Designing for/in the inclusive school

Mirca Montanari*1
Department of Humanities, Communication and Tourism, University of Tuscia, Viterbo, Italy

Rosella Persi
Department of Communication Sciences, Humanities and International Studies, University of Urbino, Urbino, Italy

*Corresponding Author: m.montanari@unitus.it

Keywords
Inclusion
Instructional design
Good practices
ICF
Universal Design for Learning

Abstract
The quality of inclusive education is, now more than ever in the post-pandemic historical phase, closely connected to the constant and profound renewal and transformative readjustment of design practices in every school order and grade. Educational design for all, for pupils with and without special educational needs, is an effective teaching tool that facilitates participation and reduces barriers to learning based on the framework provided by the main inclusive models (ICF, Universal Design for Learning). In identifying and attempting to remove the obstacles that may be generated within it, schools tend to embrace and promote a strong design culture that is attentive to the needs of all, committed to making a fertile contribution to the development of educational policies in the name of enhancing and interpreting the heterogeneity of differences in the classroom. In this perspective, several good inclusive school practices are examples of personalized and individualized teaching activities that, undertaken and implemented in concrete day-to-day operations, have a systemic impact on educational pathways without excluding anyone.

INTRODUCTION
The current historical period, constituted by a strong and growing complexity by a progressive and unstoppable change of the social, economic, political, digital, and cultural reality, calls for the need to develop more generativity in the human condition such as to allow the passage “from the society of well-having to that of wellbeing” (Bartolini, 2013). While taking into consideration both the existential and relational aspects as well as the material and economic ones, the complexity paradigm guides us in analyzing, observing, and interpreting the recursive, flexible, dialogic, and systemic interconnections that dynamically influence reality (Persi & Montanari, 2022). In this regard, the reading of educational processes and the offer of new ways of practising education are enriched and strengthened, precisely thanks to the model of complexity, to take on plural and profound interpretations of the world we inhabit, increasingly subject to the logic of the certainty of uncertainty.

Some effective teachers and educators entrust their pedagogical reflections to the multidimensional aspects of the complexity paradigm (Morin, 1994), by which they are frequently referred to and influenced. Educational processes are so interwoven with complexity that they join and

1 The paper is the joint work of the authors. For attribution purposes only, it is specified that Rosella Persi wrote the paragraphs: Introduction, and For a sustainable school; Mirca Montanari wrote the paragraphs: Designing for inclusion in Primary school, “Little gardeners grow”: an inclusive educational experience in the preschool, “The season...to the sound of music and art!” an inclusive educational-didactic itinerary in the primary school, and Conclusion.
intertwine perfectly with the categories of differences and diversities that inhabit the school of today and tomorrow. Differences offer the opportunity for all teachers to measure themselves against the problems, insecurities, unforeseen events, and risks that are part of liquid modernity, marked by pandemics and post-pandemics, from a planning perspective aimed at integrating a plurality of tools and resources for the benefit of all, no one excluded.

The educational institution should, at least in part, try to interpret and understand the inevitable and necessary transformations at an ethical, anthropological, political, digital, bio-health, and social level with the intention of democratizing learning environments and enhancing educational opportunities for all and everyone, in an inclusive perspective.

The complexity of the different and heterogeneous training needs that make up today’s schools calls for an inclusive education capable of adopting a pedagogical perspective that is attentive, sensitive, and competent in seeking innovative pedagogical approaches centered on the student (Maragliano, 2021), in adopting interactive digital teaching strategies (Tore et al., 2021), in problematizing knowledge, methodological and design choices, in offering educational-didactic responses of an individualized and customized nature, aimed at the widespread enhancement of the potential and motivations of all pupils. These contextual elements undoubtedly root their presence in renewed approaches and new educational models designed to stimulate in pupils and teachers the formation and synergic sharing of inclusive strategies and tools aimed at all. The school is, therefore, called upon to become a system that promotes significant changes of a pedagogical nature through lifelong learning and greater openness to spaces of encounter and dialogue, starting from issues that question the complexity of the micro and macro contexts of life as mediators of meaning and learning.

FOR A SUSTAINABLE SCHOOL

A genuinely effective didactic planning (Calvani & Trinchero, 2019) tends to produce a necessary personalization of the educational proposals the school undertakes to share in classrooms designed to accommodate differences and diversities. The heterogeneity of pupils’ functioning profiles, individual differences, and the peculiar talents of each one should be the object of careful planning attention by the school that tends to embrace the inclusive perspective that, on a declarative level, is understood as an emancipatory educational process. The new educational and training philosophy that inspires the inclusive paradigm essentially refers to the ICF (OMS, 2004) and UDL (CAST, 2018) models. These design constructs place the interaction between the variables due to different individual functioning and the living environments in which the person interacts and lives at the center of their inclusive action, whether with special needs or not. Both models attempt to strengthen the development of a project culture that is attentive to the needs of every person to guarantee the right to accessibility to the micro and macro contexts of life (SIPeS, 2023) through identifying of hindering and facilitating elements of social-community participation.

In interfacing fertilely with the bio-psycho-social paradigm, the inclusive perspective of universal design constitutes an enormous potential capable of modifying the instituted and giving lifeblood to the institutor without ineffective and inappropriate a posterior adaptations. Faced with the plurality of needs in class groups, proposing mono-functional, homologated, canonical didactic itineraries that do not correspond to the complexity of current educational emergencies seems dysfunctional. The renewal of traditional school structures aimed at “doing school, doing school” (Meirieu, 2015) fundamentally takes into account the special care towards pupils with special needs who need a delicate and motivating accompaniment along their educational path through
personalized and differentiated teaching strategies (d’Alonzo, 2017). Each student possesses a wealth of resources and skills to be expressed and enhanced, regardless of their critical points, which is why teachers are called upon to design effective teaching methods and strategies to facilitate teaching-learning processes in such a way as to recognize and enhance the different abilities present in the classroom as the cornerstones of living and existing.

School intervention must recognize the ability to identify and design differentiated, unique, non-standardized educational responses aimed at the differences and diversities present in the classroom, avoiding recourse to hyper-specialist and hyper-technological approaches. In requiring a strategic assumption of educational responsibility on the part of teachers (Gert Biesta, 2022), the constant remodeling of spaces, times, and organizational methods are thus functional to the special educational needs of every pupil. Personalization is one of the founding elements of the open and flexible design that qualifies its inclusive structure, adapting the educational intervention to each individual’s specific characteristics and singular needs. Pupil-friendly teaching (Baldacci, 2002), as a priority instrument of school democracy, is linked to an educational-didactic design capable of guaranteeing the equity of training processes through research and implementation of new approaches and methods, capable of absorbing and understanding the multi-complexity of classroom problems.

To personalize, individualize, and differentiate education means to support each pupil by offering them competent accompaniment in the fulfillment of their daily commitment, in the exercise of their ability to make choices, in the development of their creativity, in the construction and realization of their Life Project, according to a community sharing of solidarity values that go beyond diversity (Ianes & Cramerotti, 2009). The learning difficulties, the discomfort, the disadvantages, and the vulnerability of pupils must be respected, recognized, and supported, not associated with the questionable logic of mal-functioning and dysfunctioning of the erroneous evidence of fragile pupils based on a compartmentalized vision of the human being that goes in the reductive search for symptoms alone. In the face of the prevalence of short-sighted logics that underestimate the complexity and originality of each person, it must be argued that special needs do not correspond to broken capacities that can only be partially repaired and diagnostically interpreted.

The school community, as a plural and democratic educational context inhabited by the categories of differences and diversities, in its capacity as a central institution in the hyper-complex contemporary social webs that significantly affect the existences of people in education, is necessarily invited to assume and promote an inclusive perspective aimed at the development of the ethical sense of all towards all capable of spreading and sharing a standard and powerful message with democratic and responsible tones (Ianes & Canevaro, 2016). The realization of inclusive educational contexts, responsive to the heterogeneity of needs, oriented to welcoming and recognizing differences and diversities in all their forms and meanings, implies rethinking and adapting the planning, organizational, and methodological choices previously adopted.

The slogan “another didactics is possible” (Canevaro & Ianes, 2022) interfaces with the propositional idea of designing and implementing compelling educational-didactic itineraries aimed at accommodating with sufficient flexibility the different manifestations of vulnerability and fragility present in the complexity of today’s sociocultural contexts. Developing an inclusive policy means initiating and consolidating a mode of reorganization of spaces, times, and didactic methods to integrate them with the functionality of digital tools, given the realization of favourable and beneficial multidimensional learning contexts (Moriggi & Pireddu, 2021).
DESIGNING FOR INCLUSION IN PRIMARY SCHOOL

Designing for inclusion means attaching a high value to the construction of innovative educational contexts that allow pupils to live experiences of reciprocity, help, exchange of support and confrontation in/around the school context. The implementation of inclusive teaching actions aimed at enhancing the individual potential of each pupil, respecting every socially acceptable determination of choice and autonomy, contributes to the dynamic development of individual and group identities, i.e., the plurality of differences within the social relations of the classroom. In this sense, school actions and policies are desirable for the creation of long-term, flexible, and sustainable educational pathways aimed at providing teachers with valid points of reference for the design and implementation of motivating and challenging learning environments that can contribute to the educational success of each pupil in any situation and context.

In the educational paths presented below, the design of didactics within a virtuous framework capable considering the interdependence of contextual, cognitive, and emotional-relational variables serves as an essential tool for realizing and promoting of a renewed school called upon to be and become increasingly inclusive. In this sense, the centrality of the concept of accessibility to school experiences is strengthened through aspects considered indispensable for the development of inclusive educational practices: the definition of broad and complex goals, the reciprocal relationship of the principles of individualization and participation, the close correlation between formative assessment and didactic planning.

The promotion of flexible and inclusive didactic actions (Pavone, 2020) is enhanced by the profile of the “improvising” teacher (Zorzi, 2020) interested in formulating educational proposals according to the innovative and fertile canon of “harmonic disorder” (Barrett, 2017) as a performing element and not an accessory of the teaching-learning processes in the 3.0 school attentive to promoting inclusive community teaching action. In this perspective, two projects implemented in preschool and primary schools are presented that are oriented towards promoting and conveying didactics that are accessible to all and sustainable for all through the value of inclusive languages (Zappaterra, 2022).

“LITTLE GARDENERS GROW”: AN INCLUSIVE EDUCATIONAL EXPERIENCE IN THE PRESCHOOL

“Little gardeners grow” educational project aims to draw children’s attention to changes in the environment and human beings. The section involved in this project is part of a medium-sized school. The heterogeneous section group is made up of twenty-five pupils aged three, four, and five, including five-year-old Manuel with “special educational needs” (Montanari, 2020): his functioning profile presents a low-functioning autism spectrum disorder. Manuel interacts with the adult by taking him by the hand or indicating what he wants. He shares his gaze when given circumstantiated requests that require a lot of attention. Given his short attention span, only some signs are shared to facilitate communication.

The pupil is interested in digital language and enjoys reading books and listening to songs. Manuel’s strengths include tolerance of loud noises and proximity to peers. Aspects to be strengthened mainly concern the relationship with the fellow tutor, increasing fine motor skills, shared attention, and hand-eye coordination. The group section shows an adequate relational level; the pupils are lively but cooperative. There are critical issues about attention spans during educational activities. The fields of experience, “Knowledge of the world”, and “Images, sounds, and colors” mark out the educational-didactic pathway aimed at developing the following learning objectives

1. knowing how to manipulate and use natural materials (earth, seeds, water) with care
2. knowing how to use natural materials in a functional manner
3. to reproduce works of art in a personalized manner
4. learning the primary growth sequences of a small plant
5. enjoyment and sharing of playful learning material of various kinds: paper, digital and analog.

Play, peer tutoring, and laboratory teaching represent the primary methodologies for designing inclusive educational activities to realize experiential, participatory, and productive learning processes (Miato & Miato, 2017). The learning unit is divided into four phases implemented during the first part of the school year, respecting an organization of space and time favourable to constructing of a flexible and sustainable educational context. Tiny seed is the protagonist of the first activity, physically interpreted by an adult who carries with him a curious suitcase containing educational and other materials: books and audiobooks of various sizes and materials (sensory, pop-up, silent book), tablets for viewing books on video, flashcards, reproductions of famous paintings depicting flowers and some jars with tiny seeds. The children are left free to enjoy the material offered to them. Tiny seed entertains them by singing some thematic songs (“It takes a flower”, “Poppies and ducks” and “The reckless little seed”).

At the same time, the video teacher records the emotions and verbalizations produced by the pupils during this meeting, which he then projects on the Lim. Manuel is personally involved in opening the suitcase, inside which he finds a tablet with videos that reproduce the contents of the paper books according to a form of representation close to the experience and sensitivity of the children (Guerini, 2023). In the second phase, using small pots or polystyrene boxes, a small nursery is made in the section (previously, the pupils’ parents took charge of buying the potting soil and flower seeds). Having several pots at their disposal, the children plant the seeds in the containers. They are then urged to care for their seeds, water them constantly, and monitor their growth. The teachers document the planting to encourage the pupils to observe the subsequent development of the plants. Manuel, with the support of a fellow tutor and using a visual diary, participates in creating the small nursery in the section, which provides an opportunity to make the moment of watering part of the daily routine. The fourth training episode stimulates the setting up of an art workshop in the section.

The teachers place large white sheets of paper on the floor and walls on which the children can use various colors (tempera, finger paints, wax, Indian ink, watercolors, charcoals, and felt-tip pens) according to their favorite expressive and creative techniques. The pupils use classroom walls where reproductions of the works of art delivered by Tiny seed are hung as a stimulating background. Divided into small groups, they use various tools and materials to reproduce them personally and creatively. The artistic activity is accompanied by zen background music, “Dancing in Nature”, alternating with a rhythmic and lively piece of music. Manuel works in the small group with the help of a visual diary supported by his tutor partner. At the end of the proposed project itinerary, the section visits the municipal nursery ‘Casa fiorita’, which collaborates with the school’s Naturiamoci project. Guided by the expert, the nursery manager, the children participate in various play-educational experiences that see them as active and conscious protagonists of their learning: a visit to the facility, practical-manual activities including: “To make a tree...you need a seed” and “Let’s color with nature”.

The project’s documentation consists of the experience published on the school’s website, the collection of the minutes and works produced by the children, films, photographic material, and graphic representations to be inserted on USB sticks to be handed over to the families. In a self-evaluative and reflective perspective, the teachers draw up a narrative report to critically review their work to make any adjustments, adopt changes, become aware of undesirable effects, and propose improvements. Furthermore, the project sequences, understood as a segment of the educational
curriculum (Galanti et al. 2021), are reproduced on a collective poster to allow the children to visualize the highlights of the experience and graphically mark their enjoyment of it using emoticons.

"THE SEASONS....TO THE SOUND OF MUSIC AND ART!" AN INCLUSIVE EDUCATIONAL-DIDACTIC ITINERARY IN THE PRIMARY SCHOOL

The proposed educational-didactic itinerary entitled The Seasons....to the sound of music and art! is addressed to a second primary class of a small comprehensive school. The essential aim is to introduce pupils to the discovery of the seasons through a learning unit designed by the entire teaching team, where the languages of music and art converge. Inspired by the inclusive school model generated by the scientific contributions of Special Pedagogy and Didactics (Cottini, 2017; Gaspari, 2023), this project intervention has privileged the multidimensional axes of accessibility and sustainability to guarantee the participation and involvement of each pupil, valuing differences as resources and opportunities to be activated and welcomed (Ianes & Demo, 2023). The class group comprises twenty pupils, including Alice, a sensitive and collaborative child with a socio-cultural disadvantage, and Amin, a pupil born in Italy of Moroccan origin with an extrovert temperament and some difficulties in understanding but motivated to participate in the planned activities.

Overall, the pupils show participation, commitment, and interest in the proposed teaching activities within a predominantly lively class, where a sense of belonging and a good level of individual and collective autonomy emerge. At times, the relational exuberance borders on a climate of confusion that requires reminder interventions by the educators. Taking into account the essential prerequisites (knowing some traits of the artistic language and the main musical sounds), the planned teaching activities were developed based on the following learning objectives referring to the school subjects music, art, and image

1. get to know the different expressive possibilities of the voice, sound objects, and musical instruments;
2. understand the subject matter and primary information of speeches addressed in class;
3. use knowledge and skills related to visual language to produce various types of visual texts;
4. creatively elaborate personal productions.

The declination of the educational pathway inherent to the seasons was translated into four didactic interventions carried out in the second part of the school year through different strategies: participatory lessons, laboratory teaching, small and large group activities, and peer tutoring (Sannipoli, 2016).

The protagonist of the initial icebreaker activity is the director of the neighborhood association “Music and”. After introducing himself to the class group, he showed the children the large suitcase he was carrying, arousing their curiosity. While waiting to be able to open it, the pupils formulate hypotheses and conjectures about the suitcase’s contents, implementing hypothetical-creative thinking and solutions. With great surprise, the children discover, when they open the briefcase, that it contains images of various musical instruments, some CDs, books of different formats, sizes, and types (sensory, pop-up, hardback, audiobooks, silent books), images of works of art depicting the four seasons and theatre tickets.

After the children have actively and freely explored, socialized, and shared the playful-didactic material made available, their attention is catalyzed by the proposal of riddles, nursery rhymes, and short poems on the seasons made by the director in his role as didactic mediator (Canevaro, 2008). In the second educational episode, the class group is involved in the didactic workshop experience of building some handcrafted musical instruments to be shared and socialized playfully. The informal
material prepared by the teachers (coconut shells, rice, stones, goat nails with seed holes, wisteria seeds, walnut shells, shells with holes, bamboo sticks) is shared with the pupils who, divided into subgroups, try their hand at constructing maracas, large and small, rattles, mind-catchers, claves. At the end of the workshop activity dedicated to music, the children are invited to improvise sounds and rhythms in an orderly manner, using the instruments they have created under the supervision of the teachers.

In the fourth phase of the project, the teachers, after forming four groups of pupils, set up as many parallel teaching corners in the classroom to be used alternately to let them experience the wealth of different expressive-creative languages (musical, artistic, digital, and playful) with which to reproduce the seasons. In the art corner, large sheets of paper are laid out. Various materials (tempera, finger paints, wax paints, watercolors, Indian ink, felt-tip pens) and various tools (brushes, sponges, straws, recycled material, etc.) are made available to the pupils to reproduce, in a personalized way, the works of art handed out by the Director, using the various tools and materials as they wish. In the digital corner, the children play interactive whiteboard games about sounds and the changing seasons. At the same time, the space dedicated to musical language is used to creatively invent short songs and nursery rhymes about the four seasons using collaborative writing methods via tablet.

Finally, pupils are invited to learn in the last corner by playing structured board games: lotto of the seasons, bingo of the seasons, and magnets book. During the workshop experience, thanks to the peer tutoring strategy, pupils with special needs participated in the different activities, positively contributing to group life by enhancing their adherence to school life. In the last formative intervention, the class group is the protagonist of the educational outing to the theatre, where they are welcomed by the director of the “Music and” association, who accompanies the children to the interactive mime-musical show “The four seasons” promoted by the Teatro Telaio company. During the various activities, the peer tutoring strategy represented for the entire class group a collaborative learning experience based on involvement and affective-relational awareness (Montuschi, 1993), capable of stimulating social participation and motivation, effectively reflecting on the effectiveness of didactic research on the inclusive classroom climate (Murdaca, 2023). The photographic and video material published on the school’s website, relating to the project phases carried out, the teachers’ logbook, and the university intern’s logbook, contributed to the documentation of the various project phases.

To implement an evaluative logic that respects differences to create an inclusive learning context (Aquarius, 2015), as a founding element for quality education, a self-assessment form was adopted for teachers and pupils to improve metacognitive skills. Reflecting critically on the course undertaken implies focusing on pupils’ and teachers’ active and participative role in improving interest and motivation in favour of carefully transforming practices within the classroom. In short, from the school experiences described, there emerges the need to develop plural didactics aimed at the evolution of a design that takes into account multiplicity and interdependence as indispensable aspects in the creation of educational contexts accessible to all and to each one able to allow equal learning opportunities and empowerment (Dell’Anna et al., 2022). The implementation of flexible, open, and quality didactics envisages, therefore, systemic and structural transformations that pass through a design aimed at the involvement of the entire educating community to adopt functional and shareable strategies, resources, and paths oriented to favour accessibility, the usability of learning opportunities, the differentiation of curricular contents and the relevance of cooperative methodologies (Demo & Seitz, 2021).
CONCLUSION

The cultural and pedagogical change in schools today, stimulated by inclusive education, calls for concrete educational action and constant and progressive monitoring of the design of teaching actions.

“The practice, or rather the practices of educational inclusion, are increasingly at the center of educational research and the interest of the scientific and professional communities of researchers and teachers. Their role is, in fact, decisive in transforming learning environments by making them incident in the social and cultural dynamics of individual education. This is also why inclusive education represents - in contemporary pedagogy and didactics - a fixed point, an irreversible indication. The constant increase in the number of tasks attributed to schools today, from the more traditional ones of inculcation and orientation to those of socialization, promotion, and inclusion of subjects with various types of fragility, clearly indicates, on the one hand, the confirmation of this assumption and, on the other hand, that the ever new problems posed to inclusive didactic research from the school’s point of view cannot but respond to the criterion of methodological innovation: new times and needs must be met with current proposals that are inclusive of the right to inclusion” (Perla, 2022, p. 9).

Rethinking and renewing school practices from an inclusive perspective means remodelling and transforming a web of operational-didactic paths, as frames of meaning for shared and responsible planning. For educational interventions to be genuinely effective (not only in a declarative sense), the perspective view of inclusive didactics is aimed at assuming an ever-increasing responsibility in the face of the complexity of design choices, at adopting multiple ways of doing school that take into account the effectiveness of tools and resources about everyday educational contexts to realize and activate coherent paths that are attentive to differences, but above all to pupils with particular difficulties (Caldin, 2019). The value of the inclusive design of/for all represents a concrete opportunity to raise awareness of differences and diversity, both in school and in society, corroborated by a generative educational and training action capable of fostering encounter, confrontation, and mutual enrichment derived from progressive human actions (Bocci, 2021).

REFERENCES


