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## **METHODOLOGICAL HOLISM PROBLEMS AND THE MENTORING PARADOX IN FOSTERING GIFTEDNESS EXCELLENCE**

**Abstract:** Problems of Methodological Holism and the Paradox of Mentorship in Nurturing Excellence Among Gifted Individuals This study aims to examine, through theoretical analysis, the problems of methodological holism and the paradox of mentorship in nurturing excellence among gifted individuals. Methodological holism is regarded as a theoretical approach based on the assumption that social phenomena can only be understood within the broader context of systems, institutions, and cultural patterns. In contrast to methodological individualism, which emphasizes individual action, holism stresses the whole. This approach is considered particularly significant in educational and pedagogical research on the mentorship of gifted individuals, yet it faces numerous methodological challenges. In the context of mentoring gifted students, these challenges manifest through the so-called mentorship paradox—a contradiction between the individual dimension of gifted students' development and institutional or systemic constraints. The intention, therefore, is to analyze current issues of methodological holism and their relationship to the paradox of mentorship of gifted individuals, drawing on findings from empirical research, which, from a theoretical perspective, represent a form of metatheoretical analysis of the problem explored in this study.

The theoretical framework of this study has two parts. The first concerns methodological holism and its limitations. The analysis concludes that methodological holism enables researchers in the field of mentorship of gifted students to consider mentorship within a broader sociocultural context. This includes factors such as educational policy, institutional culture, and value norms. However, problems arise when considering the following aspects:

- Overgeneralized interpretation of processes – the emphasis on systems often leads to a loss of precision, as micro-interactions (mentor–student) remain overshadowed.
- Operationalization of the “whole” – it is empirically difficult to encompass all dimensions (school, family, society, culture).
- Conflict with individualism – holism overlooks individual creativity and freedom, which are crucial in mentoring gifted individuals.
- Predictive weakness – holistic models tend to describe rather than predict the success of mentorship.

The second part of the theoretical context refers to the mentorship paradox, which arises from the dual nature of this phenomenon:

- Individual level – mentorship is a personalized relationship based on trust, flexibility, and the development of the student's creative potential.
- Collective level – mentorship is part of institutional patterns and social expectations, which often require standardization and uniformity.

The paradox is reflected in the expectation that mentors should act simultaneously as authorities and mediators of freedom while integrating the mentee's individual needs with general educational norms. Empirical findings confirm the limitations of methodological holism and illuminate the mentorship paradox in various areas: systemic policies versus individual performance; culture and educational norms; the paradox of personalization; authority and freedom. Analyses indicate that methodological holism enables an understanding of mentorship within systemic and cultural contexts, yet it faces serious limitations in explaining the dynamics of personal relationships. The mentorship paradox—the tension between individual freedom and institutional structures—underscores the limitations of the holistic approach. Thus, it is concluded that new methodological approaches and integrative methodological models are needed, combining a holistic perspective (sociocultural context) with an idiosyncratic focus (personalized relational dynamics). Such an approach could lead to a more adequate understanding and advancement of mentorship in contemporary efforts to nurture excellence among gifted individuals.

**Keywords:** methodological holism, mentorship paradox, gifted individuals

### **1 Introduction**

The question of the explanatory primacy of individualism or holism is, as researchers note, one of the longest-lasting and most complex debates in the social sciences and humanities

(Gellner, 2003). What makes it one of the longest-lasting is the fact that the dispute began at the time of the academic institutionalization of the social sciences, and that, as the literature suggests, it has taken on different forms and regained importance multiple times (at the end of the nineteenth century, after World War II, and at the end of the last century), and has remained without consensus to this day (Kulenović, 2014).

Researchers in the social sciences rarely accept the terms individualism/holism; instead, they speak of the micro/macro and agency/structure debate. Analysts note that this involves the same fundamental ontological and methodological issues as in the individualism/holism discourse (Zahle, 2007). This debate is considered not only long-lasting but also the most complex in scientific circles, as it involves the difficult question of distinguishing the methodology of the social sciences from that of the natural sciences. Furthermore, it is often not easy to decide whether the debate is metaphysical, ontological, methodological, or epistemological.

Therefore, most authors point out that the resolution of this issue would be significantly aided by clearer definitions of causality in the social context. Related to this is the question of what is meant by “explanation” in the social sciences and how problems are understood. The lack of clarity in these questions remains the main obstacle to reaching a unified resolution and constitutes a serious critique of all formal methodological arguments attempting to provide an a priori “recipe for explanation” (Gellner, 2003). Consequently, researchers in the social sciences and humanities are still searching for ways to overcome these ambiguities in the debate over the explanatory capacity and scientific status of both approaches. One such attempt is the ongoing discourse between methodological holism and methodological individualism—one of the most enduring and complex debates in the social sciences and humanities. A brief overview of the essence of these methodological approaches can define them as follows: The holistic approach is a philosophy and methodology that views the whole as more than the mere sum of its parts. This indicates that the approach is focused on the integration of all aspects of human existence—body, mind, and spirit—in order to achieve optimal health and well-being (Kulenović, 2014).

Historically, holism has its roots in ancient medical and philosophical traditions that recognized the importance of balancing all aspects of life (Kulenović, 2014, 2025). Over time, this approach evolved and adapted in accordance with the modernity it followed, thus persisting and achieving a harmonious relationship with contemporary life needs, including research as an integral part of it.

In contemporary contexts, the holistic approach has been more broadly accepted as a key principle of lifelong learning and growth. It is based on the idea that development never ceases and that every new situation or experience contributes to our overall development. Thus, the integration of body, mind, and spirit involves an understanding of how their synergy contributes to comprehensive health and well-being.

From a research perspective, the holistic approach to problem-solving involves considering all factors that may influence a situation, that is, the phenomenon under study, thereby enabling deeper and more sustainable solutions. This approach, therefore, requires a comprehensive understanding of the problem, including its physical, emotional, mental, and spiritual aspects. In this way, its scope covers the complete picture of the problem and addresses its root causes. A significant determinant of the holistic approach in the context of interpersonal relations is that it encourages the development of communication skills, empathy, and understanding, thereby improving relationships and resolving conflicts at a deeper level. At the same time, by applying a holistic approach to interpersonal problem-solving, the causes of problems are more easily identified and resolved, ensuring long-term effects.

The foregoing is linked to questions concerning the status of explanation in the debate on the scientific status of individual scientific fields, including didactics as a narrower pedagogical discipline. Like other scientific fields, didactics is based on one of the fundamental assumptions: that there exists a significant correlation between theoretical and methodological structures, to such an extent that they can be regarded as inseparable, and that ex-

planation—its explanatory potential—is the point of convergence through which one can test whether the separation of theoretical and methodological structures is even possible. Although these questions may seem distant from didactic practice—that is, mentorship and the fostering of giftedness—they are essential for understanding methodological aspects and the initial steps in researching one’s own practice while searching for ways to guide the gifted more effectively on their path to excellence. This is what is expected today of practitioners in mentorship, and it is also what they themselves perceive in their efforts to organize mentorship more securely in accordance with the needs of their mentees. Therefore, it is necessary to understand this issue and seek to test and shape it in practice, at least partially, as feedback on the scope, limitations, and possible ways of improvement.

These questions are significant for the topic of this study, since didactics—and thus pedagogy, as the science of which didactics is a part—requires greater clarity in mentorship when selecting models, types, and forms of explanation that pedagogy is expected to adopt and apply in its research. This is significant for all social and human sciences, as it concerns the clearer articulation of the relationships between often opposing understandings of the subject, methods, and theoretically postulated goals of pedagogy. It directly involves the content and conjunction of these concepts, as well as the “models of scientificity” or “images of science” that sociocultural pedagogues have followed or continue to follow. Behind this stands the question of whether the answers to many methodological uncertainties (Kulenović, 2014) depend primarily on external factors in relation to the explanatory mechanism of sociocultural pedagogy itself. Thus, the hypothesis explored here, regarding the persistence of the nominally methodological debate between holism and individualism, perhaps should to a large extent be addressed to the metaphysical, socio-political, and ethical rather than the methodological domain (Kulenović, 2014). The authors are aware of the significance of methodological questions and emphasize the need to take them seriously and discuss them rationally, even though they currently appear unsolvable, because behind the methodological issue lies an ontological one. This ontological issue is motivated by socio-political and ethical factors and entails socio-political and ethical implications (James, 1984). Despite the traditional view that changes in the proclaimed focus and scope of explanation are the responsibility of epistemic factors (methodological, empirical, theoretical), Klemenović (2014) highlights the importance of non-epistemic factors, which have traditionally been regarded as variables independent of methodology and not expected to influence theory or explanation. However, this author argues that they too deserve equal attention and that they can become constitutive for shaping the goals and subjects of research, refining the proclaimed focus and scope of explanation, as well as determining the possibility, validity, capacity, and legitimacy of explanation. Ultimately, and in line with the title of this study, they are relevant for establishing the scientific status of didactics and of mentorship as an effective method for guiding the gifted on the path to excellence, and thereby pedagogy as a scientific discipline.

The conflict between these two scientific currents—holistic and atomistic or individualist approaches—in the struggle for explanatory primacy requires more space than is possible here (see more in: Gojkov, 2006). But it should be mentioned that the main stumbling block in this debate lies in the question of the explanatory scope and focus, stemming from different theoretical conceptualizations of the object of study (Shionoya, 1995). This conceptualization was largely dependent on the historical and cultural context and on the political-ideological orientation of the participants themselves. One may conclude, therefore, that since method is not an algorithm, and given one of its underlying assumptions, no methodological instruction can by itself provide solutions to theoretical disputes, because the essence lies in the clash of two entirely opposing theoretical conceptualizations of the subject of study. These conceptualizations entail radically different explanatory foci (whole vs. individual) and types of explanation (inductive vs. deductive) and are grounded in radically different political-ideological standpoints—state interventionism vs. liberalism (Kulenović, 2014).

On the other hand, for understanding the context in which the debate about the explanatory capacity and scientific status of sciences such as pedagogy takes place (see more broadly: Palekčić, 2014, 2025), it is necessary to bear in mind that the question of the explanatory primacy of holism or individualism is only the tip of the iceberg of a set of closely intertwined issues concerning the distinction between explanation (Erklären) and understanding (Verstehen). From the foregoing, one may conclude that, although the roots of epistemological and methodological problems lie in ontological differences (which are not explicitly defined), the issue nevertheless relates to the clash of methodological standpoints (objectivism/justificationism vs. constructivism/interpretivism). As previously noted, this is closer to the title of this study, since in this methodological conflict political-ideological positions (state interventionism vs. liberalism) are also refracted.

Thus, the methodological framework refers to the following:

#### Objectivism / Justificationism

- Assumes that there is one objective reality that science can discover; our consciousness is an objective image of the world.
- Theories are “justified” by evidence: the researcher believes they can rationally justify and verify their claims. Explanation aspires to universality, laws, and predictability.
- Typically associated with holism and inductive explanation—science should encompass the “whole,” society as a system, and find laws applicable to all members of society.

#### Constructivism / Interpretivism

- Assumes that social reality is not “given” but is constructed through interpretation.
- The researcher does not discover but interprets the meanings and perspectives of actors.
- The focus is on individual experiences, narratives, and contextual explanations.
- Associated with individualism and deductive explanation, where the whole is understood from the perspective of individuals and their constructions of meaning.

### 1.2. Political-Ideological Framework

#### State Interventionism (Holism + Objectivism)

- If society is understood as a whole that science can objectively grasp, then the role of the state as a regulator and guardian of the common good is justified.
- Ideologically, this position is closer to social-democratic, socialist, or statist orientations, where the state intervenes to maintain balance, fair distribution, and collective development.
- From a scientific perspective: the theory aspires to provide an “accurate picture of society” and thereby legitimizes state policies.

#### Liberalism (Individualism + Constructivism)

- If society is seen as the sum of individuals with their own meanings and choices, then individual freedom and the limited role of the state are emphasized.
- Ideologically, this is closer to classical liberalism or neoliberalism, where it is assumed that the state should withdraw and that social order should be built “from below,” through the interactions of free actors.
- From a scientific perspective: there is no “objective” picture of society—there are plural meanings and rationalities that need to be understood and respected.

Thus, the synthesis of the previous discussion can be summarized as follows: objectivism–justificationism + holism → leans toward state interventionism because it treats society as an objective whole that requires planning, regulation, and governance. Constructivism–interpretivism + individualism → leans toward liberalism, because it sees society as a network of individual freedoms, meanings, and initiatives that should not be restricted by external regulation.

In short: the methodological debate is not only epistemological, but also entails political-ideological implications. “Objectivism–holism” legitimizes state interventionism, while “constructivism–individualism” legitimizes liberalism and pluralism. This is more clearly shown in the following tabular presentation.

Table 1. Connections between Methodological and Political-Ideological Standpoints

<b>Methodological Framework</b>	<b>Characteristics</b>	<b>Explanatory Focus</b>	<b>Political-Ideological Implications</b>
<b>Objectivism / Justificationism (often linked with holism)</b>	Assumption of one objective reality; science discovers universal laws; justification and verification of theories	The whole (society as a system); inductive explanation	State interventionism – society as a whole requires regulation and governance; emphasizes the role of the state in planning, redistribution, and control
<b>Constructivism / Interpretativism (often linked with individualism)</b>	Social reality is constructed; the researcher interprets actors' meanings; plurality of perspectives	The individual (subjective experiences and meanings); deductive explanation	Liberalism – society as a network of free actors; the state has a limited role; emphasizes autonomy and pluralism

From the previous table it is clear that different political-ideological horizons are embedded in methodological standpoints: one legitimizes the state as the central actor, the other legitimizes the individual and his or her freedom.

Therefore, the earlier debate on individualism vs. holism may be concluded by stating that in the philosophy of social sciences the contentious issue remains the relationship between methodological individualism and methodological holism. Methodological individualism explains social phenomena starting from the individual—their motives, choices, actions, and rational calculations. Everything that happens at higher levels (groups, institutions) is reduced to individual actors. In methodological holism, however, social phenomena have a “reality” and dynamics that transcend the sum of individuals. Institutions, norms, and networks of relations shape individuals and cannot be fully reduced to individual decisions. This debate, as mentioned, has lasted for decades, and no final solution has been reached, since both approaches have advantages and limitations in explaining complex phenomena. This also applies to the case of this study’s topic—mentorship of the gifted.

From the perspective of methodological individualism, mentorship can be understood through micro-analysis of mentor–mentee interactions, focusing on: the motivation and abilities of the individual, cognitive and emotional processes during the interaction, strategies of self-regulation, and talent development. The explanatory capacity lies in the fact that giftedness development is explained as the result of individual decisions and actions.

From the perspective of methodological holism, mentorship is viewed as part of a broader educational, cultural, and institutional framework. The focus is on social networks and conditions provided by the mentor through authority and research projects, on institutional support (gifted programs, education policy), and on norms and cultural values that shape the meaning of “excellence.” Here, explanatory capacity lies in the idea that the development of giftedness is not only an individual matter, but also the result of systemic relations and contexts.

Thus, from the standpoint of explanatory capacity, the unresolved problems are as follows: if we adhere exclusively to methodological individualism, we risk overlooking how mentorship depends on networks, institutions, and cultural frameworks; if we adhere exclusively to methodological holism, we risk neglecting the inner processes of the gifted individual and his or her ability for self-regulation and self-development. This is why some authors argue that mentorship cannot be fully explained by either approach alone. Its scientific validation as a strategy for excellence among the gifted depends precisely on the integration of both frameworks.

However, attempts to resolve this controversy through triangulation have not yielded the necessary effects so far. Although researchers tend to conduct both qualitative and quantitative studies by mixing methods, this has often remained a clumsy grafting, without a real

contribution to clarifying the researched problem, since the significance of integration was not fully realized. Thus, the issue remains debated, and the contentious point is whether mentorship has the status of a scientifically grounded strategy, or whether it remains in the realm of pedagogical practice and experiential wisdom.

For methodological individualism, scientific rigor is reflected in evidence from longitudinal studies of individual success, measuring changes in cognitive development and achievement. For methodological holism, scientific rigor is confirmed in the study of educational systems, policies, and collective patterns that influence the success of the gifted.

Many authors see the problem in the fact that mentorship is a “hybrid” phenomenon—at the same time a personal relationship and a social institution (Gojkov, 2006). For that reason, they argue that its scientific status remains “uncertain” as long as there is an expectation that it can be fully explained from only one perspective, which, from another angle, reveals the shortcomings of current methodologies or methodological approaches. Thus, researchers face the challenge of continuing to search for new meta-scientific approaches, with due respect for ontology and epistemology—in other words, the need to raise the entire meta-scientific framework to a higher level capable of encompassing the previously mentioned ambiguities. This also implies that didactics must contribute more to the search for its own methodological approaches in the field of mentorship for the gifted.

From this perspective, one could conclude that the debate remains unresolved—flaring up at times, then seemingly quieting down—although it feels as though the swords have not yet been sheathed. The reason is that two fundamentally different epistemological positions are reflected here, making the debate irresolvable. In the field of mentorship, this means that insisting on the exclusivity of one approach leads to reductionism. Methodological individualism reduces mentorship to the psychology of the individual, while methodological holism reduces it to structures and norms. Therefore, some authors (Kulenović, 2023, 2025) are inclined to accept triangulation as one of the possible solutions, although, as previously mentioned, it has not brought significant progress in clarifying the paradox of mentorship. The idea that it is more fruitful to observe mentorship through methodological pluralism—a combination of individualistic and holistic analyses—does not offer much hope, since, as noted, the problem lies in different epistemologies. Hence, this issue still requires philosophical reflection, as philosophy is both the source and the refuge of the debate.

From the perspective of implications for fostering gifted excellence, the situation is the same. Methodological individualism reminds us that excellence begins with the personal engagement of the gifted individual and his or her interaction with the mentor, while methodological holism emphasizes that excellence is not possible without social networks, cultural support, and institutional structures. Thus, it is clear that mentorship as a didactic strategy cannot have full scientific status if viewed from only one approach. What is needed is an interdisciplinary and multilayered methodology that didactics must develop within its own framework, while drawing on findings from psychology, philosophy, and other scientific disciplines that can assist in the search for methodological approaches capable of grasping mentorship as a whole (Palekčić, 2024).

From this follows the paradox: the debate between methodological individualism and methodological holism is irresolvable in the classical sense, but it is productive, since it helps us to better understand the complexity of mentorship and the fostering of excellence among the gifted.

## 2. Problems of Methodological Holism and the Paradox of Mentorship

The fact that research on the effectiveness of mentorship points to a paradox—on the one hand, there is evidence that mentorship can be very effective, while on the other hand, meta-analyses usually report only small to moderate effects, and sometimes even negative effects (Ziegler et al., 2020, 2021)—leaves room for further clarification, in the sense that arguments must be developed from multiple perspectives. Ultimately, this should help practitioners navigate more effectively in concrete mentoring practices.

As mentioned earlier, the complexity of mentorship and fostering excellence among the

gifted has been described in the literature as a paradox. The significance of the predictive reliability of variables in determining mentoring success is highly influential in understanding differences in theoretical approaches to mentorship and in the current problems of methodological holism, where ambiguities persist between traditional analyses of mentorship—which are component-dominant and based on the assumption of strong predictive reliability of variables—and the realization that this approach provides information only within the limits of the current methodological level. Efforts toward holistic approaches often consider these traditional analyses inadequate (Ziegler et al., 2023). Accordingly, it is argued that the success of mentoring faces many limitations and cannot be based on the assumption of the predictability of relevant variables. The complexity of mentorship still escapes current methodological capacities (Ziegler & Stöger, 2004). Thus, the paradox of mentorship remains unresolved.

## 2.1 Findings of Empirical Research on the Predictive Reliability of Variables in Mentorship Studies

After the methodological aspects outlined above and the recognition that there is no consensus on crucial questions regarding approaches to mentorship research—which leads to the paradox of mentorship—attempts have been made, within current methodological limits, to redirect research toward mixed-methods approaches within triangulation. So far, however, these efforts remain clumsy and ineffective, far from what is needed, since, as mentioned, the conflict between research paradigms is only the tip of the iceberg. The core of the problem lies deep in meta-scientific approaches, ontology, and epistemology. Therefore, without overcoming these deeper conflicts, it will be difficult to resolve methodological questions. This means that paradigm conflicts cannot be overcome by triangulation, especially not by mixed methods alone. It is also significant that this reflects on the creation of models intended to guide the practical fostering of excellence among the gifted.

Research has therefore focused on identifying variables associated with effective mentorship. A few findings are highlighted here without detailed descriptions of the research designs.

For example, Ewing et al. (2008) studied 12 mentors (university lecturers and professors) and 14 mentees (research assistants and lecturers) who were paired for this study. A significant finding was that the mentees expressed satisfaction with the program, highlighting numerous beneficial aspects, including self-regulatory processes of goal setting, strategy development for achieving those goals, improved time management, and increased confidence in achieving success.

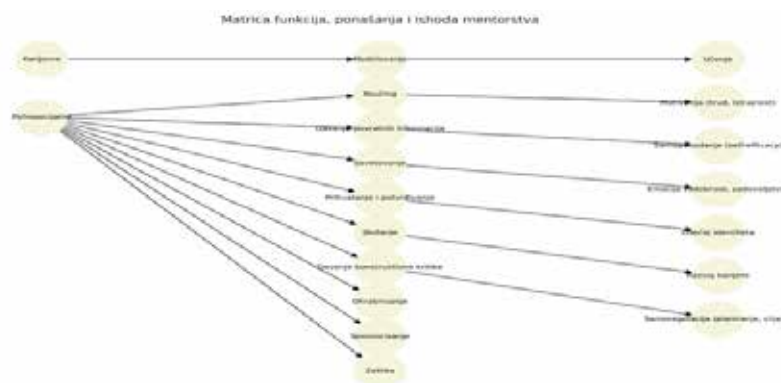
A frequently cited study by Allen and Eby (2003) surveyed members of professional associations who served as mentors ( $N = 249$ ). The surveys examined participants' perceptions of aspects of mentorship. A positive relationship was found between mentors' evaluations of the quality of their mentoring and their perceived similarity with their mentees in terms of values, interests, and personality characteristics.

Noe (1988) examined the relationships between mentee characteristics, the quality and gender composition of the mentoring relationship, the amount of time spent between mentor and mentee, and mentee outcomes (career and psychosocial). Female mentees reported greater psychosocial benefits compared to their male counterparts. Thus, gender was identified as a significant variable in mentoring programs. Gender differences between mentors and mentees also proved to be a significant factor in mentoring success.

The relationship between mentoring functions and mentee outcomes is another frequent topic in mentoring research. Lankau and Scandura (2002) studied the relationships between mentoring functions, personal learning, and mentee outcomes (such as satisfaction and retention) among 440 employees in medical institutions. Their findings indicated that the more mentees were exposed to modeled demonstrations of career roles, the better they could learn self-regulatory strategies, which in turn enabled them to improve their interpersonal relationships in the workplace, leading to greater job satisfaction.

agins and Cotton (1999) investigated the relationships between mentoring functions and outcomes among mentees, as well as whether certain variables moderated these relationships. The sample consisted of 1,162 individuals from engineering, social work, and journalism, who responded to a survey measuring perceived mentoring functions, satisfaction with mentoring, and various career outcomes (e.g., promotions). Mentees with informal mentors reported more career and psychosocial functions than protégés with formal mentors, and those in the first group reported greater satisfaction with their mentors and stronger effects. Several researchers have tested this mentoring model, among them McQuillin and Lyons (2021), who applied it in a first-year doctoral seminar, focusing on professional skills such as critical scientific reading and research proposal writing, as well as psychosocial skills, including professional socialization and interpersonal relationships with group members. Zimmerman concluded that self-reflection and independent practice are ways to develop self-regulation skills (Zimmerman, 2000). A significant finding of this study, based on student reports and instructor evaluations, was the observation that students developed greater confidence as researchers and improved their ability to conceptualize research questions. Following this review of several studies, it can be concluded that, despite the lack of consensus in the methodological field, researchers nevertheless advanced by relying on their theoretical concepts of giftedness and, in search of more reliable definitions of mentoring functions and strategies, created models (modeling, practice, providing feedback) that can lead to positive career outcomes for mentees (learning, goal setting, career development), as well as psychosocial outcomes (motivation, satisfaction, sense of identity, self-confidence, metacognition, self-regulation...). However, classical research findings based solely on the factor-analytic approach, although supportive of the hypothesis that mentoring can contribute to the acquisition of career and psychosocial skills among protégés, are not sufficient—primarily for methodological reasons, since they largely rely on self-reports (e.g., surveys, interviews) collected after interactions between mentors and mentees. These studies provide correlational rather than causal explanations of the relationships, which is why other models are being sought. In this respect, high expectations are directed toward the integration of didactics and psychology, which could reach what, in rough outline, might align with the holistic approach—that is, to meet the demands of the principle of personalization, namely academic mentorship that integrates the processes of self-regulated learning. This can be observed in Graph No. 1 in the Matrix of Mentoring Functions, Behaviors, and Outcomes, which presents the sequence of organizational steps and their effects.

Fig. 1 Matrix of Mentoring Functions, Behaviors, and Outcomes



#### Career

- Modeling → Learning
- Coaching → Effort, persistence
- Providing challenging assignments → Self-efficacy
- Counseling → Emotional well-being, satisfaction
- Acceptance and confirmation → Sense of identity
- Friendship → Career development
- Providing constructive criticism → Self-regulation (planning, goals)

- Exposure →
- Sponsorship →
- Protection →

Psychosocial

(connected to all of the above functions and outcomes)

Function	Behavior	Outcome
Career	Modeling	Learning
Career	Coaching	Effort, persistence
Career	Providing challenging assignments	Self-efficacy
Career	Counseling	Emotional well-being, satisfaction
Psychosocial	Acceptance and confirmation	Sense of identity
Psychosocial	Friendship	Career development
Psychosocial	Providing constructive criticism	Self-regulation (planning, goals)
Psychosocial	Exposure	—
Psychosocial	Sponsorship	—
Psychosocial	Protection	—

Table: 1. Matrix of Mentoring Functions, Behaviors, and Outcomes

Function Behavior Outcome

Career Modeling Learning

Career Coaching Effort, persistence

Career Providing challenging assignments Self-efficacy

Career Counseling Emotional well-being, satisfaction

Psychosocial Acceptance and confirmation Sense of identity

Psychosocial Friendship Career development

Psychosocial Providing constructive criticism Self-regulation (planning, goals)

Psychosocial Exposure —

Psychosocial Sponsorship —

Psychosocial Protection —

Furthermore, in the new models (Ziegler's (2005, 2011) systemic model, ACTIOTOPA and SOCIOTOPA, and Keverski & Keverska-Sapkaroska's (2025; Zenuni & Keverski, (2021).HODIMOD model), there is an effort to explain how mentoring functions translate into concrete mentor behaviors and how these behaviors affect mentees. Keverski & Ristevski, 2021, 2022) This is highlighted as a significant shortcoming of other models, as observing mentor-mentee interactions in real relationships is particularly important. It is also noteworthy that the role of potential mediating variables (e.g., cognitive and emotional processes of both mentors and mentees during interactions) remains largely unexplored, so researchers (Šunk & Malen, 2013) point out that the conceptual leap from mentor behaviors to mentee outcomes bypasses potentially significant cognitive and emotional processes. Another limitation is that only a small number of studies follow the same subjects (mentees) over time to determine how mentor and mentee behaviors, thoughts, and emotions change during the development of the mentoring relationship.

The conceptualization of mentorship in the HODIMOD model (Keverski & Keverska-Sapkaroska, 2025; Keverski, 2021, a,b)) draws attention to itself through a theoretical-methodological framework that incorporates contemporary perspectives on mentoring. Keverski emphasizes that the development of gifted individuals is one of the key issues in contemporary pedagogy and educational psychology, noting that traditional models, which

relied on a one-factor understanding of giftedness (mainly through intelligence quotient or a small number of significant variables), proved insufficient to explain the complexity and diversity of the potential possessed by gifted students. In this context, numerous holistic and differentiated approaches have been developed, among which the HODIMOD – Holistic-Differentiated Model of Giftedness (Kevereski & Kevereska-Sapkaroska, 2025) holds a special place. The author bases this model on a theoretical and practical framework for understanding and developing giftedness through a comprehensive approach to the gifted individual, in which he particularly emphasizes the character of mentorship as a strategy that enables personalized and developmentally oriented work with gifted individuals (Kevereski & Kevereska-Sapkaroska, 2025).

Kevereski highlights that HODIMOD (Kevereski & Kevereska-Sapkaroska, 2025) assumes that giftedness is a multidimensional phenomenon encompassing cognitive abilities, creativity, motivation and resilience, emotional and social intelligence, and moral and value dimensions of personality. The term “holistic” in the model’s name signifies that the mentee is viewed as a whole – not only as “intellectual potential” but as a person with emotions, interests, values, and social relationships. The “differentiated” component indicates that the educational process must be personalized and tailored to the specific abilities and needs of each mentee, as gifted students progress when offered a modular and flexible educational path. For them, content, methods, and goals are not uniform but differentiated. Here, the mentor plays a key role in designing, monitoring, and supporting this process. Thus, it is a holistic-differentiated model that starts from the fact that giftedness is not solely cognitive (IQ) but multidimensional, including creativity, motivation, and emotional, social, and value dimensions. “Holistic” covers the comprehensive development of the gifted individual (intellectual, emotional, social, moral aspects). “Differentiated” foresees the personalization of educational content and methods according to the abilities, interests, and developmental pace of each student (Kevereski & Kevereska-Sapkaroska, 2025). Within the model, mentorship is a key strategy that enables the implementation of this differentiated approach in practice. Particularly noteworthy is that this model foregrounds interests, which are usually suppressed or replaced by motivation in research, even though motivation does not always align with the driving force of interests (Kevereski & Kevereska-Sapkaroska, 2025).

Mentorship in HODIMOD is a planned, personalized, and developmentally oriented interaction between a mentor and a gifted student, based on a holistic approach to the individual. In this model, the mentor not only transfers knowledge but also acts as: a pedagogical guide – personalizing content, methods, and learning objectives according to the student’s abilities and interests; providing psychological support – emotional support, fostering self-confidence, resilience, and motivation; a sociocultural mediator – connecting the mentee to the community of practice, competitions, research, and cultural activities; and a model of values and integrity – conveying ethical, social, and value patterns that contribute to the development of a complete personality (Kevereski, 2017).

In HODIMOD, mentorship is thus the central mechanism enabling giftedness to develop into talent and competence, not only through intellectual challenges but also through comprehensive personal growth (cognitive, emotional, social, and moral development). In other words, mentorship in HODIMOD provides differentiated, personalized, and holistic support for the development of gifted individuals, where the mentor becomes a catalyst for transforming potential into high achievement (Kevereski & Kevereska-Sapkaroska, 2025). Therefore, in this model, mentorship is based on the interaction of previously mentioned factors (genetic determination, social stimulation, and individual activation), i.e., the three key factors that contemporary giftedness models (Gagné, Renzulli, Subotnik, etc.) consider as generators of talent development. This model can be seen as “The Role of Mentorship in Integrating Innate Potential and Social Stimulation.”

The author summarizes by noting that existing research on mentorship contradicts the empirical approach that would examine which variables mediate or moderate the relationship between mentor functions and mentee outcomes. From this, it could be concluded

that Kevereski's HODIMOD model is essentially close to Ziegler's systemic model, as both share a holistic perspective with the flexibility to keep pace with personalization and developmental changes. This implies that the model takes into account fundamental elements of the system that foster development, i.e., it considers the whole and the factors that define it, with the understanding that the significance of these factors varies between individuals. The value of a systemic approach with flexible consideration of factors gives additional meaning to factor-based approaches in methodological and didactic terms because the importance of knowing the factors is not overlooked but rather used to understand the abilities and characteristics of gifted individuals and to personalize didactic procedures accordingly. The fact that, for one gifted student at a certain developmental stage, attention should be given to a specific type of didactic procedure, while for another it may differ, does not nullify their significance in a holistic approach. Similarly, it is necessary to pay greater attention to certain factors in some situations and others in different circumstances, which does not diminish the factor-based approach in research or individual practices. Therefore, it is meaningful to devote adequate attention to understanding which factors are more or less significant for each individual at a given time. From this perspective, this approach could contribute to clarifying methodological questions regarding the importance of factor-based approaches in fostering giftedness and mentoring research, particularly in personalized didactic strategies. Moreover, it implies that the essential elements of already established models by Ziegler and Kevereski & Kevereska-Sapkaroska (2025), among others, can be further tested, particularly their systemic approach.

Although mentor behaviors in previous studies may contribute to positive outcomes in mentees, further research is needed to determine how this influence occurs; in other words, the didactic aspects of mentorship are still insufficiently explored (Šunk & Malen, 2013; Palekčić, 2013, 2024). Previous positions in the presentation of current models aim to overcome...

Previous positions in presentations of current models, which attempt to overcome methodological disagreements that still appear practically insurmountable today, are supported by several research findings from the Southeast European or Western Balkan region (Stojanović et al., 2025). These studies, focusing on factors contributing to the failure of gifted students and strategies to overcome them, examined failure factors among gifted students. The aim was to test which factors provide essential information for tailoring didactic procedures to help gifted students in crisis, who display academic failure, thereby providing data for designing didactic strategies to stimulate the motivational concepts of gifted students who, in critical moments, resort to defensive strategies. The research problem, or question to be answered, was: how do the proposed factors, whose individual significance has been confirmed in previous studies, contribute to the formation of the phenomenon of gifted students' failure?

The study employed a model combining psychological and social factors, which is the most widely accepted approach in previous research (Reis & McCoach, 2000). The goal was to verify the significance of a group of factors for which previous research has not yet provided unambiguous findings regarding the academic failure of gifted students. The sample consisted of academically gifted students (average grade above 9.50,  $N = 833$ ) from universities in Slovenia, Croatia, Macedonia, Bosnia and Herzegovina, Romania, and Serbia. One notable finding relevant to this study is that the effectiveness of the tested model, and thus the factors within it, was confirmed. However, it was also noted that it remains impossible to conclusively determine environmental factors (including mentorship) that are critical for realizing gifted potential, as fostering high-level developmental possibilities involves a morphogenic complex of factors. Distinct groups of characteristics are significant for development; their arrangement and appropriate combination are critical at specific moments and very individualized. To understand this finding, Jung's (1960) principle of synchronicity was adopted. In the interplay of environmental properties, there is an equally complex set of external, environmental factors that, in a unique way, correspond to individual uniqueness.

Although seemingly separate, external circumstances (environmental composition creating conditions and forming a specific formula for success in significant situations) and internal traits (physical and mental characteristics) condition, activate, provoke, and mark each other. The authors conclude that all of the above supports a systemic model of mentorship, like Ziegler's and Kevereski's, as directions for guiding research on didactic strategies to foster gifted excellence, ultimately aiming to return underperforming students from the margins to a path of self-regulation and achievement of excellence. It is also worth noting the didactic aspects of the study, which confirm a theoretical framework linking didactic strategies with academic success and excellence development. The authors highlight that precise and multidimensional assessment of didactic procedures allows identification of key factors that facilitate or hinder academic development, making an important contribution to both theory and higher education practice, and deepening the understanding of mentorship. They also emphasize the importance of didactic guidance, provided through well-directed strategies, so that teaching is not overly didactic but student-centered, with the instructor acting as a facilitator. This essentially transforms the pedagogical relationship—the relationship of mediation and appropriation (education and research)—with dialogue considered the core mode of instruction in higher education, which is also regarded as a fundamental characteristic of mentoring gifted students.

The findings support the positions of Palekčić (Palekčić, 2006, 2024), who attributes particular importance to curriculum content according to Klafki's (1985) theory of categorical education, and, referring to Herbart (1903), highlights the difference between learning and studying, the significance of curriculum complexity and student interests, and the importance of studying these factors throughout university, which could also extend to mentorship in higher education. These results leave ample room for further reflection in this direction. This is also reinforced by new didactic impulses, such as allosteric approaches (more broadly: Giordano, 2000), which use factor-based methodological approaches to reach conclusions about pedagogical implications, but within a modified didactic model offering proposals that surpass constructivist models and conventional learning environments.

In an exploratory study on gifted students within an emancipatory learning culture (Stojanović & Gojkov, 2024), the researchers sought to answer how much gifted students act as partners in collaborative learning and research and how this reflects on learning outcomes expressed in critical thinking competence and research-oriented learning approaches. Observation was conducted via a systematic non-experimental research method. Participants were academically gifted students from universities in Novi Sad, Belgrade, and Niš (N = 427, of which 85, 10.9%, were academically gifted with an average grade above 9.00). Instruments used included the Inventory of Critical Thinking Stimulation Strategies in Higher Education (ISPKM) and the Cornell Critical Thinking Test (Form X). This study is significant for the dissertation topic as it examines the theoretical context constituting the discourse on the effectiveness of the perspective in higher education didactics, which underlies contemporary mentorship models such as Ziegler's (Ziegler et al., 2021). A key feature of these changes is a shift in learning culture toward student-centered approaches, emphasizing the student's perspective in learning. Thus, instead of specifying "learning input," the focus should be on "output" (Kruso, 2011), which reflects critical (Horkheimer, 1976) and emancipatory pedagogy and didactics (Schleiermacher, 1998). The core problem of this research is the discourse that subjects such an approach to critical scrutiny. One critical point is that the emancipatory approach already existed in the Humboldtian tradition, oriented toward competence, which viewed studying as a field for training and educating intellectual and methodological capacities more than contemporary learning culture does. The conclusion accepts the notion that the term "competence" is new and drives more intensive didacticization of academic learning, whereas the essence of Humboldt's approach—viewing students as partners in collaborative learning and research—is being reconsidered, which in contemporary mentorship models is still regarded as the basis for mentor-mentee communication. Research on the correspondence between teaching and affective styles of students as fac-

tors in gifted student success (Suzić et al., 2023) seeks to assess the significance of affective style as a factor of success for gifted students, examining its influence on self-regulation and academic giftedness, as well as the relationship between cognition and emotion in self-regulated learning and teaching processes. This is emphasized in previously mentioned mentorship models (Šunk & Malen, 2013) regarding mentor-mentee pairing. The study addresses questions such as: what is the relationship between affective styles, teaching styles, and academic success; how do affective styles differ between academically gifted students and others; what is the significance of affective styles for high achievement in relation to self-confidence, metacognition, and personality traits as factors of self-regulation and academic success; and what are the interrelations among these variables. Key findings include: a positive correlation between balanced, flexible affective learning styles of gifted students and open, research-oriented teaching and e-learning styles, and a weak negative correlation with traditional lecture styles. Academic success is significantly associated with the reasoning competence scale. Significant differences exist between academically gifted and other students on impulsivity, negative valence-test, and balanced affective style, which is negatively associated with rigid and impulsive styles. These findings highlight the importance of teaching style factors, suggesting that when implementing mentorship or pairing mentors and mentees, attention must be paid to the mentor's teaching style, which can be crucial in both positive and negative directions.

Empirical research on the predictive reliability of variables for mentorship success often focuses on the question of which variables consistently predict successful outcomes and how to measure their predictive value. The findings related to the following are...

Findings from empirical research on the predictive reliability of variables for mentorship success often focus on the question: which variables consistently predict successful outcomes, and how can their predictive value be measured? The relevant findings relate to the following:

Doctoral students often have long-term relationships with mentors, but there is limited research identifying which matching dimensions contribute to mentorship quality. Gellner (1973) examined two constructs—deep-level similarity (shared values, attitudes, perspectives) and culturally aware mentoring—alongside demographic matching in predicting career and psychosocial support and the overall quality of the mentoring relationship. Using survey data from doctoral students across multiple institutions, confirmatory factor analyses (CFA) indicated good fit for the scales of deep-level similarity and culturally aware mentoring. Structural equation models showed that deep-level similarity and culturally aware mentoring were strong predictors of mentees' perceptions of support and relationship quality, whereas demographic matching (gender, race, etc.) was not predictive when these deeper factors were considered.

Lyons & Edwards (2022), in a study on mentoring relationship quality, observed that the mentoring relationship is often associated with the relationship's duration and risk of premature termination. This study used the Strength of Relationship (SOR) scale (for both mentees and mentors) to measure relationship satisfaction and attachment in pairings. It examined how early SOR scores predict whether a relationship will last longer or end prematurely (less than ~11 months). Analyses included testing metric invariance across demographic groups. Results showed that higher early relationship satisfaction (particularly the mentee version) strongly predicted longer relationship duration and lower risk of premature termination. The mentor version (mentor's perception) also had significance, but to a lesser degree.

DuBois (2002), in a meta-analytic review based on 55 evaluations of mentoring programs, demonstrated a general but modest positive effect on youth. Larger effects were associated with implementing "best practice" elements and strong mentor-mentee relationships. This work provides empirical support for the importance of relationship quality and program design.

The longitudinal BBBS study (Grossman & Rhodes, 2002), examining relationship duration

and outcomes, showed that relationships lasting  $\geq 12$  months produced significantly better outcomes for youth (academic and psychosocial). Short-term disruptions often correlated with reduced functionality. The study emphasizes the importance of continuity and duration as moderators of mentoring effects. Similarly, a Danish study (Raposa et al., 2022) indicated that children with mentors for  $\geq 1$  year reported substantially higher overall well-being according to parental assessments.

Mentoring relationship quality (MRQ) is the most consistent and strongest predictor of positive outcomes (psychosocial, academic, retention). MRQ also predicts the duration and impact of programs. Matching characteristics (deep-level similarity, cultural sensitivity—e.g., values, goals, professional interests) better predict relationship quality and success than superficial demographic similarities. Quantitative analyses show that MRQ depends on multiple factors: perceived similarity, contact frequency, program support, and mentee characteristics (e.g., baseline risk). Perceptions of deep-level similarity and organizational support predict higher MRQ.

Rhodes et al. (2006) found that mentor and mentee characteristics (mentor's confidence/efficacy, mental health, prior experience; mentee's previous needs, relational history) significantly influence outcomes, though effects are often moderate and conditioned by relationship quality. New longitudinal quasi-experimental studies in academic contexts show that deep-level similarity (attitudes, values, professional interests), rather than demographic similarity, best predicts mentoring quality and the amount of support provided (career/psychosocial). A quasi-experimental study confirms that perceived deep-level similarity increases mentoring support provision (Author & Author, 2024).

Closely related is the research by Thomas-McLean et al. (2019) on mentor and mentee characteristics: what makes a “good mentee/mentor.” Findings indicate that high-quality mentor–mentee relationships are characterized by reciprocity, mutual respect, clear expectations, and a personal connection. “Good mentee” characteristics include proactivity, willingness to learn, and communication skills, while “good mentor” characteristics include emotional availability, consistency, and the ability to provide career and psychosocial support.

In addition, prior findings highlight mentor training, program support, and organizational factors (clear structure, supervision, standards), which increase the likelihood of stable and effective relationships, i.e., they have predictive value for success (Pfund et al., 2016; Brown et al., 2021). Organizational practices (e.g., structured matching, supervision, support, clear policy on expectations) were also associated with longer-lasting matches, which in turn correlated with better mentee outcomes.

Mentoring research has often emphasized demographic matching (gender, race, etc.), but evidence suggests that shared values, attitudes, and beliefs (“deep-level similarity”) may be more important for mentee outcomes. In the study by Rhodes et al. (2006), titled *Will Chatbots Replace Mentors? Navigating Revolutionary Technology*, the author addresses new challenges in mentorship, analyzing situations related to “revolutionary technology” and innovations that fundamentally transform labor markets, alongside parallel impacts on education. Online learning platforms began to disrupt traditional classroom teaching, providing flexible, scalable alternatives reaching students previously excluded from formal education. Now, artificial intelligence (AI) emerges as a potential revolution for traditional mentoring programs.

AI is increasingly being used by young people as a source of support traditionally provided by caring adults, peers, and other mentors. Recent research shows that 73% of teenagers have used AI companions, with 28% specifically seeking emotional support. Adolescents perceive AI as uniquely advantageous, offering 24/7 availability, anonymity, and freedom from judgment.

Overall, the preceding research suggests that forms of the mentoring paradox often arise from conflicts between methodological approaches (quantitative vs. qualitative, experimental/procedural vs. ethnographic/contextual, etc.). Practitioners and policymakers need to understand why methodology can create paradoxes. Key forms of the mentoring paradox

and their origins include:

**Effect-size paradox:** strong practical evidence vs. weak quantitative effects. Many studies and anecdotal reports suggest that mentors have significant impacts (educational improvement, career outcomes, etc.), yet meta-analyses often show small-to-moderate effect sizes or large variation between studies. Findings from review and theoretical analyses introducing the term “mentoring paradox” suggest that much of the discrepancy arises from methodological approaches: different definitions of “mentoring effect,” heterogeneous outcomes, short follow-up periods, and poor control for selection effects (who participates in the program), producing varied results (see also: Ziegler et al., 2020; Schwartz et al., 2013; Yin, 2023; Stoeger, 2021; Rhodes, 2005; Eby et al., 2008; DuBois et al., 2002; Spencer, 2007).

**The Relationship vs. Program Fidelity Paradox** refers to the tension between the quality of a close mentor–mentee relationship and the formalization of mentoring programs. Research findings indicate that while close relationships are associated with positive outcomes, when a program becomes formalized (with a focus on protocols, meeting schedules, and structured activities), the intensity and informality—often producing the greatest effects—tend to decrease. From a methodological perspective, quantitative evaluation demands standardized interventions (fidelity), whereas qualitative studies emphasize the importance of contextual flexibility and emotional labor, producing contradictory recommendations for program design (Schwartz et al., 2013).

**The Culture and Methodological Approach Paradox** (individualistic vs. collectivistic frameworks) is supported by findings showing that concepts such as independence, initiative, and “career advice” correlate better with mentoring models developed in individualistic contexts. In collectivistic settings, the same approaches sometimes do not function effectively, and empirical results are mixed. Methodologically, this implies that standardized instruments developed in one cultural context may not be culturally valid elsewhere; quantitative instruments can miss subtle culturally expected norms that qualitative work can identify (Spencer, 2007).

**The Formal–Informal Paradox** (compensatory vs. complementary role of informal mentors) arises from analyses showing that informal mentors (e.g., family members, senior peers) can act both compensatorily (filling institutional gaps) and complementarily (working alongside formal programs). Empirical evidence shows both outcomes, often within the same population. Methodologically, differences in study design—longitudinal, qualitative narratives, or cross-sectional surveys—yield different conclusions about the role of informal mentors. Quantitative studies sometimes fail to capture the dynamics that make informal mentoring beneficial (Yin, 2023).

**The Premature Closure Paradox** is not uncommon. Relationship “quality” predicts both positive and negative outcomes. Findings indicate that close relationships generally confer benefits, but delayed or sudden termination can negatively impact the mentee—well-intentioned interventions may inadvertently work against their goals. High rates of premature termination are reported in many programs. Methodological explanations highlight that quantitative analyses assess prevalence, whereas qualitative studies explain subjective reasons and the process of termination—both are necessary to understand consequences. A large study (6,468 mentoring pairs) examined mentee and program factors predicting early closure. Key predictors included mentee age at the start, cumulative mentee risks (e.g., school problems, risky behavior, self-regulation difficulties, internal and external behavioral issues), and family factors. Some authors note that the lack of standardized indicators for closure further amplifies contradictory messages (Kupersmidt et al., 2017; DeWit et al., 2016), with approximately 34% of mentees experiencing premature termination. Risk factors included behavioral difficulties, challenges in establishing the match, and mentee gender (girls), whereas protective factors included perceived high-quality relationships, parental support, and more frequent mentor–mentee contact.

**The Norms and Bureaucracy Paradox** stems from the institutional need for measurement versus the complexity of mentoring practice. This paradox arises when institutions seek

easily measurable indicators of success and cost control, whereas mentoring is a complex, contextual, and emotional process that resists simple metrics. Such pressure to quantify can degrade the essential practice. Methodologically, evaluation frameworks (RCTs, quasi-experiments, KPIs) often fail to capture important qualitative dimensions (e.g., subjective development, social capital), leading to potentially misleading recommendations.

## 2. 2. Peer Mentoring

The literature also includes studies on peer mentoring, either independently or combined with traditional mentoring. The “Writers in Training” program (Mullen, 2003) involved 25 doctoral students in education at various stages of their program. Students met as a group with a mentor for 5 hours per week, receiving instruction and practicing academic writing. The mentor performed various functions, including modeling, exercises, and providing feedback and encouragement, while students learned strategies for critiquing each other’s writing. Fifteen students completed surveys and interviews to assess perceptions of acquired academic skills, dissertation writing progress, confidence in effective writing, and support and control over learning. Participants reported learning skills from both faculty mentors and peers to improve writing and analyze texts effectively (e.g., giving and receiving feedback). They also reported clear, achievable learning goals and that participation enhanced their motivation to write and complete their doctoral studies. Students were encouraged to practice skills outside sessions, such as analyzing literature, to facilitate knowledge transfer. These findings were confirmed by a longitudinal study of the group, which experienced membership changes due to enrollment and graduation (Mullen & Tuten, 2010). Mentoring behaviors from mentors and peers included explanations, modeled demonstrations, and instruction in academic writing skills. Mentoring processes and outcomes were measured using digital recordings and transcripts, survey items assessing learning, and textual artifacts (e.g., drafts and final versions). Mentees highlighted increased self-confidence, disciplinary knowledge improving writing skills, strengthened identity as scholar-practitioners, and better understanding of collaborative roles in research and learning. Perceived skill acquisition and motivation were corroborated by increased academic productivity (dissertation writing, presentations, publications), retention and graduation rates, and career advancement. Mullen & Tuten (2010) concluded that over time, students’ self-regulated learning progressed from external regulation to guided self-regulation and ultimately to increased autonomous self-regulation.

These studies also support critical reflections on constructivism as a didactic paradigm and the exploration of new teaching concepts, such as the allosteric model, emphasizing structure, content, and guidance (Gojkov, 2011; Palekčić, 2024). Parker et al. (2008) investigated the related concept of peer practice, a developmental activity involving interaction among peers to foster personal and professional growth. Participants ( $n = 209$ ) enrolled in MBA leadership and organizational behavior courses completed online surveys approximately six months after courses that included peer practice. Students engaged in various activities, including pairing after class to share reflections and support each other in assessing their effectiveness in exercises and tests. They also participated in portfolio peer activities, providing feedback on practices and job search strategies. Findings confirmed positive evaluations of peer practice, including support for personal and professional goals, strategic adaptation to change, increased confidence, and development of interpersonal skills. Approximately three-quarters reported satisfaction with peer practice. Satisfaction was positively associated with relational qualities in pairings, such as the ability to choose a peer partner and the degree to which emotional components were part of the experience. Students reported that peer practice contributed to professional development and motivated them to engage in similar activities in future courses. Several outcomes (goal setting, using effective strategies) indicated that students progressed in self-regulated learning.

Following this review, research confirms Krama’s (1985) findings that mentoring functions, operationalized as mentor behaviors (modeling, exercises, providing feedback), can lead to positive career outcomes (learning, goal setting, career development) and psychosocial out-

comes (motivation, satisfaction, identity, self-confidence, metacognition, self-regulation). The general research model used is presented in Table 1: Classical Research Model of Mentoring. Although previous mentoring studies provide some support for the hypothesis that mentoring contributes to career and psychosocial skill development in mentees, researchers approach this conclusion cautiously (Šunk & Malen, 2013) for several reasons. Mentoring studies largely rely on self-reports (surveys, interviews) collected after mentor–mentee interactions, providing correlational rather than causal explanations, as shown in Table 1. Despite not explicitly addressing self-regulated learning, mentor behaviors and mentee outcomes presented in Table 1 indicate that processes of self-regulated learning were incorporated in research. Additionally, the structure of mentor–mentee relationships, the goal of developing independent mentees, and the developmental dynamics of the mentoring relationship further confirm the relevance of self-regulation in this context.

Table 2. Classical Research Model of Mentoring

<b>Mentor Functions</b>	<b>Mentor Behaviors (Operationalization)</b>	<b>Mentee Outcomes (Impact)</b>
Career	Modeling	Learning
Psychosocial	Practice	Motivation (e.g., effort, persistence)
	Feedback	Self-confidence (self-efficacy)
	Advising	Emotions (e.g., comfort, satisfaction)
	Acceptance and Affirmation	Sense of Identity
	Listening	Careet Development

It is also noted as a limitation that there have been few attempts to explain how mentoring functions translate into specific mentor behaviors and how those behaviors affect mentees, which is highlighted as a significant gap, since observing mentor–mentee interactions in real relationships is particularly important. Furthermore, the role of potential mediating variables (e.g., cognitive and emotional processes of mentors and mentees during interactions) remains largely unexplored, so researchers (Šunk & Malen, 2013) point out that the conceptual leap from mentor behaviors to mentee outcomes bypasses potentially significant cognitive and emotional processes. Another limitation is that very few studies track the same subjects (mentees) over time to determine how mentor and mentee behaviors, thoughts, and emotions change as the mentoring relationship develops. Although mentor behaviors in previous studies may contribute to positive outcomes for mentees, further research is needed to determine exactly how this influence occurs; in other words, the didactic aspects of mentoring are still insufficiently explored (Šunk & Malen, 2013).

In a concluding review of research questions regarding mentoring theories—which are still considered disputed or not fully defined—Kevereski & Kevereski Saparoska (2025) and others (Fletcher & Mullen, 2012) note that prior research has revealed some common assumptions. One is that mentoring is a dynamic, developmental, and often informal process through which mentees’ outcomes and independence improve as relationships with mentors strengthen. A second common assumption is that mentoring relationships are not universal; instead, they are unique because goals, environments, and relationships are not fully known or predictable and tend to change over time (Fletcher & Mullen, 2012). Third, mentoring relationships are socialized learning partnerships focused on the interests and growth of the mentee (e.g., knowledge acquisition, professional networking, identity development), although mentors may also benefit (Allen & Eby, 2004).

Kevereski & Kevereski Saporoska (2025) also emphasize that theorists assume mentoring occurs in context and depends on psychosocial and/or career support, which can be formal or informal (Eby et al., 2008; Allen & Eby, 2007; Fletcher et al., 2012). When formalized, mentoring functions as a form of organizational learning, in which mentees' career aspirations and personal learning are structured into well-designed programs with achievable and desirable outcomes (Mullen & Tuten, 2010).

For this study, a key finding is highlighted: the effectiveness of the tested model, and the factors within it, was confirmed. However, it was also noted that there remains a limitation in drawing firm conclusions about environmental factors (including mentoring) that are significant for the realization of gifted potential, as fostering peak development involves a morphogenetic complex of factors. Distinct groups of characteristics are important for development; their composition and proper arrangement at a given moment are crucial and highly specific to each individual. In the web of environmental properties, there exists an equally complex set of external, situational factors, which, in a unique way, correspond to the uniqueness of the individual. Even though internal and external factors are distinct, external uniqueness (the arrangement of circumstances forming the environment, creating a particular formula for success in significant situations) and internal traits (physical and mental characteristics) mutually condition, trigger, provoke, and mark each other.

Thus, the authors conclude that all of the above supports a systemic model of mentoring, such as those of Kevereski & Kevereski-Saporoska (2025) and Zigler et al. (2000), as a direction for guiding research on didactic strategies for fostering giftedness, toward efficiency in supporting struggling students in regaining self-regulation and achieving excellence.

### **3. Discussion**

It is valuable to consider the didactic aspects of these research findings, which confirm the theoretical framework linking didactic strategies with academic success and the development of excellence. It is also noted that precise, multidimensional assessment of didactic procedures enables identification of key factors that either support or hinder academic development, representing an important contribution to both theory and higher education practice, and deepening the understanding of mentoring (Zigler et al., 2000; Kevereski & Kevereski-Saporoska, 2025). Furthermore, it is noted that didactic guidance is significant, but strategies should be well-directed so that instruction is not overly didactic; rather, work should be student-centered, with the teacher acting as a facilitator (Palekčić, 2006, 2024). This essentially transforms the pedagogical relationship—the mediation and appropriation of education and research—where dialogue is considered the primary mode of higher education instruction, which is regarded as an essential feature of mentoring gifted students.

The findings indicate that while the effectiveness of the tested model and its factors was confirmed, there remains room for concluding the impossibility of determining with certainty the environmental factors (including mentoring) crucial for realizing gifted potential, as fostering peak development involves a morphogenetic complex of factors. Specific groups of characteristics are significant for development; their composition and proper integration are critical at specific moments and highly individualized. In the interplay of environmental properties, there is an equally complex set of external, situational factors, which correspond uniquely to the individual. Although separate, external uniqueness (arrangement of circumstances forming the environment, creating a particular success formula in significant situations) and internal traits (physical and mental characteristics) mutually condition, trigger, provoke, and mark each other.

Consequently, the authors conclude that all of the above supports a systemic mentoring model, such as Kevereski & Kevereski-Saporoska (2025) and Ziegler (2019), guiding research on didactic strategies to foster giftedness toward efficiency in supporting struggling students to regain self-regulation and achieve excellence.

It is valuable to consider the didactic aspects of the research findings, which confirm the theoretical framework linking didactic strategies with academic success and the develop-

ment of excellence. Precise and multidimensional evaluation of didactic procedures allows for identifying key factors that either contribute to or hinder academic development, an important contribution to both theory and practice in higher education, and to a deeper understanding of mentoring (Ziegler, 2019; Kevereski & Kevereski-Saparoska, 2025). It is also emphasized that didactic guidance is important, but strategies should be well-directed so that teaching is not overly didactic; work should be student-centered, and the teacher should act as a facilitator (Palekčić, 2006, 2024). This essentially transforms the pedagogical relationship—the mediation and appropriation of education and research—where dialogue is considered the primary mode of higher education instruction, which is regarded as a core feature of mentoring.

The findings support the views of Palekčić (2006, 2024), who assigns special significance to instructional content, referring to Klafki's theory of categorical education (Klafki, 1985) and drawing on Herbart (1903), emphasizing the distinction between learning and studying, the importance of the complexity of instructional content and interests, and the significance of researching these factors during study, and arguably also in higher education mentoring. These findings leave considerable room for reflection in this direction.

As confirmation, new didactic impulses emerge, such as previously mentioned models (Allosteric and others; broader references: Giordani, 1995, 1999, 2000, 2012), where factor-based methodological approaches are tested for pedagogical implications in a modified didactic model, offering proposals that go beyond the constructivist model and learning environments.

In an exploratory study focusing on gifted students in an emancipatory learning culture, Stojanović & Gojkov (2023) investigated the extent to which gifted students act as partners in collaborative learning and research processes and how this reflects on learning outcomes expressed in critical thinking and research competencies. The study confirmed theoretical contexts, forming a discourse on the effectiveness of higher education didactics, which underpins contemporary models of mentoring, such as Cigler's (Ziegler, 2019; Ziegler et al., 2020, 2023) and Kevereski & Kevereski-Saparoska (2025). The main feature of these changes is a shift in learning culture toward student-centered instruction, focusing on students' perspectives in learning. Thus, instead of "learning input," emphasis should be placed on "learning output" (Kruso, 2011), reflecting a critical (Horkheimer, 1976) and emancipatory pedagogy and didactics (Schleiermacher, 1998).

Moreover, the findings highlight that the emancipatory approach, rooted in Humboldt's (1936) tradition and oriented toward mentoring competence, occupies a prominent role, as this approach views studying as a field for training and developing intellectual and methodological abilities. Gifted students highly value this approach, as they are seen as partners in the collaborative process of learning and research, which in previously mentioned mentoring models is considered the foundation of mentor–mentee communication.

In the study of the correspondence between students' teaching and affective styles as factors influencing the success of gifted students (Suzić et al., 2023), the importance of the affective style as well as elements of an emancipatory learning and teaching style was confirmed for the success of mentoring gifted students. This is particularly evident in its impact on the self-regulation of academically gifted individuals, including the interplay of cognition and emotion in learning and teaching self-regulation processes. This significance is also highlighted in the referenced mentoring models (Ziegler, 2019; Ziegler et al., 2020; Ziegler et al., 2023; Kevereski & Kevereski-Saparoska, 2025; Šunk & Malen, 2013) regarding mentor–mentee pairing.

Furthermore, this study validates certain theoretical frameworks, including Sternberg's theory of successful intelligence (1999, 2003, 2005), Bandura's social-cognitive perspective (Bandura, 1977, 1991, 1993), elements of Self-Determination Theory (Deci & Ryan, 2002), and the Salovey and Mayer model (Salovey & Mayer, 1990), which defines emotional intelligence (EI) as a fundamental ability concerning the interaction processes between emotions and cognition.

Significant findings also include the observation of a positive correlation between a balanced affective and flexible mentoring style and an open, inquiry-based teaching and e-learning style, alongside a weak negative association with classical teaching methods (lectures and direct instruction). Consequently, it can be concluded that these findings emphasize the importance of the mentor's teaching style as a factor in mentoring. In mentor–mentee pairing, careful attention should be paid to the mentor's teaching style, as it can be a crucial factor in both positive and negative directions in the communication and guidance of the mentee.<sup>4</sup>

#### 4. Conclusion

The analysis of the methodological holism problem and the mentoring paradox shows that the issue of fostering giftedness lies at the center of one of the longest-standing debates in the social and human sciences. While holism provides a broad framework in which mentoring is considered in the context of educational policies, cultural patterns, and institutional practices, individualism emphasizes the micro-dynamics of the mentor–mentee relationship and the internal processes of the gifted individual. Neither approach alone adequately captures the complexity of mentoring, as insisting on exclusivity leads to reductionism—either at the level of individual psychology or at the level of systemic structures. The mentoring paradox, as a tension between individual freedom and institutional constraints, clearly reveals the limits of both methodological directions.

Empirical findings confirm that mentoring simultaneously functions as a personalized relationship and a social institution, making it difficult to reduce it to a single explanation. This indicates the need for integrative methodological models that combine a holistic perspective with an idiosyncratic focus on relational and developmental aspects of gifted individuals. Such methodological pluralism could overcome the current stalemate and contribute to establishing a sustainable scientific status for mentoring in pedagogy.

Ultimately, the question remains whether the individualism–holism debate can ever be fully resolved or whether it is more productive to view it as a lasting framework in which new theoretical and methodological syntheses are shaped. In the field of gifted mentoring, this means that true innovation in research and practice can emerge only when, instead of exclusive adherence to one approach, a dialogue between different epistemological positions is embraced. This would enable a deeper understanding of the mentoring paradox and strengthen didactics in its role of guiding gifted individuals toward excellence.

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