

UNIVERSAL DESIGN FOR LEARNING: A METHODOLOGICAL FRAMEWORK FOR EDUCATIONAL EQUITY

UNIVERSAL DESIGN FOR LEARNING: UN QUADRO METODOLOGICO PER L'EQUITÀ DIDATTICA

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ABSTRACT

This study presents the development of an educational-didactic model designed to promote the uniqueness of each student through a flexible and inclusive approach based on the principles of Universal Design for Learning (UDL). The experiment will be conducted in a primary school in Rome with a sample of four classes, totaling 68 students. The aim is to examine the impact of this methodology on executive functioning and information acquisition processes.

Il presente studio espone la strutturazione di un modello educativo-didattico concepito per promuovere l'unicità degli studenti attraverso un approccio flessibile ed inclusivo basato sui principi dell'Universal Design for Learning (UDL). La sperimentazione sarà condotta in una scuola primaria di Roma con un campione di quattro classi, per un totale di 68 alunni. L'obiettivo è esaminare l'impatto di tale metodologia sul funzionamento esecutivo e sui processi di acquisizione delle informazioni.

KEYWORDS

Executive functions; inclusion; learning; children; school.
Funzioni esecutive; inclusione; apprendimento; bambini; scuola.

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Introduction

In recent years, the importance of inclusive education has become a key topic in educational research, particularly in the context of enhancing learning outcomes for all students, regardless of their diverse needs. One approach that has gained significant attention for its potential to foster inclusivity and personalized learning is Universal Design for Learning (UDL). UDL offers a flexible framework that caters to the varying needs of students by providing multiple means of representation, engagement, and expression. This approach is grounded in the idea that all students, including those with different abilities and learning styles, can achieve success when provided with appropriate tools and strategies.

The present study aims to investigate the effects of a UDL-based teaching intervention on two critical areas of student development: information acquisition and the enhancement of executive functions. Executive functions are a set of cognitive processes essential for goal-directed behavior, including planning, attention control, working memory, and cognitive flexibility. These functions are crucial for students' academic success and overall development. By focusing on a cohort of third-year primary school students in Rome, this research seeks to explore how UDL can impact not only the academic outcomes of students but also the development of essential cognitive skills that support learning and behavior regulation.

Through a rigorous experimental design, this study will compare the effectiveness of the UDL methodology with traditional teaching approaches, focusing on two main aspects: the enhancement of executive functions and the acquisition of curriculum-based knowledge. The research will be conducted over a six-month period, utilizing standardized tools such as the WISC-IV subtests to measure executive functioning, alongside periodic curriculum assessments to gauge learning progress. Ultimately, this research intends to contribute valuable insights into the potential benefits of UDL in promoting a more inclusive and effective educational environment, paving the way for future implementation and broader application of this teaching model.

1. The heterogeneity of the classroom group

In the educational and didactic field, attention to the cognitive, emotional, and behavioral specificities that characterize each learner is essential. The

enhancement of the uniqueness of mental processes and individual learning styles constitutes a fundamental prerequisite to promoting educational success and balanced psycho-evolutionary development. Learning environments emerge as complex and multidimensional realities, the result of the interaction between cognitive, emotional, relational, and sensory stimuli. The interconnection between these components must contribute to the structuring of dynamic and inclusive educational contexts, capable of significantly impacting the processes of knowledge construction and the integral development of the student.

In relation to this multitude of needs, international pedagogical literature emphasizes how the educational process must adhere to a variety of educational objectives, curricula, and methodological approaches, in a continuous and permanent process that extends well beyond the first school cycle, embracing the entire span of life. Within this framework lies the Theory of Differentiated Instruction (Tomlinson, 2001), developed by Carol Ann Tomlinson, which proposes an educational paradigm centered on valuing plurality and personalizing educational paths. This perspective goes beyond the traditional transmissive approach and recognizes the student as the center of the teaching-learning process. According to this model, teaching must be intentionally and flexibly designed to adequately meet the educational needs of individuals, enhancing their resources and potential.

Three are the fundamental dimensions that guide differentiated instruction: the student's level of preparation, that is, their mastery of knowledge and skills; interest, which implies the teacher's knowledge of individual motivations and inclinations; and the learning profile, understood as the set of personal modalities through which knowledge is constructed and reworked.

In the Italian context, there is growing awareness of the need to structure educational environments capable of welcoming and enhancing the uniqueness of each learner. In this sense, Law 170/2010 represents a fundamental milestone, as it recognizes the right to education and inclusion of students with Specific Learning Disorders (SLD), through the development of Personalized Didactic Plans. These tools do not imply the presence of a support teacher but require a methodological and planning approach attentive to the specificities of the individual, promoting an authentic culture of inclusion.

This implies a renewed educational responsibility for teachers: they are called to operate in increasingly heterogeneous contexts, in which students must be recognized as active subjects, bearers of unique identities, different educational needs, and personal experiences to be welcomed and understood. Teaching, therefore, is not limited to the transmission of disciplinary knowledge, but takes on

an ethical and relational connotation, oriented towards the integral formation of the person. Indeed, the adoption of inclusive teaching methodologies promotes the construction of cooperative and stimulating learning environments, in which diversity is recognized as a founding value and a transversal educational resource. The ultimate goal is the development of not only disciplinary but also social and emotional skills, such as empathy, collaboration, solidarity, and mutual respect. In this way, school inclusion is configured not only as a pedagogical objective but as a founding principle of the entire educational institution, which takes on the task of forming conscious citizens, capable of living and acting in an increasingly pluralistic, complex, and interconnected society.

"The diversity of specific objectives, content, and teaching methods, as well as the historical and cultural differences of each country, although oriented towards the same general competences, favor the expression of a plurality of ways of developing and implementing such competences. This process does not end with the completion of the first cycle of education but continues with the extension of compulsory education in the secondary cycle and beyond, in a perspective of lifelong education, throughout life" (MIUR, 2012).

In this perspective, the educational system must become a promoter of continuous and inclusive learning, capable of adapting to the plurality of students' needs and experiences, ensuring that everyone has the opportunity to develop meaningful competences throughout their lifetime.

2. The influence of the physical and sensory environment on the learning process

The configuration and characteristics of the learning environment play a decisive role in cognitive processes, psychophysical well-being, and students' academic performance (Oruikor et al., 2023). Attention to the design of educational spaces helps create contexts that favor the development of skills, promoting a more effective and stimulating learning experience.

In particular, the quality of the school space is influenced by multiple physical and sensory factors, which can be adjusted to optimize the educational experience and encourage greater active participation from students.

One of the most impactful elements is represented by the structural characteristics of the classrooms, such as the size of the spaces, the ceiling height, and the quality of lighting. Studies in the literature show that certain measures, including the use of specific colors in the design of environments, can affect students' behavior and

cognitive abilities. In particular, cool tones have been associated with increased concentration and memory, while warmer tones tend to promote socialization and emotional engagement (Llinares et al., 2021). Similarly, natural and artificial lighting plays a key role in modulating attention and alertness: exposure to blue light, for example, has been linked to increased cognitive responsiveness due to its interaction with the noradrenergic system (Alkozei et al., 2017). The acoustic component also exerts a significant influence on the educational process. School environments are characterized by constant exposure to various types of sound stimuli, which can either facilitate or hinder the processing of information. Studies in the field of cognitive neuroscience have shown that excessive noise compromises learning, especially for younger children, who require greater cognitive effort to process and integrate information in unfavorable acoustic conditions (Singh et al., 2019). Thoughtful design of educational spaces should therefore include solutions for controlling noise pollution, promoting better verbal comprehension and increased concentration.

Although it generally receives less attention, the olfactory dimension also plays a significant role in determining the quality of the learning environment (Kadohisa, 2013). Olfactory stimuli influence emotional regulation and cognitive processes, helping to modulate attention, memory, and psychological well-being. In addition to structural and sensory aspects, it is essential to recognize the central role played by the teacher in creating a favorable teaching environment. The teacher is not only the mediator of knowledge but also the primary actor in the construction of an inclusive and stimulating educational climate. They must be aware of the influence exerted by environmental and sensory stimuli on students' well-being and performance, adapting teaching strategies that optimize their formative experience. In fact, the teacher's role in creating a favorable learning environment extends beyond the transmission of disciplinary content and includes managing spaces, modulating sensory stimuli, and promoting an inclusive and personalized teaching approach. Their presence, communication style, and ability to adapt teaching to the needs of students directly impact the class climate and the quality of learning.

2.1 The Perceptual Process Supports Cognitive Processing

The perceptual process is not a simple passive recording of sensory stimuli, but rather a complex activity of processing and interpreting information from the environment. Perception is never a purely objective act, but is always mediated by mental schemes, expectations, and cultural contexts. This process thus emerges as

an active and dynamic phenomenon, influenced by the interaction between the physical characteristics of the stimulus, past experience, and higher cognitive processes. Furthermore, the perceptual experience is strongly modulated by the emotional component, which affects sensitivity to stimuli and their interpretation. Neuroscientific research has shown that emotional activation can enhance perceptual processing, promoting greater attention to salient stimuli. The theory of distorted competition by excitation (Lee et al., 2012) suggests that emotional intensity amplifies the neural representation of a stimulus, making it more accessible to subsequent cognitive processes.

This means that events characterized by strong emotional involvement are perceived with greater clarity and are more deeply ingrained in memory. This mechanism is particularly evident in cases of traumatic experiences, where emotionally significant events are encoded in more detailed and persistent ways. In particular, the amygdala (Pourtois et al., 2013) plays a key role in assessing the emotional relevance of stimuli, modulating their perception and influencing the individual's behavior. This dynamic interaction between emotions and perception has important implications for the educational field (Chierichetti & Tombolini, 2023). Creating school environments that foster positive emotional well-being not only improves the learning experience but also directly impacts learning and memorization abilities. Therefore, a mindful design of educational spaces, combined with teaching strategies that are sensitive to emotional variables, can represent a key element in promoting educational success and the overall development of students.

In fact, for perception to support effective learning, teaching strategies must be adopted that make the most of perceptual and emotional mechanisms. One of the most effective approaches in this perspective is multisensory learning, which is based on the simultaneous activation of multiple perceptual channels, such as sight, hearing, and touch. Numerous studies have shown that the integration of diverse sensory stimuli fosters deeper processing of information at the cortical level, improving understanding and memorization (Shams & Seitz, 2008). The use of images, audio supports, and practical simulations allows students to build more structured cognitive schemas, facilitating the retrieval and application of knowledge in different contexts. At the same time, the use of storytelling has proven to be a powerful tool for enhancing learning, as it stimulates emotional engagement and facilitates the encoding of information into long-term memory. Research in cognitive psychology (Green & Appel, 2024) shows that stories simultaneously activate brain areas involved in language, emotions, and mental simulation, allowing students to create deeper connections between academic

content and their own subjective experience. As a result, incorporating narrative elements into teaching paths fosters more meaningful learning, making abstract concepts more accessible and motivating students to explore the topics covered. Another pedagogical approach of great relevance is experiential learning (Kolb, 2017), based on the assumption that knowledge is more effective and enduring when it comes from direct interaction with the context. According to Kolb's model (1984), experiential learning develops through a cycle of four stages—concrete experience, reflective observation, abstract conceptualization, and active experimentation—which allows students to internalize complex concepts in a progressive and personalized way. Practical activities, workshops, and simulations not only make learning more engaging but also promote the development of transversal skills such as problem-solving, collaboration, and critical thinking. Finally, it is essential to consider the role of emotions in the learning process and the need to adopt strategies for managing emotional dynamics in the classroom. Neuroscientific research has demonstrated that negative emotional states can compromise the executive functions of the prefrontal cortex, hindering the ability to concentrate and memorize (Pessoa, 2008).

In contrast, a school environment that promotes emotional well-being through mindfulness techniques, breathing exercises, and stress management strategies can help improve emotional regulation in students, with positive effects on their cognitive performance and motivation to study.

In light of these considerations, the need for an integrated teaching approach that values the perceptual and emotional dimensions of learning becomes clearly evident. The adoption of methodologies that actively involve students, stimulate their curiosity, and support their emotional balance represents a key element in fostering an effective and inclusive learning experience, capable of responding to contemporary educational challenges.

3. The Inclusive Curriculum: The Italian Educational-Didactic Landscape

The principle established by Article 34 of the Italian Constitution, which states that "school is open to all," represents one of the foundations of the democratic order, outlining an inalienable right to education that extends indiscriminately to every citizen, in a perspective of equality, equity, and respect for diversity. Education thus assumes a central role in promoting an inclusive, equitable, and participatory society, where every individual can fully realize their potential, regardless of personal, social, or cultural conditions.

The school environment, understood as a dynamic and relational context, is called to ensure not only the cognitive development of students but also their social, emotional, and value-oriented development. In this perspective, education becomes a powerful tool for social transformation, capable of fostering the acceptance of differences and the enhancement of individual peculiarities through teaching practices attentive to the plurality of needs and learning styles.

The configuration of school classes is now characterized by marked heterogeneity, attributable to individual, socio-cultural, and experiential factors. Data provided by the MIUR for the 2023-2024 school year attest to the presence of 7,194,400 students divided into 364,069 classes, of which 311,201 have certified disabilities. Each student, due to their cultural, family, and social background, brings with them a set of prior knowledge, values, and cognitive styles that profoundly influence intra-group dynamics and learning paths.

Italian legislation has progressively traced a path aimed at consolidating the paradigm of inclusion, promoting a school capable of welcoming and supporting the active participation of all students. Law 118/1971 represented an initial step in this direction, introducing measures in favor of the integration of students with disabilities. This approach was strengthened by Law 517/1977, which emphasized the individualization of teaching and the need to provide adequate psycho-pedagogical support.

A decisive turning point was represented by Law 104/1992, which established the right to inclusive education for people with disabilities, promoting full participation in school life through tools such as the support teacher, the customization of educational paths, and the elimination of physical and cultural barriers. It made explicit the principle that difficulties arising from disabilities cannot hinder access to education, recognizing the value of a welcoming, flexible educational environment that respects diversity.

Subsequently, Law 170/2010 extended the legislative focus to Specific Learning Disabilities (SLD), recognizing the need to provide appropriate teaching tools and methodologies to promote educational success for these students as well. The law encouraged the development of Individualized Education Plans (IEP) and the adoption of educational practices based on inclusive strategies, actively involving families and school staff in a synergistic process.

Completing this legislative framework are two fundamental tools for the implementation of inclusion: the Individualized Education Plan (PEI), intended for students with certified disabilities, and the IEP, aimed at students with SLD or other Special Educational Needs (SEN). The PEI, prepared by a multidisciplinary team, represents a programmatic and operational document that identifies educational

objectives, teaching strategies, compensatory tools, and dispensatory measures. Similarly, the IEP outlines personalized paths aimed at supporting learning in an effective manner while respecting individual characteristics.

3.1 The inclusive approach of Universal Design for Learning

In the current context, profoundly influenced by cultural, technological, and social changes, school inclusion can no longer be limited to compensatory or integrative measures but must be conceived as an overall design perspective that impacts the entire educational system. In this regard, the approach of Universal Design for Learning (UDL), developed by the Center for Applied Special Technology (CAST) (Savia, 2016), offers a methodological framework based on flexibility and accessibility in teaching. UDL is conceived as a model that anticipates and responds to the heterogeneous needs of students, promoting education centered on the individual and their unique learning methods.

The three foundational principles of UDL—multiple means of representation of content, multiple means of expression, and multiple means of engagement—reflect the need to differentiate teaching approaches to ensure equal learning opportunities (Malaguti et al., 2023). These principles are rooted in the neuroscience of learning, according to which three main neural networks (recognition, strategic, and affective) respectively guide the acquisition of information, the organization of thought, and motivation for learning. In this sense, teaching must be tailored so that differences are not perceived as obstacles but as resources for the entire class group. By overcoming the dichotomy between normality and special needs, UDL promotes personalized education, oriented toward the development of competent, motivated, and aware students who are capable of self-regulating their learning path.

At the foundation of an inclusive school system is the need to strengthen the skills of teaching staff, improve the quality of materials and educational infrastructures, as well as to establish assessment systems capable of monitoring student progress in an authentic and formative manner. Furthermore, it is essential to foster a positive school climate based on the satisfaction of basic psychological needs—autonomy, competence, and relatedness—as highlighted by educational research (Molinari & Mameli, 2018), which recognizes equity perception and active participation as fundamental elements for school well-being and intrinsic motivation.

In conclusion, truly inclusive education is based on the ability to recognize and value diversity as a constitutive element of the school community. It requires a profound

rethinking of educational models, which must evolve toward greater openness to plurality, flexibility, and innovation. Only through a joint effort between institutions, teachers, families, and students can an authentically open school be built, one that welcomes every individual in their uniqueness and promotes a more just and supportive society.

4. Research

4.1 Research Hypothesis

In light of the premises outlined so far, this research aims to investigate the effects of applying a teaching intervention protocol based on the principles of Universal Design for Learning (UDL) on information acquisition and the enhancement of executive functions in an Italian school context. The study will be conducted on a sample of 68 children of the same age, all attending the third year of primary school in a school in Rome.

The sample has been divided into two groups: an experimental group consisting of 35 subjects, who will be exposed to a teaching methodology based on UDL, and a control group of 33 children, who will follow a traditional learning path. The main objective of the research is to analyze, on one hand, the effectiveness of the UDL approach in facilitating learning and improving information acquisition; on the other hand, to assess the impact of this methodology on the executive functions of students, i.e., the set of cognitive processes involved in planning, organization, attention control, and behavior regulation.

The starting hypothesis is that the introduction of UDL, through the diversification of access channels to content, the use of compensatory tools, and the adoption of personalized teaching strategies, may lead to a significant improvement compared to the traditional approach, both in terms of information processing and retention, as well as the enhancement of executive functions. It is assumed that, by reducing cognitive load and better aligning with individual learning styles and paces, the school experience will not only be more effective from a teaching perspective but also more inclusive and motivating for all the students involved. Thus, two main research objectives are identified: to evaluate the effect of the teaching methodology based on the principles of Universal Design for Learning (UDL) on the executive functioning of the students in the experimental group and to compare the learning levels achieved by the two groups (experimental and control), in relation to the different teaching approach adopted (UDL vs. traditional methodology).

4.2 Methods

In this research, an experimental design with a control group will be followed, structured according to a pre-post model with intra-group and inter-group measurements, aimed at investigating the impact of applying a teaching methodology based on the principles of Universal Design for Learning (UDL) on the enhancement of executive functions and information acquisition in the school context. The entire experimental activity will take place over six months. The design foresees two comparison modes: within-subjects and between-subjects. Regarding the first, the effect of the UDL methodology on executive functioning will be evaluated by conducting pre- and post-intervention measurements (T0 and T1) exclusively in the experimental group, through the administration of specific subtests from the WISC-IV. This approach will allow direct observation of any changes over time in the group that followed the UDL-based educational path. At the same time, between-subjects evaluations will be carried out to understand the level of acquisition of curricular information by comparing the results between the experimental group and the control group, through periodic tests administered to all students during the intervention. To collect the data, specific assessment tools will be used, administered at key points during the course. In this initial phase (T0), only the experimental group will be administered some subtests from the WISC-IV (Wechsler Intelligence Scale for Children – Fourth Edition), specifically: Digit Span, Coding, and Letter-Number Sequencing. These tests will assess the initial executive functioning, providing a useful framework for analyzing potential changes at the end of the intervention. At the same time, both groups (experimental and control) will undergo the Vocabulary and Information subtests of the WISC-IV, tools useful for assessing long-term memory and gathering comparable data on pre-existing learning in both groups. During the educational treatment, periodic tests will be administered to all students to monitor the level of information acquisition and compare the effectiveness of the two teaching approaches (traditional vs. UDL) in promoting learning of the content.

At the end of the program (T1), a new evaluation of executive functioning will be conducted exclusively on the experimental group, through the re-administration of the same subtests from the WISC-IV (Digit Span, Coding, Letter-Number Sequencing). This will allow verification of any significant progress compared to phase T0, attributable to the application of the UDL protocol. The set of these measurements allowed for a detailed assessment of both the evolution of learning and the possible enhancement of executive functions, as well as comparing the results obtained in the two groups, providing insights into the

effectiveness of an inclusive teaching approach like the one proposed by Universal Design for Learning.

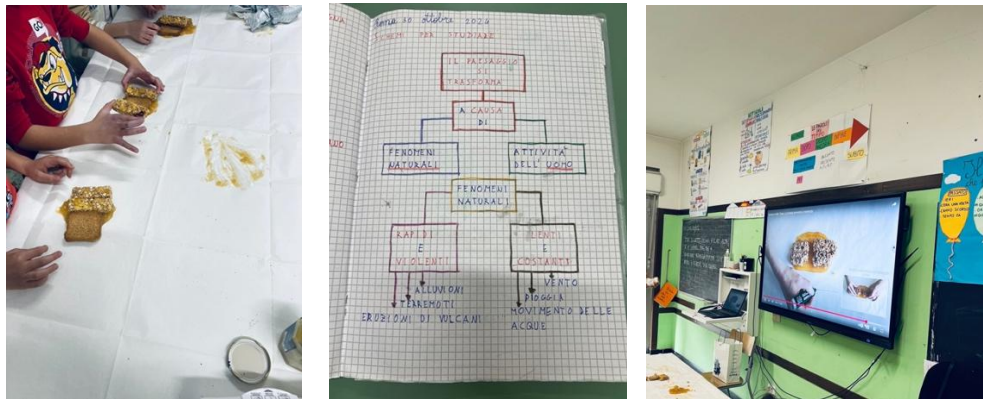


Figure 1-2-3: Teaching methodology based on the principles of Universal Design for Learning


4.3 Tools


In this project, some subtests from the WISC-IV - Wechsler Intelligence Scale for Children – Fourth Edition (Wechsler, 2003) have been selected to investigate specific cognitive areas, with particular attention to executive functions and long-term memory. The subtests were administered in two distinct phases: pre-test (T0) and post-test (T1), depending on the group membership and the variables under study.


The Vocabulary and Information subtests will be administered to both groups (experimental and control) to assess the long-term memory of the participants. In particular, the Vocabulary subtest measures language richness, verbal knowledge, and long-term memory, reflecting the previous cultural and lexical background. The Information subtest, on the other hand, assesses semantic memory and basic school knowledge, which are essential for evaluating long-term memory, considering the ability to retain and recall information acquired over time. In this way, an initial picture of each child's verbal and semantic knowledge will be obtained, providing a basis for comparing progress and the effects of the treatment or intervention in the experimental group compared to the control group during the study period.

Additionally, the experimental group will be administered tests to assess initial executive functioning, i.e., the ability of children to organize, plan, maintain attention, and manage information. In particular, the Digit Span subtest will be used to assess working memory and attention, which are direct indicators of the ability to retain and manipulate information, skills that are fundamental in executive functions. The Coding subtest will measure processing speed, sustained attention, visual-motor coordination, and response automatization, abilities that are crucial for performing complex cognitive tasks. Finally, the Letter-Number Sequencing subtest will assess cognitive flexibility, active working memory, and the ability to mentally manipulate complex information.

13. Informazione

 **Punti di inizio:**
Età 6-8: Item 5
Età 9-11: Item 10
Età 12-16: Item 12

 **Somministrazione degli Item in ordine inverso:**
Età 6-16: Se il bambino non ottiene un punteggio pieno in uno dei primi due Item somministrati, somministrare gli Item precedenti in ordine inverso fino a quando il bambino ottiene punteggi pieni in due Item consecutivi.

 **Interruzione:**
Dopo 5 punteggi consecutivi di 0.


 **Punteggio:**
0 o 1 punto
Consultare il *Manuale di somministrazione e attribuzione dei punteggi* per gli esempi di risposta.

Figure 4: Example of sub-test WISC-IV

6. Vocabolario

 **Punti di inizio:**
Età 6-8: Item 5
Età 9-11: Item 7
Età 12-16: Item 9

 **Somministrazione degli Item in ordine inverso:**
Età 6-16: Se il bambino non ottiene un punteggio pieno in uno dei primi due Item somministrati, somministrare gli Item precedenti in ordine inverso fino a quando il bambino ottiene punteggi pieni in due Item consecutivi.

 **Interruzione:**
Dopo 5 punteggi consecutivi di 0.

 **Punteggio:**
Item 1-4: 0 o 1 punto
Item 5-36: 0, 1 o 2 punti
Consultare il *Manuale di somministrazione e attribuzione dei punteggi* per gli esempi di risposta.

Figure 5: Example of sub-test WISC-IV

Conclusions

The research design presented here aims to evaluate the effectiveness of a teaching methodology based on the principles of Universal Design for Learning (UDL), with a dual objective: on the one hand, to analyze the impact of this approach on the enhancement of executive functions within the experimental group; on the other hand, to compare the learning levels achieved by students following an inclusive educational path with those continuing with a traditional methodology. Through an experimental design with a control group and the use of standardized tools, such as the WISC-IV subtests and periodic curriculum assessments, the project aims to provide an empirical contribution to the debate on the effectiveness of inclusive teaching practices. In particular, it is hypothesized that the adoption of the UDL model can promote not only the acquisition of school content but also the development of transversal cognitive skills, such as working memory and self-regulation, which are

fundamental for educational success. Although this work is a project proposal and has not yet been implemented, it lays the foundation for future field experimentation, with the hope that the data collected will provide significant insights to guide teaching choices towards greater equity, personalization, and the enhancement of individual differences.

The proposed experimental design provides a solid methodological structure to investigate the effectiveness of the UDL approach in the school context but also presents some limitations related to its project-based nature. In particular, the absence of a pre-post measurement in the control group regarding executive functions constitutes a limitation that can be overcome in potential future implementations. Despite these limitations, this study represents an important first step toward exploring inclusive teaching paths based on consolidated theoretical foundations. The integration of standardized cognitive assessments and curriculum tests allows for the development of a comprehensive methodological framework to analyze the impact of UDL both on the cognitive level and on disciplinary learning outcomes. Future implications include the possibility of empirically validating the model on larger and more differentiated samples, extending the scope of the study through qualitative assessment tools that can capture the experiences of students and teachers. This would allow for a deeper exploration of the effectiveness and outcomes of the UDL model in daily teaching practice, making a concrete contribution to the promotion of a truly inclusive school capable of responding to the educational needs of all students.

Author contributions

CC wrote the first draft of the manuscript. CC and GG contributed to the manuscript final writing and revision, read, and approved the submitted version. All authors contributed to the article and approved the submitted version.

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