

SCHOOL-TO-WORK ORIENTATION PROGRAMS FROM AN INCLUSIVE PERSPECTIVE: A SIMPLEXITY-BASED ANALYSIS

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Abstract

Giving the increasing complexification of reality, school-to-work guidance pathways may serve as an educational and inclusive tool designed to operate from a lifelong and lifewide perspective [1]. Such programs are essential in supporting the transition of students with disabilities into adulthood [2], and for “facilitating decision-making mechanisms, enabling adaptation to the environment, anticipating and positively addressing transition and change, and understanding and managing the complexity of social and cultural dynamics” [3 p 327, author's translation].

This transition phase—where students move from school to the workforce—is particularly challenging for young people with disabilities. It often represents a critical and delicate period, frequently characterized by confusion and uncertainty [4]. School-to-work guidance pathways can provide these students valuable experiences that support them in envision their future and develop more effective paths for growth and employment.

This paper draws on the theory of simplicity, originally developed in neurophysiology [5] and later applied to education [6] [7]. Simplicity refers to a unique characteristic of living organisms that allow them—through intrinsic properties and guiding principles—to develop nonlinear strategies for understanding, managing, and addressing life's complexities. Specifically, the principle of probabilistic anticipation enables individuals to draw upon past experiences and future expectations to find “smarter, faster, and more effective” [5 p XI] solutions.

Within this framework this study aims to analyze school-to-work guidance pathways through the lens of simplicity, supporting students with disabilities “adapt to unpredictable internal and external challenges” [6 p.5, author's translation] while building skills that “bridge the ever-present gap between theory and practice.” [8 p.147, author's translation].

Keywords: School- to- work guidance, disability, simplicity.

1 INTRODUCTION

Students do not always demonstrate the necessary skills to “read and manage” [9, p.21, author's translation] the increasing complexity of reality. This issue appears to be attributable to the educational system [10], since schools, like other educational institutions, should be able to provide young people with the cognitive and cultural tools essential to navigate such complexity [11] and promote the acquisition of “knowledge, skills, and attitudes useful for acting strategically” [12, p.15]. In Italy, however, considering the data on early school leaving and the consequent difficulties young people face in entering the job market, this process does not yet seem fully realized. Statistics on school dropout rates show that in 2023, 10.5% of young people between 18 and 24 years old did not complete their upper secondary education. Although this percentage has decreased compared to previous years, it remains one of the highest in the European Union and carries significant social and professional implications [13]. In fact, for the same year, data indicate that only 44.4% of young people in the same age group who left school early entered the labor market, while 16.1% were neither employed nor in training [13]. Similar statistics show even more concerning results when referring to students with disabilities. For example, it is estimated that in 2021, only 30.1% of boys with disabilities and 19.3% of girls with disabilities continued their studies until obtaining a qualification equal to or higher than an upper secondary education diploma [14]. Additionally, in 2023, only 25.4% of people with disabilities between 15 and 64 years old found employment [15].

In this context, school-to-work orientation programs can thus represent an essential educational and inclusive tool, operating from a lifelong and lifewide perspective [1]. These programs prove to be valuable resources in supporting students, particularly those with disabilities, both vertically—throughout their entire developmental journey—and horizontally—across all contexts they experience. Such

support seems to be of fundamental importance, especially during the transition phases that students with disabilities must navigate, namely the "developmental journey" [2 p.23, author's translation] that begins in the family, continues in the school context, and culminates with their entry into the world of work, marking their definitive transition to adulthood. This transition phase, in fact, represents a moment of extreme delicacy and carries additional complexities for students with disabilities, often leading to feelings of disorientation and confusion [4].

Based on the previous considerations, this study aims to examine orientation programs through the lens of the theory of simplicity, to enable students with disabilities to "adapt to external or internal perturbations in unpredictable ways" [6 p.45, author's translation] and to build a set of skills capable of "mending the ever-emerging gap between theory and practice" [8 p.147, author's translation].

2 THE INCLUSIVE VALUE OF SCHOOL-TO-WORK GUIDANCE

Human nature is characterized by an innate tendency towards curiosity. This inclination drives individuals to challenge themselves in various situations and seek out in new experiences [16]. Curiosity can be considered "a property of the adaptive system that activates the environment around us and makes it usable in different and original ways, helping us to discover the resources we have available, as well as the tools and methods to use them to their fullest potential" [9 p.23 author's translation]. Such a predisposition inclines individuals to seek novelty and fuels cognitive tension [17], that is, the desire to know more, the need to deepen one's knowledge to find answers to the questions one poses. This need finds satisfaction in the action of the school and the teacher, whose task is to present students with problems to solve, preparing them to make an effort to find unexpected solutions [17]. This can occur through concrete experiences that bring students into contact with the surrounding environment and allow them to act firsthand using specific tools and materials. Indeed, "participation in active and working life must begin at school; everything else must be built on this foundation. Through an active organization of school life, the pupil will learn to integrate into life" [18 p.34, author's translation].

Similarly, Vygotskij also attributes great pedagogical value to work, as a functional tool for the individual to acquire and enhance a plurality of capacities and potentials [19].

Structuring school-to-work orientation pathways from an inclusive perspective could, therefore, leverage these constructs and stimulate the aforementioned cognitive tension in students with disabilities. This would allow them to test themselves in new situations and thus become aware of the diverse opportunities that the local community and society can offer. Furthermore, the preparation of such pathways could increase the drive to exercise one's freedom of choice [20] and thereby avoid deterministic drifts, aiming to promote the principle of self-determination [21] for each individual. This principle aims to offer the person with a disability the opportunity to act consciously within their own lives and become its primary causal agent. This would consequently lead to a gradual reduction of all the forms of dependency that individuals with disabilities may experience, which can limit autonomy and undermine self-efficacy [22]. Indeed, "accessing some typical adult roles, including work, fosters the concrete transition into the adult world and the acquisition of greater responsibilities that require an emancipatory detachment from the childhood image and family protection, as well as from that of a user to be rehabilitated" [4 p. 328, author's translation].

Therefore, it seems fundamental that family, school, and society implement common orientational strategies to promote in the person with a disability a sense of confidence in their cooperative and improvement capacities, thus making them conscious and aware of their potential [23].

Such interventions would also help prevent the emergence of phenomena such as abulia, that is, the inability of a person with a disability to actualize what they are genuinely capable of doing, and, conversely, self-overvaluation, namely a sense of omnipotence that leads the individual with a disability to believe they can do everything, overestimating their own potential [19]. Based on these premises, school-to-work orientation pathways designed from an inclusive perspective can prove to be valuable allies in fulfilling the primary task of education: to draw out which, in this case, means bringing to light "one's unexpressed potential, exploring the inventory of one's adaptive resources, seeking them out, and knowing how to use them in every circumstance" [9 p. 139, author's translation].

3 ANTICIPATING THE FUTURE: SIMPLEXITY IN SCHOOL-TO-WORK INCLUSIVE GUIDANCE

Starting from the principle that educational experience never begins from nothing but rather starts "from ready and performed forms of behavior, and we concern ourselves with their change, we tend to modify them, but not to form something absolutely new" [19 p. 262, author's translation], school-to-work orientation pathways analyzed from an inclusive perspective could come to be configured as tools of probabilistic anticipation. This term refers to the principle that, based on past experiences and by anticipating the future, the individual is able to arrive at more elegant, faster, and more effective solutions [5 p. XI] in problem-solving. It "allows for the comparison of sensory data with the consequences of past actions and for the prediction of the consequences of the current action" [5 p. 18]. It is, therefore, a rule of prediction that the human being uses to act in an adaptive manner and which, based on the analogy of the present situation with what has already been experienced in the past, allows for the anticipation of future events and the envisioning of the consequences of one's own actions [9], in accordance with the principle that every current experience modifies all subsequent ones, carrying with it elements of the previous ones [10]. This principle fits within the theory of simplicity, formulated in the field of neurophysiology [5] and later adapted into didactics [6] [7].

It is a neologism that combines "the complexity of problematic situations and the necessary way in which we address problems" [9 p. 103, author's translation]. This concept indicates an original property of living organisms which, through intrinsic characteristics (properties) and related rules of use (principles), allows for the identification, in a non-linear perspective, of strategies to decipher, confront, and overcome the complexity of the reality in which the individual is immersed.

The human species, therefore, through simplicity, expresses its adaptive potential and demonstrates its ability to develop ever-new and creative behavioral patterns in order to generate a plurality of solutions [9]. In this regard, Alain Berthoz wrote: "The originality of living organisms is precisely to have found solutions that solve the problem of complexity with mechanisms that are not simple, but simple" [5 p. 8, author's translation].

The adaptation of this theory into the didactic field, meeting the aforementioned need to decipher and confront the complexity of reality, suggests that we start from the student's biological emergences, proceed through the recognition of different cognitive styles, and then move on to reading the social and educational emergences of the students themselves, in a continuous interaction between learner and teacher, keeping in mind the needs and resources of the actors involved [11].

In light of this theory, school-to-work orientation pathways can be conceptualized as opportunities to provide students with disabilities with experiences that enable them to anticipate their futures and develop effective growth and employment trajectories. In other words, designing pathways that allow students to engage directly with specific operational contexts and professional fields could serve as probabilistic anticipation—functioning as predictive indicators of potential future success in similar occupational sectors. For example, if a student with a disability demonstrates strong and achieves positive results in a specific workshop activity, this experience could indicate the potential for pursuing a career path in related professional fields

4 CONCLUSIONS

From this perspective, inclusive guidance pathways using probabilistic anticipation can effectively prepare students with disabilities for successful career transitions.

In other words, these pathways could provide experiences upon which students with disabilities can base predictions about which activities to pursue in their future careers, thereby exercising their freedom of choice [20] and enhancing their perception of self-efficacy [22]. This is because the simplicity principle of probabilistic anticipation allows us to "apply previous analogous experiences, assess the probability that our predictions are reliable, and recall similar situations while considering data objectively, regardless of the sensory information we actually possess" [9 p. 133, author's translation].

This would inevitably support and promote the development of the principle of self-determination for students with disabilities, understood as "the capacity to choose among various opportunities and to use those choices to determine one's own personal actions" [24 p. 38, author's translation]. Furthermore, through pathways specifically tailored to the needs and characteristics of students with disabilities and mindful of the demands of an increasingly complex reality, it seems plausible to hypothesize an increase

in their employability, with a consequent reduction in the so-called “skill mismatch” [25 p. 111], that is, the discrepancy between the skills of an individual entering the labor market and those required by it.

The points highlighted so far would support the hypothesis that school-to-work orientation pathways designed from an inclusive perspective are part of a process that assists individuals with disabilities in constructing their personal identity, owing to the central personal and social value of work itself [26], and in preparing their Life Project [27] [28].

The framework outlined thus suggests several research directions worth exploring.

In this sense, it could be interesting to investigate the actual effectiveness of inclusive school-to-work orientation pathways as tools for probabilistic anticipation, examining the extent to which they enable students with disabilities to envision future professional scenarios and accordingly guide their choices. Further research could investigate how these experiences impact students' decision-making autonomy, self-efficacy development, and self-determined action within their personal Life Project. Finally, researchers could examine the impact of such pathways on reducing skill mismatch and consequently improving employment rates for people with disabilities.

AUTHOR CONTRIBUTION

The article is the result of scientific discussion and collaboration among the authors. However, the attribution of scientific responsibility is as follows: Introduction and Conclusion to Fausta Sabatano; paragraphs 2 and 3 to Filomena Izzo. The scientific coordination was handled by Paola Aiello.

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