouraged children to explore and involve themselves in self-directed learning, providing opportunities for them to choose and develop words at their own pace. That educator differentiated the learning experience equally for every child, recognizing that each child learns uniquely.

The educators observe the children to know about their interests and challenges:

> *"by observing what the children are already interested in and what skills they are developing. For example, if some children are into building blocks, I will create activities that also bring in math or counting skills. At the same time, I notice who struggles with attention or motor skills, and I make the activities flexible" (participant 6).*

Similarly, this quote also illustrates how educators observe to identify children's interests and challenges, thereby differentiating activities to meet the individual child's needs. In both contexts, differentiation happens through responsiveness, followed by adapting the learning space and activities based on children's interests, needs, and developmental stages.

In the context of ECEC, experiential learning occurs through real-life activities that children participate in daily. Participants described how daily activities can serve as experiential learning opportunities for children. They used examples of shopping, visiting international flea markets, and engaging in different cultural festive celebrations. Those activities were not only fun, but they also allowed children to practice skills and enhance their understanding. For example, one of the participants mentioned,

> *"I sent my 5 years old who are obsessed with flags, walking down the international flea markets in the morning…so they were smelling different foods from different countries, looking at the flags" (participant 1)*

Another said, *"The four years went to the store to buy fruits, and they had to name all the fruits" (participant 2)*. This study also finds that how educators use music, celebration, and play to connect children with learning different stories, traditions, or cultures. For example, a participant said,

> *"We played freeze, moved fast and slow, and danced high and low to the kantele music, pretending to be at a wedding of a story character. The children loved it. We also celebrated the Sri Lankan New Year by making sun decorations, which helped them enjoy and appreciate different cultures and traditions" (participant 4).*

The participant integrates music, celebration, and play to connect children to diverse cultural stories and traditions, an idea reflected in both Play-responsive teaching (Pramling et al., 2019) and Differentiation for Equity (Smith & Chestnutt, 2021). According to Pramling et al. (2019), play is shaped by cultural and social processes, where children's participation helps them make meaning and rebuild understanding with their peers (pp. 31-35, 45-49). Teachers can "introduce the seeds of new directions" in play and create scopes to make learning happen through children's shared imagination and cultural expression (p. vi).

Smith and Chestnut (2021) claim that differentiation for equity requires educators to adapt instructions based on learners' cultural contexts, needs, and interests (pp. 232-234). Furthermore, it is mentioned that equitable teaching needs to "acknowledge the role culture plays in the classroom and engage students in culturally responsive ways" (p. 235). In this case, by allowing children to engage in multicultural music and traditions, we create entry points for everyone, regardless of their cultural background, and value the diverse identities of children. Moreover, both frameworks focus on the moral dimension of differentiation. Smith and Chestnutt (2021) refer to it as "a pathway to equity," acknowledging individual differences and sociocultural conditions (p. 233). In contrast, Pramling et al. (2019) emphasized the importance of cultural context and its relationship to play in enriching children's learning (p. 171). In this study, the participant incorporated Kantele music and the Sri Lankan New Year festive, inviting children to participate, honouring the diversity, and encouraging inclusion.

As children are still learning about how to share, how to communicate, and cooperate, conflicts are pretty standard; thus, educators use those moments to help children communicate and practice conflict resolution, as reported by a participant, '…*we intervene quickly. If necessary, we separate children, sometimes have conversation one to one and redirect them to other groups or activities" (P5).* This connects with Broström's (2017) theory about conflicts as stated by the author that conflict can hold developmental potential when guided thoughtfully by adults who need to make "an emotional adjustment acting accordance with the child's actions" (pp. 9-10). As the participant mentioned, through active intervention, educators can support children in developing communication, self-reflection, and emotional regulation, transforming conflicts into opportunities for social skill development. This

approach can also be connected to the theory of Differentiation for Equity (Smith & Chestnutt, 2021), where the authors explain how educators must tailor their responses to the unique emotional, social, cultural, and developmental needs of individual learners (pp. 233-235). The participant mentioned using one-to-one conversations, redirection, or even separation, ensuring every child has equal opportunities to develop self-regulation based on their individual needs.

Building on these findings, the sub-themes that emerged under teaching methods — child-centred, conflict resolution, play-based learning, and experiential learning — I highlight the importance of understanding how current research has shown these methods to inform our understanding of children's learning and development. For example, conflict resolution emerged in this study as one of the key ways in which educators help children cooperate and resolve disagreements. This aligns with what Johansson (2011) mentioned that "children are constantly involved in moral dilemmas since these dilemmas are part of the everyday world of preschool" (Bendroth Karlsson et al., 2011, p. 137). However, he further argues that while educators intervene to stop the conflicts, there is a chance of overlooking these moments as part of a valuable learning experience for children to learn about moral concepts (p. 137). As one of the participants mentioned, stopping the conflict between children who fight could also be used as a teaching method to reflect the themes of fairness, sharing, and empathy. Nevertheless, Roiha and Polso did not explicitly mention how these situations can be used as teaching methods. However, as teaching methods, they mentioned project-based work that requires peer interactions of varied abilities and backgrounds (pp.10-11). Similarly, Pozas, Letzel, and Schneider (2020) include project-based learning as a differentiated practice (p. 218). These teaching methods explicitly require learners to negotiate, share their knowledge, and resolve disagreements among project members, thereby building conflict resolution and empathy in the process (p. 218). Moreover, fantasy and acceptance of learning can happen together in early childhood education, where teachers view children's imagination as a way to co-create learning through fantasy. It could be playing roles, dancing in a wedding, or at a disco, as the participant mentioned. As Bendroth Karlsson et al. suggested, a successful integration of play and learning depends on educators' ability to "accept that learning and fantasy can go hand in hand," making children's imaginative power a key component of teaching

pedagogy (p. 252). This aligns with what Pramling et al. mentioned as a play-responsive teaching positioning that fosters imagination, where both children and educators co-create through shared imagination and cultural expressions (pp. 45-49). Likewise, Sousa and Tomlinson (2018) argue in their research, "Differentiation and the Brain: How Neuroscience Supports the Learner-Friendly Classroom," that imaginative experiences, including storytelling, dance, and role-playing, can activate curiosity and deep engagement (pp. 113-114).

Overall, the findings of teaching methods in Finnish ECEC illustrate that differentiation is implemented through flexible, play-based, and child-centred practices. The subthemes under this dimension of teaching methods include child-centeredness, experiential and play-based learning, and conflict resolution, which reflect that teaching in ECEC is relational and designed by educators through continuous observation and reflection. These all subthemes also extend what Roiha and Polso's (2021) way of differentiation goes beyond the academic structure and performance.

4.4 Dimension: Support materials

Roiha and Polso (2021) emphasized support materials as one of the key dimensions of differentiation. It not only refers to learning resources or textbooks, but also to ICT tools used for sustaining learners' concentration and enabling individualized learning (pp. 9-10). In comparison, participants of this study also emphasized the importance of learning support materials, though it was somewhat from a different perspective.

The most common support materials were addressed by the participants was the use of differentiated content, resources and activities considering a central approach to support children's diverse needs.

> *"…So the basic level is like that all of the kids can do, I'm positive on that, and then if I notice that they can do that well, then we make it a little bit difficult and when they can handle it that, then we like make it more difficult, so there's challenges for each kid and that's been the easiest way to provide activities that are developing the kids." (participant 2)*

This quote depicts how support materials can be used dynamically to develop learning as the tasks mentioned by the participant begin at an elementary level which gradually adjusted to maintain challenges for each child. Though all the children start with the same basic level, the educator observe children's performance and adjust the difficulty level to maintain challenge for each learner. Through ongoing observations and adjusting individual progression of children, differentiation happens based on learner's readiness. This idea of observing and adjusting tasks aligns with Roiha and Polso's (2021) responsive differentiation and individualized learning (pp. 9-10). It emphasizes on how ECEC educators play an active role in differentiating tasks whenever needed to align with individual development.
Similarly another participant mentioned,

> *"if there was a task that they had to find a specific letter and they were getting really good at letters, so then I changed it the way that they had to find the one that wasn't there." (participant 2)*

Here, the participant adjust existing support materials to bring cognitive challenges and this action illustrates that differentiation does not always refer to have new resources, but a thoughtful changes in existing resources can help. These examples are also reflected in Roiha and Polso's (2021) theory about differentiation that support materials do not need to remain static but can be used as flexible tools for individualized learning support.

Support materials does not only refer to activities or resources, it could also refer to how differently resources are used in ECEC depending on the child's needs and interest. For example, one of the participants mentioned that they have few kids who struggle to share things thus find it difficult to play together and build the social skills. In terms of responding about support materials, the participant said,

> *"...so when we do the morning circle, we had one toy…they have to give that soft toy to the other kid whose names come next on the card. That's how we try to develop sharing skills" (participant 4).*

Educators in ECEC also described about having different versions of the same activity so that every child can participate according to their readiness. As one participant mentioned,

> *"I also like to prepare a few versions of the same activity…an example could be painting-some children use brushes, while others use sponges or even their fingers. This idea is that they all work on the same but in the way that suits their style" (participant 6).*

This depicts process differentiation-how children engage with the same goal but through their preferred ways. Here, the shared focus for all children is painting, and providing multiple ways to do the painting is the process differentiation. Similarly, another mentioned,

"For example, if we are working with puzzles, I'll have simple ones with big pieces for younger kids, and more complex ones for the older ones." (participant 6)

In addition to differentiated activities, educators in ECEC also higlightened the importance of using differentiated tools or resources that address individual needs. It may include noise-cancelling headphones or any kind of seating support materials; offering more time and attention also could be used for children who need it.

> *"some kids sometimes are very sensitive to noise or find it difficult to participate well if there is noise or even sound, in that case we use sound cancellation headphones to the kids as it helps them to remain quite." (Participant 6). "If a child cannot sit still, we sometimes invite them to sit beside us" (Participant 5)*

These practices do align with the research that emphasized that effective learning support materials should not be static rather be adjusted with children's needs, readiness and interest (Bendroth Karlsson et al., 2011, p. 61). Therefore, it could be stated that, participants of this study demonstated how support materials are used to create a meanigful learning experience for all children through practical differentiation. However, some of the aspect which were emphasized in the existing literature were less evident in participants voices. For example, according to Bendroth Karlsson et al. (2011), support materials should also work to improve metacognition allowing children not only to complete the taks but also reflect on the information on how and why they learn or know something (Bendroth Karlsson et al.,

2011, p. 61). Similarly, it also focus on teacher's communicative skills-questioning, dialogue, and explanation, transforming materials into better opportunities for reasoning (p. 61). Another important feature was mentioned about purposeful use of variation, where different sizes, numbers, colors or different forms of resources are available with the intentioanal purposes to make concepts visible for children (Palmer, 2008 cited in Bendroth Karlsson et al., 2011, p. 62). According to Pramling and Wallerstedt (2011), metacognition is defined as "meta-level talk" refering to communication engaging children in conversation on "what they are doing or have done to direct attention" (p. 197). Similarly, dialogic interaction happens through diagloue, questioning, and explanations (p. 61). Lastly, purposeful use of variation in learning is used as an asset so that learners can be aware of different ways to understand and can also develop a wider range of perspectives (p. 9). Though paricipants of this study mentioned about using different versions or ways of activities, it was framed more as a choice than a strategy. Whereas participants of this study mentioned support mateirls more as differentiated tools, the researches expand more to metacognition, diaglogic interaction and variation in pedagogical strategies.

In addtion to differentiated resources described by participants, the research on play-responsive teaching in ECEC broadens the importance of support materials to include cultural tools and practices. Whereas the participants of this research focused more on diffeentiatied support materials to meet children's diverse needs, play responsive research study emphasizes mor on symbolic systems like narrative and shared cultural practices which can be meaningful during a play (Bendroth Karlsson et al., 2011, p. 51). For example, instead of teaching literacy, numeracy as a different task, teachers can apply cultural tools into play like using writing price tag in a pretend play shop game or using letters in a story game to make the content more effective and engaging (Bendroth Karlsson et al., 2011, p.169).

4.5 Dimension: Assessment

According to Roiha and Polso's differentiation theory, the assessment dimension illustrates how students' learning can be assessed through different ways of assessment. Therefore, differentiation in terms of assessing students' learning has

paramount importance. Roiha and Polso (2021) mention pre-assessment, formative assessment, and summative assessment to measure students' learning as each type of these assessments serves different purposes in supporting students' learning (p. 11)

However, in Finnish, ECEC assessment approaches differ from school settings because early childhood education does not involve formal teaching that typically occurs in schools. Instead, it focuses more on children's well-being and supports holistic development. Children's progress and well-being are observed and then documented through individual plans (VASU), which are created by the ECEC teacher in consultation with other educators and parents. Moreover, it is also found through the interviewees that these plans are considered as a more formal form of continuous assessment as they require regular documentation after observing the child and discussing with the other educators. As one participant mentioned, *"We compare our notes together and see if we are agreeing. Because then it's not just my opinion and others might notice something that I have not seen" (P2).* This depicts the collaborative nature of practice in ECEC, where educators work together to reflect and share thoughts, ensuring a more comprehensive understanding of each child's development. Similarly, a participant mentioned, *"I observe the kids. Then once a week, I have a team meeting. But not only during my team meeting, but through the whole day, I talk a lot with my teams" (P3)*. This quote expresses the ongoing communicative nature of assessment. It also reflects how continuous observation, combined with regular team discussions, helps the assessment integrate into regular pedagogical practice rather than a more formal and fixed process.

This approach of continues observation and team support closely align with what Sadownik and Višnjić Jevtić's (2023) theory which presents leadership as more collective, caring and relational procedure (p.xi) the participants continuous observation and dialogue with team members and other educators exemplify what Sadownik and Višnjić Jevtić's (2023) term "tender leadership"- referring to a leadership focusing in interdependent relationships and collaborations depicting that every diverse human qualities considered as a team resource (p. x). By observing children and what they do, then participating in reflection discussions and maintaining

regular conversations with other team members, the participant referred to how professional practice in ECEC is organized through social interaction and collaborative leadership. Karila (2012) also focuses on how the unequal distribution of power remains in parent-educator relationships. Though the participants expressed positive thoughts on parents' contribution in the process of assessment (for example, during VASU), those researchers (Karila, 2012) and (Sadownik & Višnjić Jevtić, 2023) both draw attention to how institutional documents like VASU may control over parents' participation; for instance, they may be allowed or not allowed to ask or comment on certain things or make any decisions.

Parents' opinions are equally considered and valued by ECEC educators, who view them as essential in building the child's holistic development. As one of the educators mentioned,

> *"And then also a crucial part of the assessment is the parents' notes as well. Because we only see the kid in how they work in a big group of children. So it's really important to know also how they then act at home." (participant 3)*

Similarly, another mentioned, *"…discussed in VASU meetings with parents, where teachers compile information about each child's interests, strengths, and areas for development" (P7).* While the participants in this study emphasized maintaining a respectful collaboration and valuing the parents' views in the assessment procedure, which mostly occurs during the VASU meeting with the parents, their comments did not explicitly address what can be the broader structural or historical dimensions of parents' involvement that are presented by Sadownik and Višnjić Jevtić (2023) as problematic. The authors argue that parental involvement, although it may present as positive, can be shaped by traditions that position educators as experts and parents as subordinates (p. 10). The authors also mention "democratic deficit," where decisions about how parents should participate are made mainly by the ECEC educators but not through dialogue with parents or families (p. 10)

When participants were asked about success, their perspective on success does not basically refer to attaining fixed outcomes, but rather observing positive change over time. Whether it could be a reduction in disruptive behavior or an increase in independence. As one of the interviewees said,

> *"success comes when we see progress—like a child learning to dress more independently, or starting to express emotions more clearly. (participant 7)*

> *"…for example, hitting other kids. So if we can make the kid not do that, it's a success" (participant 2)*

According to Bendroth Karlsson et al., whereas in schools, the focus is given more to subjects, lessons, and completing the syllabus, in ECEC settings, learning occurs through broad themes that focus on children's everyday experiences, which also include free play or guided play. These two different learning settings also differ in how learning is assessed. In the ECEC setting, the learning environment is assessed, and in school, it is the children who are assessed based on standards (2011, pp. 2-3).

According to another study "assessments and evaluations are done on the learning environment in which the children exist (mainly through observation), however, children may not be directly related to the process" (Garvis, Kangas, & Harju-Luukkainen, 2022, p. 2-3). It implies that while the learning environment is evaluated through continuous observation by the educators, the voices and experiences of children can be overlooked (p. 3). For this reason, it was suggested to use interviews, art-based activities, and even cameras, allowing children to document their own experiences (Clark, 2005; Kangas & Lastikka, 2019, cited in Garvis, Kangas, & Harju-Luukkainen, 2022, p. 3). Although this study mentions that continuous observation of the learning environment where the child is helps evaluate the overall well-being of the child, the role of children in this process has been overlooked.

According to Garvis, Kangas, & Harju-Luukkainen (2022), while Nordic socio-cultural approaches of ECEC focus more on children's holistic development through play and more flexible methods, OECD's International Early Learning and Child Well-Being Study, often called Baby PISA, was criticized for focusing more on academic skills and set goals instead of pretend play and socio-cultural learning (Garvis, Kangas, and Harju-Luukkainen, 2022, pp 3-4). Moreover, scholars like Pence (2016) and Urban (2017) claim that baby PISA may risk as imposing a one-size-fits-all model on all children in early education, hindering holistic approaches to child development (cited in Garvis, Kangas, & Harju-Luukkainen, 2022, p. 5)

According to the thematic analysis, teachers often implement differentiated teaching mainly based on a child's individual needs. Learning goals are often tailored to the unique developmental profiles of each child, resulting in differentiated teaching

across groups. It was worrying that poor resources sometimes might be the cause of a teacher's response when answering questions about the allocation of resources and spaces. As a whole, teaching strategies related to all five dimensions of the Five O model of differentiated teaching were reported by educators in ECEC of Finland. In addition to these core dimensions of the model, several other strategies linked to other categories have been raised during the interviews, suggesting a broader and unique interpretation of differentiation in practice.

5 DISCUSSION

Finnish ECEC educators implement differentiation across all five dimensions of the Five O model- teaching arrangements, learning environment, teaching methods, support materials, and assessment. Moreover, the national curriculum also explicitly mentions differentiation, stating that pedagogical solutions support children's development and well-being through "systematic differentiation of activities, flexible changes of groups and shaping of learning environments" (p. 59). Nevertheless, this also aligns with the five O model's interpretation about differentiation as a more "proactive and reactive", learner-centred approach that is embedded in all teaching (Roiha & Polso, 2021, p. 7). Differentiation is evident in how educators organize groups, design physical spaces, and maintain interactions; rather than being an extra or add-on practice, differentiation is an integral part of daily pedagogy in ECEC settings. Moreover, the findings also articulate that differentiation is more relational rather than explicitly theorized.

In terms of teaching arrangements, small and flexible groups are considered the primary vehicles for individualization. Educators mentioned grouping children by age, interests, skill levels, or social aspects, and sometimes mixing ages to foster more peer learning and scaffolding. Assistants, whether group or individual, are considered as crucial as pedagogical support for the personalized attention provided to children who require it. Whereas co-teaching refers to involving other adults working together in a shared space, systematic references to wider multidisciplinary professionals' collaboration are less evident, suggesting a practice that is collaborative but not involving structural coordination. Practices such as small grouping align with Tomlinson's (2017) idea of various readiness-based differentiation and the Finnish national curriculum (2022), which recognizes that small groups are an essential feature. However, grouping can limit opportunities for learners in heterogeneous groups and create obstacles for peer learning. The intent of differentiation is inclusion, but grouping can create separation.

Whereas the participants mention flexible or mixed age grouping as a way of fostering rich social learning and peer collaboration. There is research that emphasizes various critiques about its implementation. For example, Rouse (2015) notes that, although educators recognize the social and emotional benefits of mixed-age groups, many share concerns about the safety and developmental needs of young children when grouped with older children. Young children can get hurt when being" dumped with the bike" (p. ..). As a result, educators need to create fenced-based play zones limiting cross-age learning (Rouse, 2015, p. 747). These practices reflect children as vulnerable rather than capable agents of their own learning (Rouse, 2015, p. 748). Moreover, according to the study, during mixed-age play, older children dominate the physical zone and engage in play experiences more than younger children, as stated: "outdoor space supports the older children, not the little ones" (Rouse, 2015, p. 747). Therefore, participants' flexible grouping may raise questions about developmental differences between old and young children.

Likewise, Marks (2016) examined how primary school children perceive different abilities when grouped. For example, children working with high-ability groups find it more valued to work with the "same ability"." In contrast, those in lower groups may feel excluded and restricted in terms of opportunities (Marks, 2016, pp. 67-70). Moreover, children also report that it may affect their friendships and relationships (p. 75).

The learning environment is designed intentionally by the educators to maintain both physical flexibility and ensure psycho-social safety. Calm corners, various flexible themed corners- reading, physical movement, kitchen corners, cars corner, soft toy corners, and many more- invite the children to choose on their own how they would wish to participate. Practices such as continuous positive feedback, learning about emotions, maintaining a warm and welcoming environment, and engaging in open conversations can be considered as psycho-social differentiation that helps to lessen barriers for children to engage effectively in the learning space. Educators in this study elaborate on how they maintain a balance of observation, including participation with children, and preserve children's self-agency, as the environment is not controlled by educators alone but shaped by children's choices.

Teaching methods remain noticeably child-centred, with a focus on play and experience. Educators focus on children's interests (e.g., self-initiated writing, every

cultural festival celebration, and music) through the use of role-play, shared imagination, and field trips for real-life experiences, which helps learning to happen in a more meaningful way. Conflict among children is often viewed as a teachable moment for developing communication and self-regulation skills with adults and peers. The importance is on curiosity, inclusion, and culturally approachable gateways rather than school-like learning skills.

Support materials are differentiated through levelled tasks and various versions of the same activity, allowing all children to participate at their own pace. Different kinds of tools, such as noise-cancellation headphones, spike pillows, and sensory toys, help regulate children's behaviour and ensure equal access. However, a few aspects presented in previous research—metacognition reflection, dialogic communication, and purposeful “variation-as-strategy”-are less evident in the participants' views about their pedagogical practices, indicating an area for development.

Assessment is more of a continuous observation through collaboration and feedback. Observation, team conversations, and VASU meetings are foremost in integrating the assessment system through everyday practice, reflecting socio-cultural and play-based learning. Whereas these findings are similar to what previous research has emphasized on relational and flexible assessment, gaps persist: children’s own perceptions are rarely incorporated, and structural systems can also hinder parental influence and opinions.

The findings of this study regarding differentiation in Finnish Early Childhood Education and Care challenge the presentation of the term 'differentiated instruction' in other literature in many ways. For example, while Bushie (2015) illustrates differentiation as a continuum for teacher-centred planning, Eikeland and Ohna’s (2022) depict the theoretical meaning and critique of differentiation. In contrast, the Finnish ECEC is more rooted in systematic, daily practice.

Bushie (2015) refers to differentiation as more like “a systematic approach to planning curriculum and instruction for academically diverse learners” (p. 50) to honour every student's learning needs and make the best use of students’ readiness and capabilities (p. 36). This approach to differentiation focuses more on proactive planning and, at the same time, requires teachers to reflect on their own teaching practices. On the other hand, Eikeland and Ohna (2022) found through reviewing 28

international studies that the concept of differentiation remains unclear, stating, “there is a weak consensus regarding the definition of differentiation due to its diversity of terminology, forms and rationales” (p. 157). This study's findings about differentiation extend this gap by showing that differentiation can be operated systematically without being labelled or addressed in organizational or policy documents. Educators practice differentiation, without explicitly naming it, through all the dimensions of the five O model—teaching arrangements, environment, methods, support materials, and assessment—by acting proactively and ensuring learning-centred practices (Roiha & Polso, 2021, p. 7). Moreover, Eikeland and Ohna found tension in the existing literature regarding the practice of differentiation in specific groups, such as gifted or language support learners, which may result in segregation: “Differentiation based on ability grouping may threaten inclusion when it functions as tracking” (p. 163).

However, rather than organizing different ability groups, Finnish ECEC educators practice inclusion and differentiation through ensuring psychosocial safety and agency, through flexible corners, positive feedback and children’s preference in participation. In this case, differentiation may support children in practicing agency and choosing which play they wish to participate in, as they see fit. It is also essential to thoroughly examine the ethical implications. For example, allowing a child to remain alone as they are unwilling to participate may seem like valuing their opinions. However, this could also result in exclusion or overlook any social or emotional issues that children may face. Therefore, teachers need to strike a balance between responsiveness and active engagement with children.

The findings from this study primarily illustrate that differentiation is implemented holistically through regular pedagogical practices with children, rather than being considered a distinct instructional strategy. Implementation happens through flexible grouping, an emotionally receptive learning environment, child-centred and regular observation, supporting inclusion, and children’s agency. This result aligns with Roiha and Polso’s (2021) theory of differentiation as a “proactive and reactive learner-centred approach” through integrating into five dimensions (p. 7). However, when comparing with differentiation in school and higher education settings, a noticeable deviation arises in terms of implementation.

In school and higher education settings, differentiation often refers to a more instructional and structured framework designed to achieve academic diversity by

adjusting content, process, and assessment. Goyibova et al. (2025) depict differentiation as “customizing instruction, content, and assessment to match the needs of varied learners” (p. 1) and focus on strategic differentiative tasks such as task complexity, flexible grouping and giving instructions based on multiple intelligence of the learners (pp. 2-3, 5-6). This approach is primarily teacher-oriented and primarily aims to achieve better cognitive outcomes, as measured through academic results. Whereas in Finnish ECEC, educators often implement differentiation more as an environmental process, shaping learning through its emotional and social aspects. At the same time, it also focuses on balancing freedom and pedagogical structure, understanding children’s interests, and identifying children’s voices in regular activities. Therefore, even though the term is the same in educational areas, the pedagogical alignment differs across educational levels. Understanding this distinction prevents the misinterpretation of differentiation in ECEC as it aims to make sure that every child’s right to belong, develop holistically rather than to meet fixed and predefined performance standards (Roiha & Polso, 2021, p. 7; Goiyibova et al., 2025, pp. 4-6)

Whereas this study provides an insight into how differentiation is practiced in Finnish early childhood education and care, numerous limitations should be acknowledged. First, this study involved a limited number of participants, and the data limit the generalizability of the findings to Finnish ECEC. Participants' experiences and their opinions may differ across different municipalities, language day-cares (Finnish, Swedish, and English), and types of institutions. Secondly, the study is based on the individual experiences of ECEC educators, whose own perceptions may influence the findings. Without concrete data sources, such as observation and document analysis (e.g., VASU), as well as interviews with parents and children, the findings depict a loop where they appear to represent more perception rather than what is actually enacted in real pedagogies. Fourth, as the terminology ‘differentiation’ has some conceptual ambiguity among educators.

Taken together, the results illustrate that the participants in this study define differentiation not as a separate tool or strategy, but as a value-based receptiveness and a continuous approach to meeting children’s diverse needs. Differentiation is implemented in Finnish pedagogy through small-group instruction, play-based learning, and personalized care. However, the analysis also creates several tensions,

such as grouping may hinder learning and create an unequal learning space, adult-dominant environments, limited focus on metacognition, and the absence of children's and parents' voices in assessments.

6 CONCLUSION

This research explored how Finnish educators in Early Childhood Education and Care (ECEC) settings define, practice and reflect differentiation in their regular pedagogical work. Through examining teachers' and educators' experiences with children, this research investigated how those experiences can be looked through the framework of Roiha and Polso's (2021) theory of differentiation—Five O model that includes five different elements of differentiation —teaching arrangements, learning environment, teaching methods, support materials and assessment. This research showed how differentiation is implemented within everyday Finnish ECEC practices as the national core curriculum emphasized on implementing differentiation based on children's' needs.

The results showed that educators implement differentiation not as a separate or additional instructional method but as a continuous process of responsiveness to meet each child's needs, interest and growth. Among all those five dimensions of Roiha and Polso's (2021) theory of differentiation, educators illustrated their differentiation work through flexible small grouping, emotionally supportive environment, play based and child centric pedagogical method. In terms of teaching methods, the idea of VASU, regular observation on children's development and providing individualized support and collaborative support among educators reflected a pedagogy that ensure inclusion and equity. Moreover, adapting both physical and psychosocial learning environment through ensuring every child feels safe, valued and heard. Furthermore, support materials were used flexibly as educators adjusting tasks and materials in order to maintain different levels of challenges for each child. This illustrates differentiation is implemented as a decision-making rather than a fixed pedagogical method. Lastly, assessment in ECEC is more towards formative and collaborative method. Rather than looking into the outcome, success considered to be more visible in children's well-being, independence and social capability and competence.

Nevertheless, the research also acknowledges several challenges. Educators mentioned about assistants, resources and structural factors can influence for sustained collaboration and individualised support. Moreover, the findings also illustrated that grouping practices-which considered to provide support for individualized learning-can inadvertently lead to separation limiting peer interactions. Limited emphasis on metacognition and the absence of children and parents' voices in assessment can also be considered as tensions in ECEC settings. Moreover, these findings also depict that what are the strengths and complexities of implementing differentiation in ECEC settings. Though this study was limited in terms of the number of participants, the findings of this study illustrate insights about how differentiation is understood and implemented by ECEC teachers, educators/adults. This may help areas where policy and pedagogical practices can be developed further.

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APPENDICE

Interview questions:

1. How do you design activities or play situations to meet the different learning needs of your children?
2. Do you need to adjust your play activity based on the different ways children learn? If yes, how do you make these adjustments?
3. What differences do you notice among your children in terms of their learning? How do you consider these differences-such as interests, readiness, language abilities and cultural backgrounds-when planning and implementing the activities?
4. How do you group children to address their individual learning needs effectively?
5. Do you modify schedules or routines to accommodate the diverse needs of your children? If so, how?
6. How do you organize the physical space in your group to allow different children to engage, play and learn in the best way possible?
7. What strategies do you use to create a positive social environment where all children feel included and safe while interacting with others?
8. How do you support a child's emotional well-being?
9. Do you provide individualized support in terms of your teaching styles? If yes, how do you provide that? Please give examples.
10. What kinds of resources do you use? Do you design or use resources that are appropriate for varying ability levels in the group?
11. According to the ECEC curriculum framework, how is children's progress assessed in a differentiated learning setup? What specific aspects of development and learning are monitored, and can you provide examples of assessment methods used, if any?
12. What do you think about providing individualized support to every child? Can you share an example where you successfully provided support to a child in a setting?
13. What were the key challenges you faced while providing individualized support to each child?city