A Model for Educational Profiles of Students Based on Their Strengths and Competencies

Dora Levterova-Gadjalova, Paisii Hilendarski University of Plovdiv, Bulgaria
Ivan Trichkov, Paisii Hilendarski University of Plovdiv, Bulgaria
Maya Fyodorova-Radicheva, Paisii Hilendarski University of Plovdiv, Bulgaria
Lilyana Chobanova, Paisii Hilendarski University of Plovdiv, Bulgaria
Andreyana Katusheva, Paisii Hilendarski University of Plovdiv, Bulgaria

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Abstract

The following article is dedicated to the creation of an innovative methodology for the structuring of students' educational profiles. Contemporary education is provoked by the revolutionary development of digital smart technologies. In this context, inclusive education following the paradigm of United Nations' sustainable development Goal 4 for Quality Education (United Nations, 2025) faces new challenges, including the implementation of educational profiles of students in personalized education. The effectiveness of personalized education requires a holistic approach to recognizing the manifestations of personality in the educational environment in order to successfully implement individualized educational trajectories for students. The present work describes an innovative toolkit for structuralizing students' educational profiles through the prism of their personal strengths. The questionnaire was piloted among 238 participants, each of whom was selected according to established criteria for competence and professional experience. Statistical data analysis clearly indicated the presence of five main factors (social competence, emotional, cognitive, behavioral, and sensory) that constitute the integral system of the educational profile of students' personal strengths. Each of the abovementioned factors is discussed in details and in the context of the interaction between the individual cross-factor relationships. In conclusion, a working model for educational profiles of students according to their strengths and competencies is presented.

Keywords: educational profile, personal strengths, student profile

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Introduction

Educational profiles are an essential tool that helps examine and personalize the educational process. They are used in various forms and educational settings, but their common goal is to provide the most accurate and comprehensive picture of the learner, reflecting the unique aspects of their personality, interests, and educational needs. These profiles allow for the reality of the learning environment to be interpreted through the student's individual characteristics, enabling more precise planning and adaptation of the learning process.

Educational profiling systems combine various methods and tools designed to assess students' abilities, interests, level of training and professional orientation. The systems combine both pedagogical and psychological assessment and employ a variety of criteria and analytical approaches to track the progress and effectiveness of the educational experience (Levterova-Gadjalova et al., 2023). The aim is to create a foundation for informed decision-making regarding the student's individual educational pathway. In the context of the digitalization of education, the importance of educational profiles is growing even further. Contemporary digital platforms enable the collection and analysis of large volumes of data on students' achievements, interests, and learning behaviors. This creates an opportunity for real-time updates to profiles and a more precise personalization of learning experience with the help of adaptive systems and artificial intelligence. In a digital environment, the educational profile becomes not merely a static characteristic, but an evolving data set that supports and guides both the teacher and the student in the process of both learning and career guidance (Luckin & Holmes, 2016; Tzouveli et al., 2008). The increasingly widespread use of digital technologies in the learning process makes it possible to optimize the role of these advantages in the improvement of the educational process. However, to use this potential to the fullest, it is important to develop a comprehensive and coherent model for building this profile. Furthermore, the model should reflect as fully as possible the individual characteristics of each student, while also enabling the identification of appropriate recommendations and a course of action for working with them. This requires the inclusion of the distinctive features of the various aspects of personality functioning in the educational environment. Each of these aspects can have a significant impact on the overall development, as well as the academic success, of the child and student in the educational environment.

Literature Review

It can be said that a child's cognitive abilities have the most noticeable and direct connection to the learning process. Indeed, there is some evidence that the speed of cognitive processing, the ability to organize perception, as well as the working memory, have a strong positive correlation with academic success (Nesayan et al., 2019). These characteristic features play a significant role in the comprehension of educational content, and taking their specific characteristics into account in students leads to the optimization and improvement of the educational process and academic performance in any educational setting. Therefore, understanding these characteristics is a key factor in academic success. In an educational setting, one of the most commonly used methods for diagnosing students' cognitive profiles is the WISC (Wechsler Intelligence Scale), which assesses five key parameters: the Verbal Comprehension Index (VCI), Visual Spatial Index (VSI), Fluid Reasoning Index (FRI), Working Memory Index (WMI), and the Processing Speed Index (PSI) (Wechsler, 2026). These methods are widely used in the assessment of the cognitive abilities of both typically developing children and gifted children, as well as those with special needs. However, the assessment with this model is time-consuming and labor-intensive, and requires additional

specialized training for its administration. For this reason, in practice, this approach is only applied when there are indications of particularities in the cognitive development of the child or student. In contemporary educational settings, cognitive functioning is typically assessed through the associated patterns of sensory processing of information.

Analysis of a student's sensory profile is widely used in a variety of contexts and educational paradigms. One of the most popular methodologies worldwide is VARK. It includes four primary sensory styles: Visual, Auditory, Reading/Writing, and Kinesthetic (Fleming, I'm different; not dumb. Modes of presentation (VARK) in the tertiary., 1995). To measure the profile, a 16-item questionnaire (originally 13) is used, offering the opportunity to provide a casual response, each of which is associated with a specific sensory style (Fleming & Baume, Learning Styles Again: VARKing up the right tree!, 2006). This scale is a logical extension and improvement of the earlier VAK model, which did not include reading and writing as a separate sensory domain (Barbe & Swassing, 1979). Both scales are based on hypothetical everyday situations and suggested solutions to them (Leite et al., 2010). The use of such methodologies provides the educational specialist with information regarding the student's preferred style of processing stimuli from the learning environment. The teachers can use this information to tailor their teaching materials and methods so that they have the greatest possible impact and help children and students absorb new knowledge, skills, and attitudes. However, to a significant extent, this model faces serious criticism, primarily due to the lack of evidence that there is a connection between the use of teaching materials and instructional content developed based on the student's performance on them and the academic success the student demonstrates. These doubts are significant because the existence of such a view of the educational process is largely undermined by them (Nancekivell et al., 2020). On the other hand, sensory processing and its specific characteristics for each child cannot be ignored, as they significantly influence the way in which educational content is perceived. These findings suggest that it is necessary to look for different types of sensory perception characteristics, ones more closely related to the strengths of the information processing system. The influence of good coherence in sensory information processing does not end with its connection to the child's cognitive profile. These characteristics also leave their mark on, and are in turn influenced by, the child's social competence and the particularities of their interaction with the world.

The study of the social competence aspects of a student's profile in the context of a rapidly changing society is highly relevant and essential for shaping their overall future development. The social competence profile is also linked to their creativity and ability to fulfill their potential (Samašonok & Juškevičienė, 2021). The need for adequate socialization is particularly prominent in the context of modern, rapidly digitizing society. An individual's ability to collaborate, work in a team, and share their knowledge, skills, and perspectives on the world with others is part of the critically important competencies at the heart of modern education.

Apart from cognitive, social, and sensory development, there is another aspect of how a student's personality functions in an educational context: that is, their emotions. Emotional regulation can play a significant role in the educational process, not only through its influence on socialization but also through direct links to self-regulation, motivation, and academic performance (Jianhui et al., 2022; Nesayan et al., 2019). Furthermore, it can be argued that the relationship is mutual. It is not only that low academic performance can be a predictor of negative emotional states, but also the other way around. Experiencing negative emotions leads to poor academic performance among students (Reinhard et al., 2023). These

interrelationships form the core of the modern model of positive education, which aims to optimize not only academic outcomes, but also the student's personal development. It is in this context that we examine the distinctive features of student behavior in the educational setting.

A student's educational profile inevitably includes the distinctive features of their behavior. The behavioral profile is typically constructed on the basis of various characteristic, consistent behavioral tendencies, such as risk-taking, extroversion, patience, and adherence to norms. In the context of the Bulgarian education system, the behavioral profile of children and students in the educational environment is particularly important and constitutes a central part of the psychological-pedagogical assessment that the head teacher of each class prepares for each student each school year (Ministerstvo na obrazovanieto i naukata, 2016, 2017). The characteristics of the behavioral profile are of particular importance for the implementation of the pedagogical process because they can provide information about the direct relationship between pedagogical interaction in the educational environment and the child's personal development. The search and identification of these mutual relationships are particularly important and in the best interest of the child, as a key participant in the educational process and the educational outcomes. The search for coherence in the development of a competency profile based on national educational standards and the fulfilling and healthy development of the student's personality is a central issue in the analysis of the educational framework. In order to address this issue, it is essential to identify the student's strengths and use them in their professional and personal growth.

A Model for Educational Profile, Based on Student's Personal Strengths

In the contemporary paradigm, the educational profiles are viewed as a comprehensive multidimensional construct, which encompasses the various dimensions typical of the personality. The structure of a student's general educational profile can be built based on the characteristic features of the student's personality—sensory, cognitive, behavioral, emotional, and social-competence dimension (Levterova-Gadjalova et al., 2023). These five domains allow for a comprehensive and holistic examination of the distinctive features of a child's and student's behavior; the present study seeks to confirm the existence of this five-factor model.

Table 1

Structure of the Educational Profiles Based of the Student's Strengths Questionnaire. 5 – Factor Model

N	Social competence profile	Emotional profile	Behavioral profile	Cognitive profile	Sensory profile
1	1.1 Is able to communicate positively with significant others.	2.1 Possesses the ability to adopt another person's perspective (cognitive empathy).	3.1 Demonstrates a tendency toward prosocial behavior.	4.1 Demonstrates an ability to think in perspective.	5.1 Adequate recognition and interpretation of various stimuli (e.g., smells, sounds, faces, objects, textures).
2	1.2 Demonstrates the ability to take responsibility.	2.2 Understands their own thoughts and experiences; is inclined toward self-reflection and analysis (reflective).	3.2 Has a good sense of humor.	4.2 Uses appropriate mnemonic strategies.	5.2 Demonstrates the ability to distinguish meaningful, relevant sensory information.
3	1.3 Possesses the skills to assess their strengths and weaknesses, which is the foundation of appropriate social behavior.	2.3 Is able to manage feelings of jealousy.	3.3 Is able to apply strategies to control hyperactive impulses ("stereotyped behavior," hyperactivity).	4.3 Critical thinking skills.	5.3 Precision and sensitivity to the fine details of the sensory image.
4	1.4 Has a realistic self-assessment.	2.4 Is able to anticipate and sense emotions and emotional states within a narrative (understands the emotions of characters in a story).	3.4 Is able to apply behavioral strategies to cope with everyday situations.	4.4 Understands and is aware of his/her own strengths and weaknesses.	5.4 Good semantic processing of structural elements (shapes, background, forms, objects).
5	1.5 Is able to navigate, assess, and respond appropriately in various social situations.	2.5 Is familiar with states of frustration (disappointment, etc.).	3.5 Exhibits socially appropriate nonverbal behavior (facial expressions, gestures, body posture, and appropriate nonverbal cues and signals).	4.5 Is able to formulate and convey information about his/her own thoughts through language.	5.5 Observational skills and the ability to detect changes related to transformations or modifications in sensory information

The study included 238 participants, all of whom were educational professionals. Each participant described a child or student with whom they work in their practice. The questionnaire contains 5 sub-profiles (Social Competence, Emotional, Sensory, Cognitive, and Behavioral). For each of these sub-profiles, five items have been selected to assess the student's strengths with regard to a specific personality dimension. All items contain positive statements representing potential strengths. The relevance of each item to the subject is rated on a 5-point scale (1-never, 2-very rarely, 3-sometimes, 4-often, 5-always). The data were collected through a Google Forms survey conducted between January and March 2026. All participants in the study provided their informed consent. The data were collected anonymously, without further disclosure, in accordance with national and international requirements for the ethical conduct of research involving human subjects.

Results and Discussion

All analyses were performed by using IBM SPSS Statistics 25. The results show that the mean values of all scales are relatively similar. The behavioral profile scale has the lowest mean (18.6309), while the sensory profile scale has the highest (19.9463), with a minimum score of 5 and a maximum of 25 raw points for each scale. The standard deviation for each scale varies around 3, indicating relatively stable results. As expected, the mode is highest on the sensory profile (22), but the social competence profile, which has the second-highest mean score (19.8792), shows a multiple mode ranging between 22 and 21. The mode is smallest on the behavioral profile. The behavioral and cognitive profiles demonstrate the widest variation (with a minimum score of 5 and a maximum of 25), while the sensory profile has the smallest (with a minimum score of 7 and a maximum of 25). These differences across the scales, however, remain minimal, and it cannot be claimed that any single scale yields better results than the others overall. Full results for the scales are visualized in Table 2.

Table 2
Scale Statistics

	Sum Social competence profile	Sum Emotional profile	Sum Behavioral profile	Sum Cognitive profile	Sum Sensory profile
Valid	238	238	238	238	238
Missing	0	0	0	0	0
Mean	19,8792	19,1812	18,6309	19,1409	19,9463
Median	20,0000	20,0000	19,0000	20,0000	20,0000
Mode	21,00[a]	20,00	18,00	20,00	22,00
Std. Deviation	3,58471	3,52223	3,11133	3,52600	3,39273
Variance	12,850	12,406	9,680	12,433	11,511
Skewness	-1,077	-0,565	-0,766	-0,937	-0,737
Std. Error of Skewness	0,199	0,199	0,199	0,199	0,199
Minimum	6,00	6,00	5,00	5,00	7,00
Maximum	25,00	25,00	25,00	25,00	25,00

a. Multiple modes exist. The smallest value is shown

Factor analysis, performed using a component matrix with VARIMAX rotation, revealed the presence of 5 factors. The 5-factor model of the questionnaire explains 66.385% of the

variance, with items' communality coefficients varying between 0.675 and 0.920. This result allows for an examination of the reliability of each of the scales. The reliability analysis shows very good results. The Cronbach's alpha method used shows the lowest value on the "Behavioral Profile" scale with 0.77 and the highest on the "Social Competence Profile" scale with 0.86. There is no item whose removal would improve this indicator on any of the five scales.

Table 3
Scales Reliability Statistics

Scale	Cronbach's Alpha	Items
Social Competence profile	0.86	5
Emotional profile	0.82	5
Behavioral profile	0.77	5
Cognitive profile	0.84	5
Sensory profile	0.84	5

These results indicate that the questionnaire has high internal consistency and that the items are relevant to the general construct researched. These findings suggest that students' educational profiles can be examined holistically by considering the various aspects of a child's strengths within the framework of the proposed five profiles.

Conclusions and Recommendations

The results of the factor analysis confirm the presence of five subscales that correspond to the proposed profiles: social competence, emotional, behavioral, cognitive, and sensory (Levterova-Gadjalova et al., 2023). Furthermore, the model demonstrates good explanatory power, and each of the scales shows significant internal consistency. The students' personal strengths proposed for assessment shape consistent profiles that are organized into a comprehensive construct. The data provide sufficient grounds to conclude that this approach possesses the qualities necessary for an innovative methodology for creating a student's educational profile based entirely on their personal strengths. In other words, it can be concluded that the creation of a profile based on the developed model largely reflects the actual functioning of the child and student in their usual work environment—the educational setting.

The educational profile prepared in accordance with this model is holistic, accurate, and allows professionals working with the student to optimize and direct their efforts toward facilitating the student's optimal personal development. A key recommendation from the study is the importance of further developing a theoretical framework for applying this methodology in order to improve working practices with students under the conditions of the educational environment. Unlocking the full potential of the proposed methodology could become essential for providing more comprehensive and effective support for students' personal and professional development in the educational setting.

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Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

The author declares that no AI or AI-assisted technologies have been used to generate, refine, or correct the content in the manuscript. The ideas, design, procedures, findings, analyses, and discussion are originally written and derived from careful and systematic conduct of the research.

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