A REVIEW OF THE ADVP METHOD IN THE LIGHT OF THE NEUROEDUCATIONAL PERSPECTIVE

UNA REVISIONE DEL METODO ADVP ALLA LUCE DELLA PROSPETTIVA NEUROEDUCATIVA

Giuseppa Cappuccio
University of Palermo
giuseppa.cappuccio@unipa.it

Martina Albanese
University of Palermo
Martina.albanese@unipa.it

Double Blind Peer Review

Citation
Cappuccio, G., & Albanese, M. (2025). A review of the advp method in the light of the neuroeducational perspective. *Giornale italiano di educazione alla salute, sport e didattica inclusiva*, 9(1).

Doi:
https://doi.org/10.32043/gsd.v9i1.1358

gsdjournal.it
ISSN: 2532-3296
ISBN: 978-88-6022-509-2

ABSTRACT

This paper revisits the ADVP model (Pelletier et al., 1974) through the lens of neuroeducation. It elucidates the connection between specific cognitive functions and the mental processes activated by students during career decision-making. The revised model aligns with the concept of the teaching brain (Gola, 2024), guiding educators in designing teaching–learning processes that, akin to the UDL framework, foster student agency, encouraging reflection, authentic engagement, and strategic decision-making.

Il contributo revisiona il modello ADVP (Pelletier *et al*., 1974) attraverso le lenti della neuroeducazione. Esso analizza il legame tra alcune funzioni cognitive e i processi mentali attivati dagli studenti nel momento della scelta professionale e, in linea con il *Teaching brain* (Gola, 2024), orienta i docenti nella progettazione di percorsi di insegnamento-apprendimento che, analogamente al framework UDL, promuovono l'agency dello studente, stimolando la riflessione, l'engagement e la capacità decisionale.

KEYWORDS

ADVP; neurodidactics; vocational training; UDL; Teaching brain.
ADVP; formazione professionale; UDL; Teaching brain; neuroeducazione

Received 30/04/2025
Accepted 17/06/2025
Published 20/06/2025

1. Possible relational links between teaching brain, professional training and UDL

In their development, young people face complex orientation tasks. Marostica (2012) lists at least eight tasks that education and training systems should promote: analysis of one's own resources (in terms of interests and aptitudes, but also knowledge and skills and willingness/motivation to commit oneself); examination of the opportunities and resources available, but also of the constraints/conditions and rules that organise/characterise the contemporary world and the knowledge/globalisation society; forecasting the development of one's own present experience and identifying possible goals to be achieved relation of personal resources with opportunities and constraints in order to find the right mediation between ambitions and reality; decision-making, identifying concrete goals to be achieved; operational and autonomous planning of one's own development, through the study of feasibility, and the identification of the necessary and feasible strategies for realisation; implementation of the constructed projects, and breaking them down into individual actions; monitoring and evaluation of the ongoing experience and implementation of the project in order to understand possible modifications and adjustments.

In order for these orientation tasks to become the object of teaching, it is necessary to: 'rethink the goals by identifying knowledge, skills and competences that can be prerequisites for orientation (general/propedeutic orientation competences); rethink the best ways to achieve them, identifying the most suitable teaching strategies and classroom work design models to make them teachable/constructible at school; assume an interpretative scheme deduced from the literature on learning and therefore immediately translatable into teaching operativeness' (Marostica, 2012). In other words, there is a need for the educational system to redefine training strategies so that they are effective in terms of subject orientation (Ricciardi, 2021) and models that guide teachers' choices.

It is in this scenario that the present contribution is inserted, which intends to reread the main axes of the ADVP method, a system of orientation didactics for the ongoing training of young people and adults, from the perspective of Educational Neuroscience.

This choice derives from the awareness of the Teaching Brain theoretical framework according to which 'the act of teaching is realised to the extent that the brain of the teacher and the brain of the learner interact dynamically' (Gola, 2021) and to do this, it becomes necessary to understand which dynamics support the

functioning of the brain in order to structure teaching paths and proposals that are effective and transformative. In other words, the teacher's training activity becomes a catalyst for student agency, as it orients - and guides the same to self-direction - towards reflection, authentic and strategic choice and finally action. We are talking about that active learning oriented to the promotion of pupils' wellbeing and participation (Ghedin, 2009) that the Universal Design for Learning (UDL) (CAST, 2011), at a macro level, sponsors as education valid for all, with concrete implementation criteria that are a guide for teachers' practice towards a radical change in educational systems.

Ghedin and Mazzocut (2017) emphasise how UDL is based on research conducted in the neuroscientific field and how this pedagogical approach recognises the variability present in the classroom, which, moreover, requires the adoption of different teaching methods to accommodate everyone's diversity. In doing so, reference is made to different learning styles, but the sphere of emotions and affect (Tomlinson, 2006) that motivate students in the learning process should not be forgotten (Immordino & Damasio, 2007). The interesting aspect of this approach is that it aims at flexible teaching that involves the participation of all students without affecting the level of learning standards. In fact, the design mode of UDL 'reduces barriers in education from the outset by maintaining a high level of success for all learners through the design of flexible and accessible curricula' (Ghedin & Mazzocut, 2017); thus, learners with difficulties benefit most, precisely because the aim is to improve the learning experiences of all students.

Thus, as reported by Demo and Veronesi (2019) at the basis of UDL there are two assumptions: individual differences in learning represent the norm, and do not only concern the learning of persons with disabilities; competences are influenced by the characteristics of the context, and it is therefore essential that this is as free as possible from barriers that prevent the development of competences or its expression.

It is clear that 'Universal Design for Learning poses questions, sometimes challenges, deconstructs the linear procedure of the common path of many teachers, but at the same time restructures, generates and regenerates the power of teaching', since teachers, 'while knowing that they do not have full control over the entire educational process, continuously create the optimal conditions of learning for all pupils' (Savia, 2018).

At this point, the construction of the bridge to be drawn between neuroscience, education and the possibility of designing inclusive and universally valid educational pathways becomes evident. Gola (2020) cites the analysis carried out by Summak

and colleagues (2010) in support of the main nuclei to which this conjunction leads: the understanding of the neurological bases of learning in the context of biological and environmental processes, the acquisition of a vision of the recognition of neurological diversity, the identification of neurologically appropriate learning-teaching styles and the possibility of providing transdisciplinary bases for educational programmes.

In a nutshell, if UDL is a design model of materials, methods and instructional strategies aimed at facilitating learning and promoting the school participation of all students, then it is hypothesised that a theoretical conjunction between UDL and Teaching Brain can be made with the aim of creating a firm and coherent theoretical framework that serves as a background to the proposed method that reinterprets ADVP from a neurodidactic perspective.

2. The ADVP method

The *Activation du Developpement Vocationnel et Personnel* (ADVP), is a method created by a group of researchers from Laval University in Quebec (Canada): Denis Pelletier, Gilles Noiseux and Charles Bujold between 1970 and 1974. Its aim is to guide the development of the pupil's personal and professional maturation and to mobilise in him/her the intellectual, volitional and affective resources necessary for the accomplishment of developmental tasks (Pelletier *et al*., 1974). The system developed by Canadian researchers has long been tried out by the Ministry of Education in Quebec in secondary school classes. In Europe, on the other hand, the method has found fertile ground in France where several experiments have been reported since 1988. In Italy, ADVP is known thanks to the studies of Viglietti (1989) and from 2003 to date by Cappuccio.

From a theoretical point of view, the ADVP method has its roots in the decision-making theory of Tiedeman and O'Hara (1963), on the professional development model of Super (1957) and on the intelligence model of Guilford and Hoepfner (1971)[1].
According to the approach of the three Canadian scholars, a person's career choices are elaborated along an evolutionary process marked by certain stages or phases - discovery, classification, evaluation and experimentation - which in turn entail the performance of certain tasks - exploration, crystallisation, specification and realisation - so that the choice is satisfactory for oneself and for society. In fact, the

[1] For a more detailed discussion of the theoretical foundations of the method, see Cappuccio (2004).

ADVP method aims to create the conditions for the pupil to create a clear awareness of his or her own identity that enables him or her to make choices in view of a life project (chosen from among several projects) that engages him or her in realistic (i.e. realisable) choices, appropriate to his or her needs, interests, potential and values, involving the realisation of a personally satisfying and socially constructive way of being, open to novelty and change (Noiseux & Pellettier, 1972). From this point of view, a professional task, specifically, is the outcome of a coherent set of acts performed by a person and aimed at career orientation and the related decisions that go to make-up one's life history.

Given that the professional choice is elaborated by the student during an evolutionary process that is characterised by the alternation of stages and relative tasks to be carried out, the originality of the ADVP method consists precisely in focusing on the stimulation of the mental abilities underlying the professional development tasks that make their implementation possible (Cappuccio, 2003) and that, according to Guilford's (1967) approach, can be expressed in the form of thought: creative, categorical, evaluative and implicative thought.

3. A neuro-oriented review of the ADVP method

Moving from the theoretical and methodological horizon of the ADVP method and looking at the forms of thought (creative, categorical, evaluative and implicative) extrapolated from Guilford's theory of intelligences, the present study intended to operate a reinterpretation in a neurodidactic key through the analysis of the cognitive domains, networks and brain districts underlying the categories of thought identified in the ADVP model.

That is to say, based on the main neuroscientific evidence and brain imaging studies (fMRI and EEG) existing in the literature, a review is proposed of the forms of thought that characterise the various phases of the maturation process of a subject's professional choice and, in full of the specific tasks that define them.

In the proposed model, in fact, one or more cognitive domains that the neuroscientific literature has identified as relating to the categories of creative, categorical, evaluative and implicative thought have been associated with each ADVP thinking skill. Subsequently, each of the extrapolated cognitive domains was matched with correlates and neural networks that, according to neuroimaging studies, show significantly greater activation when the cognitive functions of reference are employed.

This is followed by a brief and concise examination that does not do justice to the complexity of the topic; for the in-depth study, please refer to the monograph: '*Didattica orientativa e ricerca educativa: metodologie e modelli per lo sviluppo personale e professionale'*.

1) The category of creative thinking is traditionally associated in neuroscientific studies with that of divergent thinking, a constitutive component of the creative processes that characterise the discovery phase in the ADVP model. Divergent thinking (in its meaning of cognitive flexibility and the ability to generate new solutions) is designated by studies in the field as a driver of higher-level cognitive processes, such as memory retrieval (Madore *et al*., 2019) and semantic associations (Fink *et al*., 2009). In particular, the analogical faculty of semantic association is understood as an essential cognitive competence in the processes of linking concepts and generating analogies from remote mental representations. This ability is recognised as a key element in the development of creative thinking and the promotion of teaching strategies oriented towards flexibility and cognitive innovation.
2) Within the framework of this theoretical proposal, categorical thinking is understood as the result of the integration of the faculties of taxonomic and thematic categorisation, as well as of a broad repertoire of transversal cognitive competences implicated in the processes of organising sensorial stimuli, including the phonetic ones traceable to the linguistic sphere. In the educational sphere, such a vision makes it possible to valorise the role of didactic practices that stimulate the capacity for structuring and systematising thought, competences that appear to be ascribable to two cognitive domains that are also distinct from a neurophysiological point of view: on the one hand, taxonomic categorisation processes, more oriented towards the hierarchical classification of concepts; on the other, thematic ones, more linked to the construction of contextual associative networks. This distinction, if appropriately considered in didactic planning, can foster a targeted enhancement of students' cognitive abilities, promoting greater mental flexibility and deeper conceptual understanding.
3) Neuroscientific research has long since begun to investigate the neural correlates of moral cognition, studying the functioning mechanisms of that complex network of cortical regions and areas whose synergetic activity would seem to give rise to a true moral brain, traceable to evaluative thinking. Another cognitive component of evaluative thinking is the faculty of contingency judgement, linked to the ability to detect relationships

between a clue (cue/input) and a subsequent result (output) (Crump *et al.,* 2007); it cannot be separated from the processes of selective attention. Finally, from a neuroscientific perspective, evaluative thinking can also include the metacognitive faculty, which is divided into two main components. This dichotomous conception is due to the work of Flavell and Wellman (1977) and is based on the difference between metacognitive knowledge and metacognitive control.

Whereas metacognitive knowledge, or meta-knowledge, corresponds to the awareness that individuals have of their own cognitive processes and their ability to monitor and reflect on them, metacognitive control, or meta-control, consists of a set of self-regulatory mechanisms, including planning and adapting one's behaviour according to the results it produces on the environment (Livingston, 2003).

4) One of the sub-faculties involved in implicative thinking is that of analogical reasoning, i.e. that set of higher-order cognitive processes that make it possible to establish analogies and similarities between different mental representations. Theory of Mind (ToM) and mentalisation are also interconnected cognitive functions supported by specific brain regions that enable individuals to effectively navigate the social world. These capacities are essential for implicative thinking as they enable individuals to go beyond the explicit information conveyed by language and to understand and determine subtextual messages and hidden intentions, enhancing communication and mutual understanding between people. This thinking manifests itself, therefore, as an intrinsically logical and sequential process, based on the ability to formulate analogies and rules through inductive and deductive reasoning; all of which is supported by a complex neural architecture, a rigorous operational sequentiality and an intrinsic logical structure, necessary for the formation of inferences, the analysis of analogies and the understanding of others' intentions and states of mind.

4. Operational hints for the application of the ADVP method

To build a bridge between theory and educational-didactic praxis, the conceptual effort developed was directed towards the definition for each developmental task associated with thought forms of:

- some descriptors that act as stimuli for the activation of the related cognitive domain.

- Some meta-analysis questions relating to the design of activities that serve as a guide for teachers to reflect on whether the activity complies with the descriptor.
- Some techniques/strategies to be included in educational and training contexts in line with the functioning of the brain described above, showing how the model could be implemented.

Again, the following discussion is an extreme summary of the concepts outlined.

The activation of creative thinking, relative to the exploration development task, contemplates four descriptors related to as many cognitive domains: the analogical faculty, the mnemonic faculty (LTM) and remote image association, the clustering and switching faculty, and the reappraisal inventiveness faculty.

1. Encouraging the analogical faculty.

Design meta-analysis question: does the activity encourage original and creative association between different semantic components and mental representations?

Techniques/strategies: Brainstorming and brainwriting, Mind Mapping, Automatic Writing (for free association), Scamper Technique, Word Game, Walk and Talk (for spontaneous association), Forced Analogies, Matrix of Ideas, Lotus Technique, Storyboarding.

2. Promoting the mnemonic faculty (LTM) and remote image association.

Design meta-analysis question: does the activity promote the retrieval of long-term memory and/or remote information or semantic concepts?

Techniques/strategies: PAV Technique, Spaced Repetition, Active Recall, Chunking, Elaborative Rehearsal, Loci Technique, Link Method, Storytelling.

3. Incentivising clustering and switching.

Design meta-analysis question: Does the activity incentivise students' effort towards categorisation of items/information? Does the activity stimulate students' effort towards replacing items/information with similar or analogous ones?

Techniques/strategies: activities based on hierarchies and categorisation, Chunking, Mind mapping (for clustering), lateral thinking techniques, mental simulations, use of metaphors (for switching).

4. Implement the faculty of inventive reappraisal.

Design meta-analysis question: Does the activity promote cognitive re-evaluation of events, information and concepts in the pupil?

Techniques/strategies: Role Reversal; problem reformulation, Why-How Laddering, Divergent and Convergent Thinking, Disruption, Fail Forward, Exaggeration, Elimination.

The activation of categorical thinking, related to the crystallisation development task, contemplates 3 descriptors related to as many cognitive domains: faculty of taxonomic categorisation, faculty of thematic categorisation, cross-categorisation faculty of perceptual and sensory categorisation (sensory stimuli + auditory stimuli).

1. Encourage the faculty of taxonomic categorisation.

Design meta-analysis question: do the activities stimulate in students the ability to recognise, classify and organise concepts, objects or information according to logical and taxonomic criteria?

Techniques/strategies: semantic anchoring, use of feedback, metacognitive self-reflection.

2. Promoting the faculty of thematic categorisation.

Design meta-analysis question: do the activities stimulate in students the ability to identify, distinguish and organise concepts or content into coherent and meaningful thematic categories?

Techniques/strategies: concept maps, case study analysis, storytelling, guided discussion.

3. Implementing the transversal faculty of perceptual and sensory categorisation.

Design meta-analysis question: do the activities foster perceptual and sensory categorisation by integrating visual and auditory stimuli to support cognitive processing and the construction of cross-cutting conceptual schemas in children?

Techniques/strategies: sensory discrimination, sensory exploration.

The activation of evaluative thinking, related to the developmental task of specification, covers 3 descriptors related to as many cognitive domains:

contingency judgement faculty (ability to detect relationships between a stimulus and a subsequent event) based on sustained attention processes, moral judgement and comparison faculty, metacognitive judgement faculty (ability of the brain to monitor and evaluate its own cognitive processes and to make judgements about them).

1. Promoting the faculty of contingency judgement.

Design meta-analysis question: does the developed activity focus on the ability to exercise contingency judgement, i.e. the ability to detect relationships between a stimulus and a subsequent event? Does the developed activity promote the exercise of sustained attention?

Techniques/strategies: cognitive training based on logic and problem-solving games, Mindfulness, n-back memory tasks, Event diary, Role-playing, Brain refresh activities, Flowcharts.

2. Building the faculty of judgement and moral comparison.

Question for the design meta-analysis: Does the devised activity favour the building of the faculty of judgement and comparison with respect to moral judgements in particular?

Techniques/strategies: Discussion groups, Mentorship, Identification of Values, Peer tutoring.

3. Implement metacognitive judgement faculty.

Design meta-analysis question: Do the teaching strategies adopted stimulate in students the ability to reflect on their own learning processes, evaluate the effectiveness of their cognitive choices and make informed judgements on how they approach tasks?

Techniques/strategies Thinking aloud, self and peer assessment, planning and goal setting.

The activation of implicative thinking, related to the developmental task of realisation, contemplates 2 descriptors related to as many cognitive domains: faculty of strategic reasoning, mentalisation and Theory of Mind, faculty of inductive reasoning (ability to identify and extract rules/patterns from single instances) and deductive reasoning (ability to derive, from one or more given premises, a conclusion that is the logically necessary consequence).

1. Promoting the faculty of strategic reasoning, mentalisation and Theory of Mind.

Design meta-analysis question: Do the designed activities foster the ability to reason strategically? Do the designed activities implement the ability to understand one's own and others' emotional states?

Techniques/strategies: Strategy games, problem solving activities, writing a diary for self-examination, meditation and body scan, active listening techniques, reading and creative writing activities, cultural exchanges and insights, use of virtual reality, dramatisation and role play.

2. Implementing the faculty of inductive and deductive reasoning.

Design meta-analysis question: Do the implemented activities foster the application of deductive and inductive reasoning? Do the implemented activities allow abstraction of concepts? Do the implemented activities allow specific derivation of concepts?

Techniques/strategies: Dataset exploration, reading and analysis of scientific articles, individual and group investigations, formal logic problems, Debate.

Conclusion

The reinterpretation of the ADVP method in the light of the neuroeducation perspective has made it possible to highlight how the cognitive processes underlying career choices can be analysed and enhanced through an approach that integrates neuroscientific evidence with contemporary pedagogical models. The proposed theoretical model, the result of an interdisciplinary systematisation, makes it possible to map cognitive competences in relation to the subject's developmental tasks, favouring a more effective orientation teaching centred on the student's agency.

In this framework, the adoption of the Teaching Brain paradigm and the Universal Design for Learning model offers teachers conceptual and operational tools to design inclusive, flexible and neuro-compatible learning environments. ADVP, reinterpreted in this key, is no longer merely a method for professional orientation, but a training device capable of activating deep cognitive resources, stimulating metacognitive reflections and promoting authentic and sustainable choices.

Nonetheless, certain critical issues emerge that warrant attention and further investigation. First and foremost, the complexity of the proposed theoretical model—which connects cognitive domains, neural networks, and educational strategies—requires a solid interdisciplinary background on the part of educators. Such expertise is not always adequately addressed in either initial teacher training or continuing professional development. As a result, the practical implementation of the model risks being uneven or only partial in the absence of appropriate training tools and support mechanisms. Secondly, although neuroscience provides valuable insights into cognitive mechanisms, translating these findings into pedagogical practice must be approached with caution. It is essential to avoid undue simplifications or biological determinism that may reduce the inherent complexity of the educational process. Finally, the lack of large-scale empirical validation of the integrated model highlights the need for further experimental and longitudinal research, aimed at verifying its effectiveness, transferability, and impact across various educational and training contexts.

Furthermore, although the theoretical model presented is rich in conceptual depth, it is currently undergoing empirical validation. To improve its relevance and usefulness, the research aims to include experimental and longitudinal studies designed to assess the practical effectiveness of the model in real educational and professional contexts. The model is being implemented in a vocational school through an experimental protocol with randomisation of the sample into two equivalent groups to verify any improvements in the experimental group compared to the control group. The initial results observed during the study point towards the possibility that the model can be substantiated by relevant empirical evidence as well as by an interdisciplinary theoretical approach.

In light of these considerations, the present contribution should be regarded as a theoretical and methodological proposal for the renewal of educational practices through a neuro-informed approach. It remains open to future developments and critical reflection, in pursuit of a guidance-oriented pedagogy grounded in neuroscience, yet always mindful of the multifaceted nature of the educational experience.

Author contributions

This contribution is the result of joint work by the two authors; however, paragraphs 1, 2 and the conclusions were written by Giuseppa Cappuccio, while paragraphs 3, 4 and 5 were written by Martina Albanese.

References

Cappuccio, G. (2003). Il metodo di attivazione dello sviluppo professionale e personale (ADVP). *G. Zanniello (a cura di), Didattica orientativa. Una metodologia educativa per l'attivazione dello sviluppo professionale e personale*, 87-150.

CAST. (2011). *Universal Design for Learning guidelines* (version 2.0). Wakefield, MA: Author. Estratto da http://www. udl center.org/aboutudl/udlguidelines.

Crump M.J.C., S.D. Hannah, L.G. Allan, L.K. Hord, (2007). Contingency judgements on the fly, *Q. J. Exp. Psychol*. 60 (6), 753–761.

Demo, H., & Veronesi, D. (2019). Universal Design for Learning nelle interazioni in classe, tra pedagogia speciale e analisi della conversazione. In *Didattica e Inclusione Scolastica: Ricerche e pratiche in dialogo* (pp. 31-50). Milano: Franco Angeli.

Fink, A., Grabner, R. H., Benedek, M., Reishofer, G., Hauswirth, V., Fally, M., Neuper, C., Ebner, F., & Neubauer, A. C. (2009). The creative brain: investigation of brain activity during creative problem solving by means of EEG and FMRI. *Human brain mapping*, 30(3), 734–748. https://doi.org/10.1002/hbm.20538.

Flavell, J., & Wellman, H. (1977). Metamemory. In V. Kail, Jr. & J. W. Hagen (Eds.*), Perspectives on the development of memory and cognition* (pp. 62–63). Erlbaum.

Ghedin E. (2009). *Ben-essere disabili. Un approccio positivo all'inclusione*. Napoli: Liguori.

Ghedin, E., & Mazzocut, S. (2017). Universal Design for Learning per una valorizzazione delle differenze: un'indagine esplorativa sulle percezioni degli insegnanti. *Giornale italiano della ricerca educativa*, 18(anno X), 145-162.

Gola, G. (2020). Conoscere l'insegnamento attraverso il cervello. Prospettive di interazione tra neuroscienze e processi didattici dell'insegnante. *Formazione & insegnamento*, 18(2), 64-74.

Gola, G. (2021). Cosa succede nel cervello quando si insegna? La prospettiva Teaching Brain. *Research Trends In Humanities Education & Philosophy*, *8*, 56-60.

Gola, G. (2024). *Educational Neuroscience in the Classroom*. Cambridge Scholars Publishing.

Guilford, J. P. (1967). Creativity: Yesterday, today and tomorrow. *The Journal of Creative Behavior*, *1*(1), 3-14.

Guilford, P. J., & Hoepfner, R. (1971). *The analysis of intelligence*. New York: McGraw-Hill.

Immordino-Yang M. H., Damasio A. (2007). We FeelThereforeWe Learn: The Relevance ofAffective and Social Neuroscience to Education. *Mind, Brain and Education*, 1, 3-10.

Livingston, J. A. (2003). *Metacognition: An Overview*, Technical Report. https://eric.ed.gov/?id=ED474273 ERIC Number: ED474273.

Madore, K. P., Thakral, P. P., Beaty, R. E., Addis, D. R., & Schacter, D. L. (2019). Neural Mechanisms of Episodic Retrieval Support Divergent Creative Thinking. *Cerebral cortex* (New York: 1991), 29(1), 150–166. https://doi.org/10.1093/cercor/bhx312.

Marostica, F. (2012). Due o tre cose sull'orientamento formativo o didattica orientativa/orientante*. In: «Orientarsi … in rete» n.9 del marzo 2012 (pagg.8-12)* Centro Risorse per l'orientamento della Provincia di Bologna.

Noiseux, G., & Pelletier, D. (1972). *Dossier d'orientation 1: tâches d'exploration et de cristallisation: guide de l'animateur*. McGraw-Hill.

Pelletier, D., Noiseux, G., & Bujold, C. (1974). *Développement personnel et croissance personnelle*. Montréal: McGraw-Hill.

Ricciardi, M. (2021). Per costruire competenze orientative: ambienti di apprendimento e professionalità docente. *Formazione & insegnamento*, 19(2), 138-149.

Savia, G. (2018). Universal Design for Learning nel contesto italiano. Esiti di una ricerca sul territorio. *Italian Journal of Special Education for Inclusion*, 6(1), 101-118.

Summak, S.M., Summak, A.E.G., Summak, P.S. (2010). Building the connection between mind, brain and educational practice; roadblocks and some prospects. *Procedia Social and Behavioral Sciences*, 2, 1644–1647.

Super, D. E. (1957). *The psychology of careers; an introduction to vocational development.* New York: Harper & Bros.

Tiedeman, D. V., & O'Hara, R. P. (1963). *Career development: Choice and adjustment*. New York: College Entrance Examination Board.

Tomlinson, C. A. (2006). *Adempiere la promessa di una classe differenziata: Strategie e strumenti per un insegnamento attento alla diversità*. Roma: Las.

Viglietti, M. (1989). Orientamento ed auto-etero responsabilizzazione personale. *Annali della pubblica istruzione*, 2, 143-158.