Reflecting on Inclusion in Early Childhood Education: Pedagogical Practice, School Space and Peer Interaction

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\textbf{ABSTRACT:} We examined an inclusive setting of 3- to 4-year-old children, focusing on the relations between teachers’ practices and the organization of spaces to promote peer interaction, in two distinct contexts, Brazil and Finland. A qualitative epistemology was applied. Participants included one pivot child (intellectual disability), his peers and teacher in each research context. Data consisted of video recordings and field diaries. Analysis followed a microgenetic model sustained by the network of meanings framework. Results uncovered: (a) contradiction between theory and practice regarding implementation of inclusion, (b) availability of objects and space division influenced more than the type and quality of material in peers’ interaction, (c) peers emerged as reference for the child with disability. Results indicated that cultural differences enhance the discussion on how multiple paths for inclusion can be implemented and open the reflection of the role of peers for materializing the participation of the child with disability.

\textbf{Keywords:} Inclusion, peer interaction, early childhood education, qualitative investigation
Introduction

Research on inclusive education, particularly related to early childhood education, has mostly focused on the analysis of teachers’ practice and early interventions for identifying effective and high-quality education for children with disabilities (Boyd, Odom, Humphreys, & Sam, 2010). This approach has often adopted children’s learning outcomes as indicators of quality (Dunst & Trivette, 2009), showing the effectiveness of preschool education on children’s social skills and school progress (Camilli, Vargas, Ryan, & Barnett, 2010; Gavaldá & Qinyi, 2012; Kaminski & Powell-Smith, 2016) or correlating preschool attendance with development and school readiness (Pianta, Barnett, Burchinal, & Thornburg, 2009; Strain & Bovey, 2011). However, when scholars examined children’s participation, the studies revealed the relevance of considering the child’s voice and involvement in social situations. Souza (2010) showed how children can be active participants in constructing knowledge. Lúcio and L’Anson (2015) discussed children’s participation and citizenship in terms of everyday experiences, showing children’s diverse roles as community members. Based on the sociology of childhood, researchers have shown children’s active roles in constructing culture and contributing to peers’ development (Cobb-Moore, 2008; Corsaro, 1990, 2005; Rossetti-Ferreira, Amorim, & Oliveira, 2009; Rutanen, 2008).

Studies have also investigated the relevance of organizing spaces and practices that allow children’s interaction to happen (Müller & Carvalho, 2009; Rutanen, Amorim, Colus, & Piattoeva, 2014) and the importance of free play as an opportunity for children to coconstruct culture (Lucena, 2010) within an inclusive environment. Recently, researchers have discussed children’s participation by investigating its impact in the development of school activities and architecture, showing how children perceived themselves as confident learners and discussing the need to incorporate children’s perspectives in institutional management planning (Jansson, 2015; Nah & Lee, 2016; Sandseter & Seland, 2016).

Nevertheless, despite a solid body of research that indicates the competency and agency of children in coconstructing culture and participating in learning situations, and the previous knowledge on teachers’ instructional practice and the interaction between children, the challenges faced on the practical level of promoting participation and achievement of children with disabilities in inclusive settings points to the need for further research. Previous studies highlighted the need to consider the complexity of human development when working within inclusive school environments (Ferreira, Amorim, Mäkinen, & Moura, 2016) and the possibilities for the development of children with disabilities during pretend play with peers (Ferreira, Mäkinen, & Amorim, 2016). These empirical and theoretical findings increased our interest in further investigating
children’s participation in inclusive early childhood contexts, in which we believe peer interaction plays a relevant role.

Therefore, in this study, we investigated possible relations between teachers’ pedagogical practices and the organization of school space to promote peer interaction. We considered children’s actions as crucial elements in terms of implementing inclusive classrooms in early childhood education (ECE). To enlarge the view of the inclusion, we used a data set of two distinct social contexts (Brazil and Finland), allowing possible contrasts and juxtaposition, to capture and identify similar core elements of the implementation of inclusive educational practices in diverse ECE contexts. The analysis examined the social practices instead of individual achievements, contextualizing the phenomenon of inclusion in its historicity, contradicting standardizations and other positions that dismiss the complexity of inclusion.

Thus, in this work we addressed the following research questions regarding ECE contexts: (a) To what extent do pedagogical practices and the organization of school space constitute possibilities for peer interaction? (b) What are the specificities of peer interaction when some of the participants are children with disabilities in these inclusive settings? (c) What kind of cultural differences emerge in Brazilian and Finnish pedagogical practices for enhancing children’s participation and peer interaction in inclusive ECE schools?

**Peer interaction, pedagogical practice and school space**

The starting point of this study is related to the assumption that human constitution and development occur predominantly through relations with others, within processes of interactions that take place in different social contexts and with diverse social and cultural elements (Vygotsky, 2007; Wallon, 2007). Interactions, thus, are a central element when analyzing the social phenomenon (Pedrosa, 2004).

Here, we adopted the definition of interaction as “a potential of regulation of behaviors among the components of a social field” (Carvalho, Império-Hamburger, & Pedrosa, 1998, p. 4). Within this definition, interaction cannot be explained by the isolation of an individual’s behaviors, but is understood by its dialogical and regulatory effects, by everything that occurs among children, implying an interindividual psychological zone (Carvalho, 2004). Therefore, the analysis is driven by one’s behavior (explicated by the immediate emission-response mechanism) toward the explicit potential of regulation between individuals, even if one is not aware of one’s potential to regulate the other individual’s behavior (Carvalho et al., 1998). This concept of interaction (Carvalho, 2004; Pedrosa & Carvalho, 2006) highlights the construction of meanings through diverse ways
beyond direct communication, as a researcher seeks to understand an interaction even when there is no explicit physical contact, joint activity, or verbalization.

When analyzing the regulation of behaviors among peers, researchers should consider that the behaviors are constrained by the institutional space and time, which are conceived and organized to allow specific pedagogical practices. As these practices are conceived differently in the literature, we adopted Mendes’ (2008) concept, which can be understood as actions involving the elaboration and implementation of the curriculum . . . consisting of the theory, reflections, mechanical-normative-guided actions, and the quotidian itself. Everything from the curriculum proposed by governmental institutions, to the contextualization of discourses within school by its subjects. (p. 118)

Pedagogical practice is “a social action guided by objectives, purposes and knowledge, inserted in a context of social praxis” (Veiga, 1992, p. 16) and can be imbued with contradictions and related to diverse cultural characteristics that are part of a society, constituting a social phenomenon by itself. In this study, we focus on four specific components: classroom dynamics (e.g., work in groups, pairs, or individual), type of activities (e.g., play, storytelling, painting, and drawing), materials (e.g., toys, paint, and crayons), and the role adopted by the teacher during the institutional routine.

Specifically, in relation to ECE schools, previous studies (Raittila, 2012; Rutanen et al., 2014; Tudge, 2008; Vuorisalo, Rutanen, & Raittila, 2014) have shown that spaces can be analyzed by their structure, which entails a set of actions and dynamics established by persons in the organized activities. In that sense, values, beliefs, preferences, rules, and ideologies play an active part in structuring affordances of a conceived space available in the social space, constraining the individual and/or group use (Carvalho & Pedrosa, 2004). More than the infrastructure in which the practices happen the space is considered the manifestation of the concepts of an educational system, partly embodied by the institutional curriculum and the proposed pedagogical practices (Vieira, 2015). Therefore, space is related to meaning-making processes, which involve negotiations between the school, teachers, and children, and between children in a specific time and context. In this sense, understanding how this pedagogical context is organized is relevant.

**Method**

**Study contexts**

In this study, we analyze pedagogical practices and the organization of school space in Brazilian and Finnish ECE schools. Bearing in mind Nóvoa and Yariv-Mashal’s (2003)
reflections on the possibilities of comparative research, we embrace this study as an opportunity to know the other, understand the other, and reflect on the phenomenon. We treated the two diverse cultural backgrounds as a reversing mirror that sheds light on distinct and similar characteristics of the other case (Tilly, 1984), aiming to reveal aspects of inclusion processes, which, despite the cultural differences, might be important for a deep understanding of inclusion. This approach offered a unique situation for identifying the core elements of a phenomenon (Tudge, 2008), and the assumption of culture-specific domestication (Alasuutari & Alasuutari, 2012) provided the possibility to understand how international trends are domesticated with respect to local conditions. To this end, we drew on the logic of individualizing comparison (Tilly, 1984) and the contrast of contexts (Skocpol & Somers, 1980), which seek “to contrast specific instances of a given phenomenon as a means of grasping the peculiarities of each case” (Tilly, 1984, p. 82) but “to bring out the unique features of each particular case … and to show how these unique features affect the working-out of putatively general social processes” (Skocpol & Somers, 1980, p. 178).

Previous studies in ECE reported interesting possibilities for research in which Finland and Brazil are taken as research contexts (Rutanen, Costa, & Amorim, 2016; Rutanen et al., 2014). Both countries are committed to children’s rights and have signed the Salamanca Statement (United Nations Educational, Scientific, and Cultural Organization [UNESCO], 1994), or the Statement of the World Conference on Education for All (UNESCO, 1990), resulting in a set of inclusive reforms based on similar grounds (Mendes & Cabral, 2015; Mendes & Cia, 2015; Ministry of Education, 2009, 2011, 2014; Rajakaltio & Mäkinen, 2014).

In Brazil and Finland, special education has traditionally been organized as a specialized service substitute for mainstream schooling, leading to special schools and special classes. The segregated organization of educational services was based on the medical concept of normality/abnormality, placing education for students with disabilities as an assistentialist goal (Mazzotta, 2001). In the 1970s in Finland and in 1988 in Brazil, access to education became a right for all children, and for the first time, there was a clear orientation that schooling was supposed to be carried out in the mainstream system (Sassi & Moberg, 1990).

After the World Conference of Education for All (Jomtien, Thailand, 1990) and the World Conference of Education Special Needs (Salamanca, Spain, 1994), Brazil and Finland aligned their national educational policies with the goals of access and quality proposed by UNESCO (1994), under the social justice agenda. Both countries interpret and embrace inclusive education as a notion of social justice, which aims to guarantee equity in the access and participation of all students in the school system (Mäkinen & Mäkinen, 2011;
Ministry of Education, 2013). However, as global guidelines do not mandate a specific system to establish inclusion, the process of domestication of international policies (Alasuutari, 2009; UNESCO, 1994) resulted in distinct realities.

In Brazil, the national guidelines integrated special and inclusive education as the National Policy of Special Education within the Inclusive Education Perspective (Ministry of Education, 2009), and special educational attendance (EEA) was established within mainstream schools as the main support system for children with disabilities from 4 to 16 years old. The school participating in this study offered services from ECE (starting at age three) to the 9th grade of Elementary School, taking sixty new students every year. ECE is integrated to the school facilities, but has its own curriculum and staff members. Classrooms are organized by age groups, accommodating up to eighteen children (maximum of two children with disability), which will be taught by a class teacher and one class aide. EEA services were offered for all children with disability since the first day at school. Special classes were scheduled one hour once a week before school hours.

In Finland, the system maintained the twin-track system, in which students are entitled to receive individualized instruction, accommodation, and support most appropriate for their needs (within mainstream or special education settings). The system was obviated by amended legislation (Basic Education Act, 2010; Early Childhood Education Act, 2015) and by the redesigned National Core Curriculum for Early Childhood Education (2016). Although the system defines learning as interaction, the emphasis is strongly on meeting students’ individual learning needs, for example, through individual early childhood plans for every child. The school participant was essentially an ECE institution for children from one-to-five-years-old. Classrooms are also organized by age groups, but could also integrate children from different ages, accommodating up to twenty children, which will be taught be a class teacher, and two class aides. There was no specific service of special education foreseen for children with disabilities within the school.

**Methodological approach**

This study was designed under a qualitative epistemology, which presupposes that knowledge is a constructive-interpretative process (González Rey, 1997, 2002, 2005), involving the elaboration of new meanings by the analysis of a non-static category, the subjectivity. Thus, individual case studies can also contain general and essential elements of a social phenomenon.

We were inspired by the network of meanings methodological framework (cf. Rossetti-Ferreira et al., 2004, 2006) and assembled a combination of empirical sources (e.g., behavioral observations of children and teachers, content of speech in communication,
actions of behavioral regulation, and facial expressions) as the elements of analysis. The network of meanings adopts a relational and dialogic analytical approach (Rossetti-Ferreira, Amorim & Silva, 2004), dealing simultaneously with all the information from the different data sets, allowing possible contradictions and unexpected elements to emerge during the process. Therefore, the study design provided an appropriate basis for understanding inclusion as the result of multiple interrelated factors, such as the pedagogical practice, the organization of space, and peer interactions.

Participants

In Brazil, participants were 17 four-year-old children with typical development and one child (boy, pseudonym Ignacio) with intellectual disability due to Down syndrome (referred to as the pivot child). In Finland, participants were 12 three-year-old children with typical development and one child (girl) with intellectual disability diagnosed with a similar syndrome (pseudonym Tarja). Participants also included teachers, class aides (specific information added in annex), and the researcher (in this case, the first author), who, under the network of meanings framework, was considered to have an active role as a conductor of the investigative process (Rossetti-Ferreira et al., 2006). It is through the eyes, reasoning, choices and sensibility towards the events that the data is constructed, demarcating the limits of research corpus. There were two main criteria for selecting the participants. First was that schools were part of public system, being administrated under the national guidelines for ECE of each country. Second, that the pivot children were diagnosed with intellectual disability without any co-morbid conditions, which could prevent them of autonomously moving around in the classroom, so that it would be possible to see also their initiatives towards interacting with others.

In this study, besides obtaining written consent from parents of all children involved (project was submitted to Ethical Committee in both countries), as part of ethical considerations the researcher was also introduced beforehand to the children participating on the study, explaining the purpose of her visits and the boundaries of interaction. Researcher did not engage in children’s activities.

Data collection

Data were collected from two sources: video recordings of daily routines and field diaries containing information that contextualized the registered daily events, such as teachers’ and aides’ actions, pedagogical goals for each activity, and general observations of the space. In Brazil, data were collected during the 9-month school year in weekly 1 h sessions. In Finland, data were collected for 3 months during a 1 h session twice a week. Additionally, the researcher had access to teachers’ planning material, which contained different information curriculum implementation and daily schedules.
The use of video recording was supported by previous studies (Ferreira, 2005; Gavis, Odegaard, & Lemon, 2015; Pedrosa & Carvalho, 2006; Souza & Batista, 2008) as an adequate tool for qualitative research with children. Previous studies also supported the use of a field diary as a resourceful strategy for providing supplementary information related to the process (Etherington, 2004; Ortlipp, 2008).

**Analysis**

Data were prepared for analysis by excluding from the video archives images were the pivot children were alone, or in interaction exclusively with an adult. Thus, from approximately 2068 minutes of Brazilian data, a total of 755 min remained, and from 1399 minutes of Finnish data 309 min were considered. The difference in the total amount of minutes between Brazilian and Finnish final data set did not imply any constraints to the analysis. The analysis consisted of a four-step iterative process inspired by the network of meanings dialogical and relational approach. First, all the video recordings were gathered and analyzed to delimit the interaction episodes. We applied two combined criteria related to the concept of interaction used in this particular work: joint attention (proposed by Tomasello & Farrar, 1986) and behavior regulation/mutual regulation between children (as described by Carvalho et al., 1998). Two hundred and four interaction episodes in Tarja’s and Ignacio’s school contexts were prepared for the second round of analysis.

In the second step, we analyzed the identified episodes. We described the content of each regulation/mutual regulation of behavior and categorized the episodes according to two elements: locality (e.g., playground, classroom, and cafeteria) and type of activity, such as a free activity (no direct orientation from an adult) or a structured activity (direct guidance by an adult). We then chose three pairs of episodes, in which the locality and context of the activity were the same in both settings (see Table 1).
TABLE 1  Presentation of the selected episodes

<table>
<thead>
<tr>
<th>EPISODES</th>
<th>COUNTRY</th>
<th>DATE</th>
<th>LOCALITY</th>
<th>CONTEXT OF ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Episode 1</td>
<td>Brazil</td>
<td>15.03.2014</td>
<td>Cultural Space</td>
<td>Painting activity in small groups.</td>
</tr>
<tr>
<td><strong>Pair 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Episode 2</td>
<td>Finland</td>
<td>27.10.2015</td>
<td>Classroom</td>
<td>Painting activity in pairs.</td>
</tr>
<tr>
<td>Episode 3</td>
<td>Brazil</td>
<td>29.07.2014</td>
<td>Playroom</td>
<td>Pretend play.</td>
</tr>
<tr>
<td><strong>Pair 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Episode 4</td>
<td>Finland</td>
<td>01.10.2015</td>
<td>Classroom</td>
<td>Pretend play.</td>
</tr>
<tr>
<td>Episode 5</td>
<td>Brazil</td>
<td>04.11.2014</td>
<td>Playground</td>
<td>Peer is telling what to do.</td>
</tr>
<tr>
<td><strong>Pair 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Episode 6</td>
<td>Finland</td>
<td>10.11.2015</td>
<td>Classroom</td>
<td>Peer is telling what to do.</td>
</tr>
</tbody>
</table>

Once we had selected the episodes and combined them according to the similarity of the activities or social situation, we carried out the third step: a frame-by-frame microgenetic analysis (Goés, 2000). The microgenetic analysis focused on identifying three groups of elements: (a) The first group was regulatory behaviors, which were identified by the tracking of an individual’s gestures, eye gaze, verbalization, vocalizations, and physical contacts. We applied a manifest coding for quantifying each behavior. (b) The second group was material/spatial elements (i.e., division, composition, and utilization of space and materials during the activities), and (c) the third group was pedagogical instructional/supportive actions (e.g., role of the teacher, type of activity and instruction, and pedagogical aims). For the material/spatial and pedagogical/supportive elements we applied a latent content analysis for *thick description* (see Kondracki, Wellman, & Amundson, 2002) and based on the identification of the three groups of elements, we created descriptions of the selected episodes. To illustrate the microgenetic analysis, we present two excerpts from Pair 1 (according to Table 1).
Pair 1: Painting Activities

Ignacio

FIGURE 1  “Do it right as we are making it together”. Pivot child Ignacio (identified by the arrow) imitating his peer.

**Context**: The entire group (18 children) was in the 25 m² classroom. The activities were done mainly on the floor, emphasizing group collaboration. The art lesson lasts for 90 min and happens once a week, organized by predetermined schedules for the entire school year. In this episode, the children were continuing an activity initiated the previous week (mosaic technique), which consisted of applying glue within the borders of a specific drawing and pasting pieces of colored paper (material prepared by the teachers). The teacher guided the children (divided into groups of five) through the activity, but the class aide mediated Ignacio's actions. It was the first time that the class had contact with this artistic technique and the first time Ignacio was video recorded using a brush.

**Episode 1**: Ignacio looks at his peer sitting in front of him, who is picking up a brush and dipping it into the pot of glue. Ignacio imitates the peer, taking a brush and dipping it in the pot of glue. He looks at his peers seated beside him and begins brushing the glue on the drawing, continuing the imitation. He looks at their hands and the paper on which they are doing the activity. In front of him, Gabriela verbalizes syllables. Ignacio also begins to babble, emitting similar sounds. Seconds later, Ana (sitting on his right) says that Ignacio is doing the activity wrong and complains to the teacher. Ignacio stops, looks attentively at his peer, and waits. The teacher intervenes and tells Ana to guide him how to do it. Addressing Ignacio, Ana says, “You have to clean it, Ignacio.”
Context: Six children sat in pairs in specific places in the 20 m² classroom. Their backs were to the other pairs, privileging the individual work and space. The class teacher had previously organized the materials (paper, paint, brushes, and music). The activity consisted of spreading paint on a piece of paper and then creating textures by rubbing a wooden stick against the paint. The class aide explained the procedures, offered the materials, and guided the children through the activity, while classical music played in the background. The children had used the same technique with different materials before. Although each child did his or her own work, the activity was identified by the teacher as a group activity, because the children were organized in pairs and sat together, simultaneously doing the same kind of work.

Episode 2: Tarja and Raimo are sitting together. The teacher comes over and explains the activity. While the teacher is explaining, Tarja touches the teacher with the brush several times, and turns and looks around the room (at objects and at the pair of children sitting at another table behind her). After that, she looks at the brush, presses it against the paper, presses it against her skin, and later smells it. When the teacher finishes the explanation, she turns the music on and pours paint on Tarja’s paper. The child immediately starts to spread the paint. Tarja looks at her male classmate, Raimo, beside her. She then performs similar movements as his. Raimo does not look at her, continuing to focus on his painting process. Tarja looks at him several times (at his hands and at his painting) while continuing with her own painting movements. Tarja turns her attention toward the other pair of children sitting at the table next to her. Tarja turns back and looks at Raimo, who is now creating textures using the wooden
stick. Tarja stops her movements with the brush and takes a stick, imitating her peer’s movements.

Based on the description we then performed the fourth step of the process: analyzing the relations of these elements to the phenomenon of inclusion, which are the main results of this study. In the following sections, we discuss each element and the emerging meanings, which we examine to point out the differences between two cultural contexts in terms of children’s participation and peer interaction in inclusive settings.

**Results**

In this section we present the results according to the elements that we focused to analyze.

**Regulatory elements**

In episodes 1 and 2, the pivot children watched their peers as models to do the guided activity. The Finnish pivot child (in episode 2) constantly looked at peers’ work and searched for the other pair of children while doing her own activity. The Brazilian pivot child not only imitated a peer’s gestures and movements but also was regulated by a peer’s observation of his work. Both pivot children had an adult at their disposal, but the peer’s actions focused the pivot children’s attention and regulated their behavior most of the time. As we can see in these episodes, peers were a reference for the child with disability in both contexts.

More broadly, in the six episodes analyzed, the regulatory behaviors showed that the pivot child in Brazil exchanged physical contact more frequently (n = 17) and participated in more interactions (n = 12), which involved verbal dialogs with peers compared to the pivot child in the Finnish context (verbal interaction with peers, n = 5; physical contact between peers, n = 10). These findings could be related to the higher number of children participating in the activities and the division and utilization of space, which possibly result in less individual space for each child in the Brazilian setting. Regarding the analysis of eye contact, although the same quantity (n = 46) was observed in the behavior of two pivot children, for the Finnish child the eye gaze duration and the focus on the others’ gestures showed that this was possibly the most significant channel to enter in interaction with what others were doing.

The Brazilian pivot child also engaged in more situations involving verbal dialogs with teachers (n = 4; n = 1 for the Finnish pivot child), although the child vocalized only syllables. This could be explained by the constant presence of the Brazilian teacher or class aide during the activities, a situation that differs from the Finnish context where the
adult did not participate in the activities all the time. However, regarding the verbal dialogues, even considering the differences in the scenario, activity, and type involvement of the pivot child, the content of all dialogues in all interactive episodes was related to prompting changes in the pivot child's behavior, either towards improvements in the child's execution of a specific task such as seen in episode 1, or aiming for compliance with school rules and the routine already incorporated by the children. To exemplify we present the excerpts from Pair 3 (episodes 5 and 6).

**Pair 3: Peer is telling what to do**

*Ignacio*

**Episode 5:** Ignacio was playing alone under the slide structure until his classmate Maria sees him putting his fingers between the gaps in the slide. Maria comes over, grabs his arms, and says, "No, Ignacio, no! You can't put your fingers while Mateus is playing up there." Ignacio looks at her. Maria shakes his arms and repeats herself. Maria leaves. Ignacio looks at the researcher and places his fingers in the slide gaps again. Maria returns, grabs his arms firmly, and says, "Ignacio, I already told you: No! No! No!" She firmly sits him on the ground and repeats slowly, "You can't do that." He looks at her and remains on the ground.

![Ignacio and Maria dealing with conflicts.](image-url)
**Tarja**

![Image](image_url)  

**FIGURE 4**  Tarja (arrow) and Siiri, dealing with conflicts.

**Episode 6:** Children are preparing to go outside, and Tarja is playing with the cash register. Siiri observes Tarja and tells her, "The money is not supposed to be placed there, it is here." Tarja continues to do exactly what she was doing before, and Siiri tries to communicate through Sign Language at the same time she verbalizes, "It is time to go and play outside the room." Tarja continues playing with the toys. Siiri tries again, this time holding Tarja’s hands. Tarja makes an upset face and pushes her peer away. Siiri grabs Tarja’s arms once and then leaves to call for help.

Peers in both contexts recognize themselves as someone capable of interfering to the pivot child’s behavior and incorporate the roll.

**Material and spatial elements**

Regarding the analysis of material and spatial elements, there were no important differences in the type or quality of materials available for children; in both contexts, children played with similar toys (e.g., dolls and wooden/plastic furniture), had access to similar structured playground equipment and used glue, paint, brushes and paper as their main materials for the activities. Therefore, type or quality of materials did not have a role in prompting children’s interactions and did not reveal any specificity of pedagogical assumptions. However, the availability of the materials and space setting division did. In situations where children had to share the objects and were constrained by a smaller space, they presented more regulatory behaviors and more physical contact, eye contact, and verbal exchanges. In these situations, the content of the dialogs, in addition to
presenting intentions of behavioral changes, involved constructing joint narratives within a story-telling process as seen in episode 3.

The availability of objects and the division of space could also explain the difference between the total amount of minutes of interaction in the Brazilian and Finnish data sets. This difference between 755 (36.5% of total time, Brazil) and 309 (22.08% of total time, Finland) could be interpreted as indication that in this Brazilian setting there were more possibilities for children to engage in joint situation.

**Pair 2: Pretend Play**

*Ignacio*

![Image of children playing]

**Figure 5**  “The story behind the play”. Ignacio (arrow) in the pretend play.

**Episode 3:** Ignacio and his peers were in the playroom. Ignacio is wearing costumes and a helmet and holding a hammer, all of which recall an engineer or a construction worker. Ana comes close and asks for help, telling him that her house is broken. He looks at her for a moment without making any movement. She repeats: “My house is broken. Come!” The teacher encourages him to go. Ignacio follows Ana to the opposite corner of the room. While walking, Ignacio looks to other children playing. Ana keeps tracking Ignacio, to see if he is following her. They exchange eye contact. When they arrive at the corner, where a dollhouse, bench, pans and pots are placed, Ana says, “Here, Ignacio, here. Look!” She points to the toy in front of them (dollhouse) and says to Ignacio, “Here I cook, and now nothing is working. I need you to repair it” and “also here, this has to be in the other way, you fix it.” She explains to him where it needs to be fixed. Ignacio hits the toy several times, incorporating the role and following her commands, while looking at her from time to time.
Tarja

**FIGURE 6** “The silence behind the play”. Tarja (arrow) in the pretend play.

**Episode 4**: Tarja was in a corner of the classroom, where the kitchen scenario is set and children are free to play. Five children are playing in the pretend house scenario at the same time. Tarja and Tea sit at the table, while Marja and Jenna play with the oven and kitchen supplies. Plastic objects representing food are on the table. Tarja looks at Tea, who is organizing the different plastic foods in front of her. Tarja stretches her hand in Tea’s direction and gives Tea a plastic onion. Both girls look at each other. Tea takes the onion and puts it by her side on the table, without including it with the other food toys. Tarja continues to look at her peer. Tea places one of the vegetable toys in her mouth. Tarja watches Tea’s movements and follows them. Tea then folds the tablecloth and touches it to her own mouth, looks at Tarja, and mumbles. Tea starts to put the vegetables into the basket. Tarja gets her potato and tablecloth, and places them in the basket just like her peer.

These episodes also showed differences in the way children interacted during the play, especially concerning the use of objects (materials) and the engagement process in pretend play. In Brazil, the pivot child and his peer (episode 3) clearly shared a story even if there was little reciprocal verbal dialog, contextualizing both play roles in the same scenario. In the Finnish school (episode 4), the children appeared to engage in pretense with their own individual story, with no evidence of explicit combinations of roles during the pretend play, as the pivot child acted mostly by imitation, as shown in the previous excerpt. The use of the objects reveals different patterns of interaction. For the Finnish children, sharing the objects and scenarios was the element that connected their play, setting a generic but unique background for their different stories.
In addition to the analysis of the content of the dialogs, we can see that the space division and the use of time for each activity were distinct. In the Brazilian context, there is a fixed (the same for the entire year), adult-oriented (decided exclusively by adults), and function-delimited (specific rooms for specific tasks and activities) use of space. Activities are organized in lessons (60 or 90 min) and applied to the entire class at the same time. Play is addressed by the use of a specific time schedule and place in school (playroom). At the same time that this situation revealed an understanding of the role of play as content, it also created a scenario in which all 18 children were challenged to find ways to interact, share, and construct their playtime together, increasing the demands on social abilities and encouraging collaborative work. In turn, the Finnish school organized activities according to the division of the classroom. The children decided about the time and use of the space during group discussions in the beginning of the day routines and pretend play did not have a specific role or description in the school’s curriculum, being generally described as the way through which children learn, and through the way activities should be introduced to them.

The episodes also show how the organization of the classroom plays a part in enhancing children’s interactions. The Finnish classroom environment was composed of different areas, such as a space for tables and cabinets, an area for pretend play, a room for free-play on the floor, a bathroom, and a space for the teacher’s office. In this school, the guided activities took place mostly at tables, in a clear delimited space reserved for each child. As an example, in episode 2 pairs of children sat at different tables, their backs to each other to encourage them to focus on their own process. There was no demand for physical contact or verbal negotiations. Moreover, the teacher could intervene directly in each child’s process, and the child with disability could take his or her own time to perform the activity. Therefore, an individualized experience was in relation to the learning process.

In the Finnish context, the routine is discussed with the children daily, and is based on what each child is interested in doing and learning. Children experience the different spaces and activities available in the classroom in separate small groups, and the time is not prefixed. Play is the main activity, regardless of the space or time, appearing diluted in all activities of the children’s routine, taking on the role of a tool, by which children learn during their time in school. This structure created a flow of simultaneous activities, and children explored the activities more autonomously (the teacher intervened only when requested). However, the structure also defined the interaction among children to occur in smaller groups, with less need for peer negotiations in a more individualized perspective.
Pedagogical instruction and support actions

The analysis show important differences regarding the classroom dynamics and the role of adults’ in the activities, which influenced the promotion (or not) of children’s interactions and are considered relevant for the discussion of inclusion. In all the episodes analyzed from the Brazilian context, even though the described interaction is focused in a pair of children, the classroom dynamic imposes a situation where all children are engaged in the same kind of activity at the same time; there is no distribution of the pupils in different activities. This group dynamic enhances opportunities for interaction once children are in more number, and prompts group activities as a pedagogical strategy to structure the activities. In addition, there is officially a class aid designated to follow and mediate the academic activities for the pivot child (e.g., the painting activity). This assistant was responsible for the pedagogical support for the child with disability and in the situation of the painting activity was the adult in charge of providing the instruction and guidance.

In contrast, the classroom dynamic in the Finnish context is structured by dividing children into different activities (e.g., different play areas with distinct toys, gymnastic routine and arts), resulting in smaller groups with less variables of peer interaction. Also, in this context there is no class aid designated to assist specifically the pivot child, being her pedagogical support a responsibility of all adults involved. Similarly, in the painting activity it is also the class aid the adult responsible for instructing the child with disability.

In spite of the above-mentioned differences, the type of materials used to support children’s activities was not significantly different. In both cases, paint, glue, brushes and paper were used in the class, and during play time children had the same kind of toys (e.g., dolls, house equipment and costumes). According to the analysis, there was no evidence of type and quality material interfering or defining the interactions.

The combination of this information provided an overview of how peers established and maintained interaction throughout different moments of the school routine, revealing the institutional rhythms, aspects of the teacher’s practice, and how the spaces were organized, promoting (or not) children’s interaction. The assembly of these elements opened up possibilities to reflect about the inclusion process in both educational settings.
Discussion

Considering that both countries embrace inclusive education as a notion of social justice, the implementation of inclusive practices shows an ethical perspective and precepts, referring to the idea of offering equal access to the same opportunities (Berg & Schneider, 2012). This perspective advocates that educational settings have to consider the specific educational needs of each child and offer assistance and an environment that fit that individual’s development. Both countries explicated similar global aims based on international agreements (UNESCO, 1994, 2009) and invested in children’s rights (Rutanen et al., 2014), but the domestication process (Alasuutari, 2009) and the cultural specificity, historical background, financial resources, and social demands have led to different paths in inclusion practices in the investigated ECE contexts.

As an example, activities were conceptualized based on different understandings of group work. In Brazilian ECE, group activity was interpreted as tasks in which children collectively constructed a unique shared product, being involved in a similar process, doing the same kind of activities at the same, maintaining the same work rhythm, and sharing understanding of the task goals. Thus, the division of space in collective activities implied the need for children to constantly negotiate the use of the area and objects and debate how the work could be done, implying opportunities for interaction. This pedagogical identity creates practices that value the children’s interactions with others, providing affordances for children with disabilities to engage in joint activities and stimulating peers to influence the meaning-making process. However, this situation that imposed child–child dialog and regulation by others’ actions also constrained individual needs (e.g. individual differences in performing the task or individual need for specific guidance), demanding that the child with disability achieve the same results as the rest of the children with typical development.

In Finnish ECE, group activities meant children shared time, space, and materials when executing tasks, which were not necessarily completed as a collective production (i.e., each child created his or her own work). The pedagogical practices emphasized individuality and the search for the child’s autonomy. Sharing materials, space, and time was the foundation element for group activities, even if they resulted in individual processes and products. In contrast to the Brazilian setting, the Finnish individual work with shared space and material privileged respect for the individual needs and learning paths of the child with disability but did not necessarily encourage children to share their thoughts and creative processes. The institutional organization also constrained the time given for the children to work, showing the impact on the inclusive practice adopted: the Brazilian pivot child carrying out his activity at the same time as children with typical development versus the Finnish pivot child with no time limit to perform the activities.
An individualistic or collectivist educational perspective is also related to historical and cultural elements, which have been pointed out in different sociological studies (Gundlach, Zivnuska, & Stoner, 2006; Wagner, Humphrey, Meyer, & Hollenbeck, 2012). In this perspective, individualism or collectivism affects the structure and function of the society’s organization (Wagner & Moch, 1986), and the interpretation of participation (a pillar concept for education and even inclusion) will also be guided by these different perspectives.

Therefore, the possibilities for peers’ interactions and engagement in activities were affected by the teachers’ different theoretical concepts, institutional interpretations of the pedagogical tools, and different ways of implementing the pedagogical strategies. These elements influenced the construction of children’s learning experiences in living spaces, as stated in previous studies (Mathisen, 2015; Raittila, 2012; Vuorisalo et al., 2014), and shaped a certain way to construct inclusion. However, in both cases, while participating in school activities, the children were also incorporating sociocultural values, characteristics, and beliefs particular to each society, as Corsaro (2003, 2005) has proposed. The contradictions identified by the multicultural analysis open up space for a debate on what should be the empirical evidence of the phenomenon of inclusion: children’s participation and membership or individual achievement?

Finnish ECE considers the adult–child negotiation and the child’s participation in decision-making processes, more than in Brazil, where the interaction between children was more valued, but adults mainly made decisions. However, when considering the specificity of the child with disability, the Finnish teacher had less marked adult–child interaction, and in Brazil, the school provided a full-time aide to assist the pivot child. As we can see, values were inverted, and contradictions were once more explicitly expressed in both contexts. However, as a core element in both ECE schools, the regulation and mutual regulation of behavior between children (Carvalho, Branco, Pedrosa, & Gil, 2002; Guralnick, 2002; Pedrosa & Carvalho, 2006; Schilling & Clifton, 1998) were constant, even though peers unintentionally regulated each other’s actions and were supported by different resources to initiate and maintain contact. This regulation (with or without awareness or intention) contributed to the learning process of the child with disability, as the pivot children performed the school-proposed activity, by mimicking the other children’s behavior and following the other children’s leads. Similar findings have been reported in previous studies (Carvalho & Pedrosa, 2004; Ferreira, 2017; Lucena, 2010), supporting the discussion that children search for the peers as a reference of cultural values and rules (Corsaro, 2003, 2005; Lucena, 2010), regardless of the children’s developmental conditions and the characteristics of each society. Therefore, the present study revealed the peer as a relevant agent for the inclusion process, providing support,
interposing actions, behaviors, and dialogs by peers, which influenced the action and participation of the child with disability.

Furthermore, the episodes showed that peers could take on the role of an adult when interacting among themselves and even with the children with disability. In both cases, the content of the communication process indicated that peers were enacting adult roles while correcting the behavior of the children with disabilities. Peers enacted the social representation of the teacher or adult's role, evidencing their self-recognition as individuals more capable and responsible for intervening in the other child’s activities and behavior. A similar dynamic has been described in different studies that explicate the process of interpretative reproduction of the world by which children construct peer culture (Corsaro, 2005; Corsaro & Molina, 1990; Oliveira, 2011). Children adapted their communication resources aiming to reach understanding by the pivot child, which could be a sign of the social changes once foreseen in the inclusive education paradigm (UNESCO, 1994) toward a society that considers diverse ways to exist in the world as a human being.

Finally, through the regulatory functions and the construction of meanings (Carvalho et al., 1998), both pivot children participated in playing roles, coconstructing culture and consequently their own developmental process (Oliveira, 2011; Smolka, 2001). The play activities were recognized as an important part of the children's routines, and even when the play was structured by distinct rhythms and practices, the child with disability had more opportunities to establish interaction with peers. Through the pretend play, the children created a situation that did not highlight the intellectual disability, setting the pivot child as a competent peer for the play and diminishing the imbalance between children. At the same time, all children were appropriating the social values and behaviors, constructing individual and social meanings from the experiences shared collectively. Therefore, the presence of the child with disability in the group could be considered an integral part of all children’s lives, and consequently important for their developmental process.

For the discussion here presented, it is understood that the findings of this study could refer particularly to those who wish to reflect on the practical level of the implementation of inclusive pedagogies. However, it is important yet to remark that because of the specificities of the theoretical framework adopted in each school and the individual characteristics of the participants, generalizations regarding the two social realities and the phenomenon of inclusion as a whole cannot be made.
Conclusion

Grounded upon the network of meanings dialogical analytical approach and by triangulating the focus on pedagogical practices, division and use of space, and peer interaction in distinct social ECE contexts, first, it was possible to identify how pedagogical practices and the organization of school space influenced directly the possibilities for peer interactions and recognize that peers influence considerably the actions, behaviors, and participation of the child with disability, especially by imitative processes. Second, it is possible to conclude that we still can identify important contradictions between theory and practices in the ECE educational environment, especially regarding the elaboration of a learning environment that respects the child’s individual needs. At the same time, the contradictions between the different social contexts opened up possibilities to reflect about how to create situations in which objects and space have to be shared between children, prompting their interaction and enhancing the possibilities for imitative behaviors to occur.

Despite possible contradictions and the use of different tools (objects, stories, physical contact, and eye contact) for engaging children in group activities, in both contexts children with disabilities were included in social participation and cultural engagement, accentuating the idea that multiple paths can be pursued for inclusion. Finally, we identified that the child with disability searched for peers as reference. Peer interaction should be further studied within similar contexts. As communication is the pillar element of interaction and construction of participation, the resources children with intellectual disability might utilize in their communicative processes with peers in ECE contexts in different cultural backgrounds should be explored in the future.

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