Flipped Inclusion: a bottom-up systemic concept of inclusion

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Abstract: This work delves into the concept of Flipped Inclusion as a pedagogical innovation aimed at fostering inclusive educational environments. By exploring the complexities of educational systems and the dynamics of inclusion, this paper argues that Flipped Inclusion represents a bottom-up approach to sensitizing educators and students towards inclusive practices. Drawing upon theoretical frameworks and empirical insights, this work examines the transformative potential of Flipped Inclusion within the broader context of inclusive education.

Keywords: Flipped Inclusion, Diversity, Equity, Inclusion, Belonging, Adaptivity, Bottom-Up Systems.

1. Introduction

Inclusive education encompasses a multifaceted endeavor to ensure equitable access to learning opportunities for all individuals, regardless of their backgrounds or abilities. While legislative mandates play a crucial role in shaping inclusive policies, the realization of inclusive practices often hinges upon the attitudes and actions of educators and students within educational settings. Flipped Inclusion, which is presented to us as a model of systemic inclusiveness (Corona, 2017; Corona, De Giuseppe, 2017, 2020), emerges as a pedagogical strategy that not only responds to legislative imperatives but also fosters a culture of inclusivity from the grassroots level. In many countries, the educational systems are inherently complex and adaptive, characterized by dynamic interactions among various stakeholders, including policymakers, administrators, educators, students, and community members. Within this complex ecosystem, inclusive education represents a dynamic process of negotiation and adaptation, wherein policies, practices, and attitudes continually evolve in response to changing societal needs and educational paradigms. The idea that Professor Felice Corona's research proposes creates a concrete case that can integrate with the simplex didactic (De Giuseppe, Corona, 2021) that sees the teaching-learning process as bio-educational in nature (Frauenfelder, 2001) and must take into account that learner and teacher are dynamic adaptive systems (Sibilio, 2014) and, accordingly, didactic is realized as a specific case of Alain Berthoz's theory of simplicity. Berthoz (2012) delineates fundamental characteristics of life that serve as foundational tools for creating diverse patterns of interaction within complex adaptive systems (Pace, Aiello, Sibilio & Piscopo, 2015, pp. 71–87). These principles provide a theoretical framework for interpreting the behavior of such systems. Sibilio (2015) underscores the exploration within scientific literature regarding the application of complexity concepts in edu-

cation and didactics, revealing a plurality of interests and a complex interplay of elements within didactic fields. Consequently, the didactic phenomenon can be perceived as a composite entity, with observers able to discern specific relationships among its components that define its organization and identity. This identity is contingent upon the class of systems it pertains to, with various possible organizational structures arising from different subsets of component relationships (Sibilio, 2015, p. 485). Furthermore, recognizing the didactic system as a complex adaptive system prompts consideration of how Berthoz's identified properties can inform interactions among its elements. This stimulates discourse within the scientific community to address the multifaceted educational complexities. If viewed as a complex autopoietic system, the application of simplex properties and principles delineates interaction patterns, facilitating comprehension and management of complexity through tailored actions. These actions, emerging from educational praxis, offer solutions that are not rigidly normative but rather contribute to the reformulation of teaching theory (Sibilio, 2015, pp. 477–493). Drawing upon the works of Felice Corona, a correlation is sought between inclusive didactics, particularly the *Special Educational Needs* (Ianes, Macchia, 2008; Corona, 2014), and a simplex approach to teaching. The distinctiveness of Flipped Inclusion lies in the fact that the work that starts with the individual, and in a scaled-up mode falls into groups of increasing size (meso-group and then macro-group) means that the individual no longer feels alone in his or her thoughts and beliefs, but thanks to confrontation becomes part of a community that shares the values of inclusion and shares good practices under the guidance of an experienced teacher. Lastly, to introduce well the imprint that this model has left and its history, it is good to point out that Flipped Inclusion has been taught for almost a decade at the University of Salerno by Professor Corona and his collaborators, especially in the training of teachers who exceeded competitions to enter the workforce both as disciplinarians and as specialists for supporting students who have special educational needs, called TFA, i.e. specialization courses for support activities, and also to all university students who are studying the master's degree to become teachers in primary school.

2. Exploring the duality of systems: top-down vs. bottom-up approaches in group dynamics

It is good now to take a step back to contextualize Flipped Inclusion, because in this paper it is important to bring out one of the merits of it. The study of group dynamics encompasses a broad spectrum of theories and practices aimed at understanding how individuals interact within collective entities (Mintzberg, 1996; Daft, Nacamulli, 2021). Central to this understanding is the recognition of the dual nature of systems governing group behavior – the top-down and bottom-up approaches, that also have solutions on factors that affect the horizontal or vertical structures of systemic organizations (Mintzberg, 1996, p.166-197). Top-down systems typically involve centralized control and decision-making, where directives flow from leaders or authorities to subordinates. that create dynamics definable as "mechanical bureaucracies" that do not often yield the results hoped for by those at the top of the "bureaucratic machine" (Ivi, pp.257-290). Conversely, bottom-up systems emphasize decentralization, encouraging grassroots initiatives and participatory decision-making among group members. Both approaches have distinct characteristics, strengths, and

limitations, which warrant exploration to appreciate their implications for group functioning.

There are some advantages and challenges of top-down systems, for instance the top-down approaches offer clear lines of authority and decision-making, providing stability and coherence within groups. Leaders (In the educational field, they could be identified as the Minister of Education and the parliament who make the laws, the school leader and the teachers depending on the specific case) in top-down systems can swiftly implement directives, ensuring alignment with overarching goals and objectives. Moreover, hierarchical structures facilitate accountability and efficiency in resource allocation and task distribution. However, top-down systems may stifle creativity and innovation by limiting input from lower-ranking members. Additionally, reliance on centralized control can lead to disconnect between leaders and followers, fostering feelings of disempowerment and alienation among group members (in the school system are the students, from another point of view one could consider teachers in training depending on the specific case).

Vice versa, bottom-up approaches promote inclusivity and autonomy, empowering individuals to voice their perspectives and contribute to decision-making processes. By harnessing the collective wisdom of group members, bottom-up systems foster innovation and adaptability, as diverse viewpoints are considered in problem-solving. Furthermore, participatory decision-making enhances group cohesion and ownership of outcomes, fostering a sense of belonging and commitment among members. However, bottom-up systems may encounter challenges related to coordination and consensus-building, especially in larger groups where diverse interests and priorities may emerge.

The interplay between top-down and bottom-up systems is dynamic, influenced by factors such as organizational culture, leadership style, and the nature of tasks at hand. While some situations may call for decisive leadership and centralized control, others may benefit from collaborative and participatory approaches. Recognizing the strengths and limitations of each approach enables groups to leverage the synergies between them, fostering adaptive resilience and agility in response to changing circumstances. Moreover, hybrid models that integrate elements of both top-down and bottom-up approaches can capitalize on the strengths of each while mitigating their respective weaknesses, is this is precisely what Flipped Inclusion proposes when applied to teacher education.

Overall, the duality of top-down and bottom-up systems underscores the complexity of group dynamics and decision-making processes. By critically examining the advantages, challenges, and implications associated with each approach, groups can navigate towards more effective and inclusive ways of operating. Embracing a flexible mindset that recognizes the complementary nature of top-down and bottom-up approaches empowers groups to harness the full potential of their collective intelligence and achieve shared goals in a dynamic and rapidly evolving world.

In this context, the values of inclusion can be conceptualized as operating at two levels: top-down and bottom-up. At the top-down level, inclusion is mandated by legislative frameworks and institutional policies aimed at ensuring equal opportunities and access to education for diverse learners. However, true inclusion also emanates from the bottom-up, driven by the empathy, which can be seen as that ability to put oneself in the other's point of view as he himself is in it (Todino, 2023), awareness, and commitment of individuals within the educational community. Corona and his

colalborators would say that there is an effective transformativity of the flipped inclusion model, thanks to an anthropocentric "ergonomics" given precisely by social capital that generates effective ecological-systemic empowerment (De Giuseppe, Ianniello, Corona, 2020). Teachers, in particular, play a pivotal role in promoting inclusive practices through their pedagogical approaches, classroom interactions, and attitudes towards diversity (Mura, 2016; Cottini, 2018). It is important to point out that not only groups can adapt, as dynamic systems that can have the two dynamics (top to bottom and vice versa) but also the mind according to cognitivism, especially in the context of human learning (Corona, 2015). Is this no accident, so the fact that groups organize themselves through these two dynamics is in a sense an element that ties into human cognition as well, here are the details. Cognition in learning can be considered as a dynamic and complex process involving both top-down and bottom-up approaches. These two approaches can be seen as two sides of the same coin, with the mind operating as an adaptive system capable of integrating and using both. The bottom-up model, as suggested by Sun (2001), emphasizes processing information from specific details and data to gradually build a broader understanding. In this approach, learning occurs through the absorption and analysis of sensory input and concrete information. This process can be compared to a detailed analysis of a puzzle, where individual pieces are processed and assembled to form a complete picture. this is reminiscent of group dynamics, where various people offer their own experience to others and out of the confrontation comes the "complete figure" of an argument, a concept a theme shared by all. On the other hand, the top-down approach at the individual's cognitive level, as discussed by Singh and Hardaker (2017), involves using concepts, mental frameworks, and prior knowledge to guide the interpretation and assimilation of new information. In this case, the mind uses mental patterns and general concepts to make meaning and organize incoming data. It's like having a big picture of the puzzle and looking for the pieces that fit into that picture, and that's what people do when they confront interpret some directive that comes from above, analogous to group dynamics. However, the reality is that human cognition is not rigidly confined to one of these approaches; rather, the human mind is an adaptive system that can integrate both approaches into a dynamic process. Imperial (2021) highlights that in many situations, such as in policy implementation, it is necessary to combine both top-down and bottom-up approaches to ensure effective success. Furthermore, as highlighted by Stump et al. (2009), social learning processes and skill development can be considered as resulting from a combination of top-down and bottom-up influences, in which basic human needs play a key role. In summary, cognition in learning   and also learning in increasingly large groups (meso and macro) through comparison are complex phenomena involving both top-down and bottom-up processes. both operate as an adaptive system, capable of integrating and using both approaches flexibly to process information, learn, and adapt to its surroundings.

3. Flipped Inclusion: a bottom-up approach to sensitization

In the "realm" of education, inclusion operates on two distinct yet interconnected levels: top-down and bottom-up. At the top-down level, inclusion is mandated by legislative frameworks and institutional policies aimed at ensuring equal opportunities and access to education for diverse learners. Fortunately, it is helpful to remember that certainly the Italian education system has garnered international recog-

nition by virtue of its pioneering history in spearheading the integration of students with disabilities, in formulating bespoke educational frameworks tailored to individual student requirements, and in progressively expanding the concept of inclusion as a fundamental mechanism for ensuring equitable access to quality education for all (Aiello, Pace, 2020). Even if this starting point can be useful for general reasoning, the laws do not always turn into practical elements, also because the laws clash with government financial coverage which is often insufficient. In Italy, in fact, the Constitution already gives indications on the inclusion in article 3 on the fundamental rights of the individual: all citizens have equal social dignity and are equal before the law, without distinction of sex, race, language, religion, political opinions, personal and social conditions. In Italy, the inclusion offered, for example, by teachers that support some students protected by law but often for fewer hours than necessary because the financial economic coverage that comes from the Ministry of Economics and Finance (MEF) it is insufficient for everyone in some schools (this is due to a series of cascading laws involving regional arrangements with state ones). These principles, good education for all, are also taken into account at the supranational level, e.g., for UNESCO (2005) equality is an "imperative" but is then disregarded in too many nations, not only in Italy.

Perhaps it is good to return to the issues related to the educational frameworks within which good practices can be taught and learned, here it is not appropriate to go further into this more socio-political discussion which however highlights some difficulties found in the country system. As mentioned before, in the teaching-learning process, learning inclusive values operates on two distinct yet interconnected levels: top-down and bottom-up. These regulations provide a foundational structure for fostering inclusivity within educational settings, setting standards and guidelines to address barriers to learning (CAST, 2011; Cottini, 2018; Ianes, 2020) and promote diversity. However, true inclusion goes beyond mere compliance with regulations; it emanates from the bottom-up, driven by the responsiveness, perception, and commitment of individuals within the educational community. Teachers, in particular, play a fundamental role in promoting inclusive practices through their pedagogical approaches, classroom interactions, and attitudes towards diversity, equity and inclusion, i.e. DEI (Gill, McNally, Berman, 2018). Their actions and attitudes shape the culture of inclusivity within classrooms and schools, influencing the experiences of learners from diverse backgrounds. By flipping traditional instructional models (Bergmann, Sams, 2012), Flipped Inclusion encourages educators to prioritize the diverse needs of learners, promote collaborative learning experiences, and foster a culture of acceptance and respect. Through flipped classrooms, cooperative learning activities, and the integration of assistive technologies, Flipped Inclusion empowers educators to cater to the individual learning styles and preferences of students, thereby enhancing engagement and participation. In fact, Flipped Inclusion is sympathetic to the concept of *Diversity, Equity, and Inclusion* (DEI), which is an organizational and social framework designed to promote the equitable representation and full participation of all individuals, with particular attention to groups historically underrepresented or subject to discrimination on the basis of identity or disability. Diversity refers to the range of individual differences that characterize human beings, while equity aims to ensure fair and equal treatment and opportunity, and inclusion aims to create welcoming and respectful environments that foster the full participation of all community members, regardless of their differences. And even more an-

ticipated the notion of *Diversity, Equity, Inclusion, and Belonging* (DEIB), which extends the earlier DEI model by integrating the concept of belonging. In this context, "belonging" refers to the feeling of being accepted, valued, and fully integrated into a given social or organizational context. In addition to promoting diversity, equity and inclusion, the approach, through Flipped Inclusion, where people in a bottom-up manner but guided by an expert teacher on inclusion issues (EADSNE, 2012), strives to create spaces where each individual feels genuinely welcomed and recognized, thus helping to strengthen social cohesion and collaboration within communities.

4. Conclusions

Flipped Inclusion's main contribution, maybe, lies in its ability to mitigate feelings of isolation and cultivate a sense of belonging among participants. This is achieved through a meticulously designed process. Initially, it engages participants in individual work, allowing them to introspectively examine their own thoughts and beliefs on inclusion. Subsequently, the program transitions to group discussions, starting with meso-groups (smaller, intimate settings) and progressing to macro-groups (larger gatherings). This gradual scaling fosters a safe and supportive environment, crucial for individuals to feel comfortable sharing their unique perspectives and ideas. By transitioning from individual work to group discussions, Flipped Inclusion effectively addresses the potential for initial isolation. As participants engage in open dialogue and share experiences, they discover a sense of shared purpose and the realization that their thoughts and beliefs are not isolated. Furthermore, this approach fosters a sense of community through guided confrontation, a facilitated process where participants are encouraged to respectfully challenge each other's perspectives in a constructive manner. This open exchange of ideas not only strengthens the sense of community but also deepens participants' understanding of inclusion and best practices. In conclusion, the research led by professor Felice Corona represents a theoretical and practical framework for advancing inclusive education from the grassroots level. By sensitizing educators to the complexities of diversity and equipping them with the tools and strategies to accommodate diverse learners, it holds the potential to transform educational landscapes and foster inclusive communities of learning. As educators continue to navigate the dynamic terrain of inclusive education, Flipped Inclusion serves as a beacon of hope, guiding their efforts towards creating more equitable, accessible, and empowering educational experiences for all.

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