Abstract
Designing inclusive curricula in the Italian Early Childhood Education and Care (ECEC) system (0-3 years) may be an intricate task, especially when taking children with Autism Spectrum Disorder into account. Educators are requested to connect nationally and internationally shared (European Commission, 2014; MIUR, 2012; OCSE PISA, 2009) pedagogical orientations to evidence-based strategies that address children’s individual educational needs at this early age. The COVID-19 pandemic has brought about new challenges for this educational setting that not only supports parents in guaranteeing a safe environment for their children but has proven to be beneficial for the children’s holistic development. Furthermore, they should also consider the effects of the COVID-19 pandemic on the intensity of ASD symptoms due to a lack of embedded learning opportunities offered by inclusive classrooms. To address this purpose, this paper aims at exploring the feasibility of the Group-based Early Start Denver Model to design ECEC curricula that may support the establishment of a routine within the educational context.

Keywords
Early child education; embodied nature of Autism; G-ESDM

Servizi educativi italiani per la prima infanzia; natura incorporata dell’autismo; G-ESDM
Introduction

With the gradual spread of the COVID-19 pandemic, our day-to-day life has been affected tremendously. People had to face the fear to interact and relate with others, they had to get used to social distancing and extensive hygiene protocols and even to month-long lockdown periods to limit contagion. Moreover, it also gave rise to the largest disruption of education systems in history affecting almost 1.6 billion learners all around the world (United Nations, 2020). Closures of schools and other learning spaces have impacted 94% of the world’s student population, and it also required the educational field to establish new alliances among the institutions in order to co-operate and develop new relationship models (Sibilio, 2020). At the same time, the complexity of providing inclusive education for all, especially children with disabilities arose (ISTAT, 2020). Teachers gradually had to accept the idea that the only solution to fulfil their duties and be of help and support to their pupils and students was to shift to virtual learning environments, although aware that it could never replace the learning opportunities that in-person everyday school life provides (Pace, Sharma, Aiello, 2020), thanks to social and embodied relationships.

With regards to children with Autism Spectrum Disorder, there has been a higher cause of concern among the global autism research community in terms of their and the families’ well-being (Amaral, de Vries, 2020). Studies, in fact, have shown that loneliness and uncertainty have led to more severe ASD symptoms and an increase in sleep problems during the home confinement period (Türkoğlu et al., 2020). In addition, levels of stress both for children with ASD and their families due to the change in routines have intensified (Alhuzimi, 2020). Since the same feelings may well emerge after the pandemic period, considering that these children will need to get used to a completely new routine, researchers are called to reflect and propose ways of how educators and teachers can be prepared to effectively manage the difficulties their pupils and students with ASD will deal with when going back to school.

Educational settings may potentially be ideal contexts to build children’s resilience and support them to adapt to new routines and more complex environments when compared to their home as well as to cope with the virus contagion prevention measures and other needs deriving from on-site teaching activities. Educators and teachers should follow pedagogical and educational insights in order to design inclusive curricula and properly adapt the ‘new’ environment to give the children with ASD the opportunity to experience it without feeling sensory overload, stress or being upset. To start with, it is important to explore and understand the nature of ASD and to identify national educational priorities considering the significance of early educational intervention to modify the developing brain (Dawson 2008) in order to positively affect the child’s development and learning trajectory. At the same time, it is indispensable to identify evidence-based models that may guide educators working with children with ASD of 0-3 years old in inclusive early childhood settings and support them on making better informed decisions on educational programmes. In Italy, there are uncertainties on this topic because, to date, there is still a lack of curriculum guidelines specific for ECEC services catered for infants and toddlers up to the age of three. For this reason, a preliminary understanding on principles may support educators on designing inclusive curricula in Italian ECEC systems is necessary to investigate possible connections with the embodied nature of ASD and educational approaches.

1. The need for a curriculum for the Italian early childhood education and care system

Over the last decades, early childhood education has emerged as a primary service for infants and toddlers to promote their development, well-being and full participation from pre-school years. With the aim of improving quality in early childhood education and care settings, the European Commission (2014) considers the curriculum as a fundamental tool
and contemplates the development of new approaches based on evidence as pivotal. Any proposal needs to cover an array of themes to include developmental care, formative interactions, learning experiences and supportive assessment to meet the aim of promoting young children’s personal and social development and their learning as well as laying the foundations for their future life as citizens (European Commission, 2014). Reaching this benchmark requires educators and teachers to deploy well researched educational strategies (European Commission, 2014; Darling-Hammond, Youngs, 2002) and to act at different levels:

- designing inclusive curricula that may promote the development of children (Bondioli, Savio, 2019; Bulgarelli, 2018).
- supporting the full participation of all pupils by avoiding disparity in access to early childhood education, ensuring all children the possibility to enter formal education since birth and benefit from better school performance in later years (European Commission, 2014; OCSE PISA, 2009).

Italian inclusive ECEC services follow these suggestions that are in line with the pedagogical traditions and national regulations. Since the entry into force of the Law 107/2015 (G.U. 2015) and the Legislative Decree 65 of 2017 (G.U. 2017), the Italian Early Child Education and Care system (ECEC) comprises not only the preschool phase, known as asilo nido, (from 3 months to 3 years) but also kindergartens (from 3 to 6 years), called scuola dell’infanzia. As stated in the Legislative Decree, these services contribute to promote the children’s care, education and socialization through the development of well-being and identity, autonomy and skills. Both educators and teachers are to act in response to specific functions of care, education and adopt teaching strategies personalised to the developmental stages and learning styles of the pupils of the particular age group. According to the European Commission (2016) «at national level, policymakers seek to influence children’s learning experiences by issuing a detailed ECEC curriculum or by publishing official guidelines outlining the main principles of education for this age group». The Italian National Guidelines are addressed to preschool educators and it draws attention to the importance of a curriculum that creates effective learning environments and nurtures children’s cognitive and socioemotional development (MIUR, 2014, p. 11). Then, it also outlines common competences and educational standards which reflect Italian society’s expectations regarding the role and responsibilities of early childhood educational settings. However, these only take into account early childhood settings for children from three to six years old whereas there is a lack of specific curricula addressed to preschools catered for pupils from 0 to 3 years of age. This, in turn, creates a fragmented system that does not favour continuity between the first and the second three-year periods (Bondioli, Savio, 2019). As a result, this may also impinge on the identification of specific learning objectives, suitable materials and ways to set the classroom according to pupils’ needs, teaching and assessment methodologies. Bondioli and Savio (2019) attempted to define some pedagogical suggestions for a curriculum that should be based on a holistic play-based approach that is developmentally appropriate and engaging.

Moreover, considering that in Italy all educational settings need to be accessible to all children irrespective of ability, gender, culture or origin (Aiello, Pace, 2020), the curriculum needs to be feasible enough to meet the needs of pupils’ different readiness and interest levels, allowing them to feel comfortable and engaged along with educators/teachers and peers during the activities (Tomlinson, 2017; D’Alonzo, 2016). Pedagogical principles may guide educators and allowing great freedom within the design of individualised and inclusive programmes. Nonetheless, designing an inclusive curriculum in today’s schools may be an intricate task considering the variety of special educational needs and it seems to be harder when addressed also to pre-schoolers with ASD (Handleman, Harris, 2001). Professionals, indeed, may face difficulties on the identification of specific learning goals only from pedagogical principles, especially if they do not have specific training on child development and ASD manifestations.
2. The embodied nature of Autism Spectrum Disorder

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterised by social communication impairments and restricted interests (American Psychiatric Association, 2013). Usually, it is detected and diagnosed around the age of three, although parental concerns surrounding their child’s development arise as early as the first birthday (Barbaro, Dissanayake 2009; Werner et al. 2000). Its clinical manifestations may hinder brain function development leading to a disruption of the established patterns of functional connectivity (Lewis, Elman, 2008) and to learning difficulties (Bo et al., 2016; Klinger, Klinger, Pohlig, 2007). In order to understand the nature of autistic learning, researchers (He, Jespersen, 2015) went beyond the traditional approach centered on deficits, including social ones, focusing on the particular way of being in the world of people with autism. This interpretation connects with the phenomenological assumptions (Merleau-Ponty, 1945; 2014) and neuroscientific theories (Gallese, 2013; Cosso et al., 2012; Luz, Thompson, 2003) which consider the body not only as an open-ended project and a way of living in the world, but also as a “processor” of stimuli and an agent whose structure is modified by the environment; a body that simultaneously experiences in a world that responds with immediate meaning and contextual presence (Merleau-Ponty, 1945; 2014).

On the other hand, few studies are internationally going in deep on taking children with ASD learning process as being-in-the-world. The theory describes how the body partially determines the way they learn: the theory of mind, the weak central coherence theory and the interactive theory are considered limited because these do not fully consider the subjective dynamics of our experience and the embodied nature of autistic learning (He, Jespersen, 2015). Firstly, according to the authors, when children with ASD show motor learning difficulties, it is possible that these are a reflection of a sensory sensitivity that may negatively impinge on several abilities. Secondly, to modulate the attention towards multiple stimuli and to learn by observing, because it requires the children with ASD to have more time to discriminate, select and elaborate a variety of environmental and social stimulus. Thirdly, the difficulty to modulate the attention is also related to gestural joint attention, imitation and language skills in children with ASD. As shown by Ingersoll (2008), their inability to imitate gestures and body movements interfere with:

- their language outcomes and joint attention skills: usually these children decrease the deictic use of gestures to draw someone else’s attention to an object or event and show lower competences in language (Pickard, Ingersoll, 2015; Bono, Daley, Sigman, 2004);
- their difficulty to imitate others’ actions or with objects: this is related reduced play skills.

Moreover, developmental delays in motor skills, such as accurately moving hands, fingers, toes, lips and tongue (Bhat, Landa, Galloway, 2011; Ming, Brimacombe, Wagner, 2007), affect motor coordination on a wide range of tasks such as: drawing, typing, writing, speaking and playing (Jansiewicz et al., 2006). For this reason, the role of educators and teachers is pivotal to design implicit and explicit curricula to give the child with ASD the possibility to learn through his/her body within the educational environment. The COVID-19 pandemic might have endorsed these symptoms because online learning environments do not provide a suitable educational environment for most children with special needs such as ASD (Asbury et al., 2020; Di Pietro et al., 2020). It is a different way of being-in-the-world that might not give children with ASD the opportunity to act, interact and mutually adapt with such a complex environment like the ECEC settings. Moreover, as stated by Pinnelli (2020), during the pandemic period, it seems that early child education has somehow become only inherent to schooling rather than educating. For this reason, it has now become ever more important to take account of the ASD embedded learning suggestions, in order to figure out how to design inclusive curricula that will help in re-establishing new routines and support children with ASD when educators and teachers go back to school.
3. Insights from the G-ESDM to design inclusive curricula in ECEC services

For several years, the challenges that educators face in order to adapt their teaching process to promote pupils with ASD development and learning, has placed the attention on the identification of early intervention models based on evidence that may be adopted in inclusive ECEC settings. Despite the ASD core deficits, infants and toddlers with this disorder usually follow developmental paths that are more similar to typically developing children (Vivanti, Salomone, 2016; Rogers, Dawson, 2010). As a result, emphasis has been given on the incorporation of developmental principles and sequences in a number of early autism educational interventions. Several of these interventions have also been deployed to and tested in preschool programs and their adoption seems to be promising in promoting pupils with ASD development in inclusive mainstream classrooms (Vivanti et al., 2019; Chang et al., 2016). Among these educational interventions the Group-based Early Start Denver Model (G-ESDM; Vivanti et al., 2017) uses the knowledge of how typical children develop, learn and the ways in which ASD affects early development in order to improve the developmental outcomes for pupils with ASD. It implements relationship-based strategies within an environment which foster child-centred and socio-constructivist approaches.

The GESDM stems from the Early Start Denver Model (ESDM, Rogers, Dawson, 2010), an evidence-based practice whose effectiveness has been confirmed in several studies (Rogers, Dawson, 2010; Dawson et al., 2010). Both models share the neuroscientific and pedagogical suggestions of promoting learning opportunities through the design of educational settings and from child with ASD interests and motivation. For this reason, the model suggests the reduction of sensory stimuli that may interfere with the teaching-learning process (Iavarone et al., 2017) and to set up several “learning centers” whose materials are selected according to specific themes (for example: symbolic games, reading, art, logical-mathematical thinking, etc.). As Peters and Forlin (2011, 2017 p. 139) point out:

«the brain grows in an integrated way that demands a rich environment which addresses the multiple aspects of development of all children [and the educational practices need to be] rich, stimulating and nurturing environment; child-centred learning with individualised programmes in inclusive settings, emotional stability; personal attachment; regulated sensory stimulation; use concrete experiences, problem-based learning, discovery learning».

Hence, it supports children with or without ASD learning process because it facilitates to: clearly understand the aims of the specific area; which materials may be used; learn by following their interests and interact with peers. In this case, the educator or the teacher act indirectly on the environment to provide all the children the possibility to develop skills and learn how to handle specific materials thanks to their interaction with the objects.

Moreover, both the implicit and explicit educational work is oriented by a curriculum checklist based on the ESDM, which follows specific developmental sequences referring to the age range between 12 and 48 months. The curriculum checklist targets several areas: receptive communication, expressive communication, joint attention, social skills, play, fine motor skills, gross motor skills, imitation, cognition behaviour and personal independence. First of all, checklist indicators may give educators the possibility to guide their observation and evaluation of the child’s most mature skills and of those that are emerging or lacking. Moreover, following a holistic approach, data collected through the observations is shared and discussed with the caregivers or other professionals who take care of the pupil with ASD in other settings, so that they can identify specific learning goals and strategies, and to track progress within the group implementation framework. Educators will add those goals in the Individualised Educational Plan and will design each activity so that the child may develop and strengthen different skills during an activity. Throughout sensory-motor activities and play, the educator may allow the children develop a sense of orientation, learn to relate with the environment, to adapt to
the stimuli perceived thanks to the exploration and problem-based approaches (Montesano, Cassese, Tafuri, 2016). The educators have to lead the activity and to use different strategies based on the principles of the Applied Behaviour Analysis, the Pivotal Response Teaching and the Denver Model that underpin the G-ESDM. The integration of these approaches may favour child with ASD attention on the task and develop new skills by starting imitating the child and following the interest he/she demonstrate towards materials or events. As shown by Vivanti et al. (2017), it allows the educator the possibility to get the child’s attention and promote the development of imitation skills, but also motor and language skills, through observational learning and the use of prompts if the child needs to be scaffolded to master the ability during play.

Moreover, taking into account the child’s skills, the educator can design and set up cooperative learning activities or other small group activities involving peers with different abilities and promote the participation of the child with ASD. Even if the social deficit is one of the core ASD symptoms, researchers (Wolfberg, 2015; Prenderville, Prelock, Unwin, 2006) show that children with ASD demonstrate to learn easily from peers. In fact, inclusive settings offer children with ASD the chance to practice their skills during social interactions with typically developing peers (Vivanti et al., 2019). Essential is the adult role as a peer interactions mediator who, without interfering during social relations, supports the child with ASD to direct his/her attention towards the peer and favour full participation during the activity.

**Conclusion**

Thinking that as from January 2021 children may have the opportunity to go back to school (partially or totally in presence), to design inclusive curricula that include strategies to find suitable adaptations of time and space that promote the full participation of children attending ECEC services and support a new sense of *being-in-the-world*. Educational principles underpinning the GESDM seem to be in line with those of inclusive ECEC curricula, and hence it may provide educators the opportunity to address the educational needs of children with ASD through the adoption of educational strategies and sensory social routines to interact within a sensory and social complex system.

**References**


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