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A functional classification of teaching methods for psychological–pedagogical disciplines in higher education

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ABSTRACT

Teaching methods in higher education have attracted sustained scholarly attention, yet classification frameworks tailored to psychological–pedagogical disciplines – those preparing professionals to understand human development, learning, and interpersonal dynamics – remain underdeveloped. This paper proposes a theoretically grounded classification designed specifically for these disciplines. Drawing on an integrated framework combining axiological, acmeological, systemic, and person-oriented approaches, the classification was developed through systematic analysis of pedagogical literature and conceptual synthesis. The resulting framework organizes teaching methods into four functional categories based on their primary role in the educational process: motivational methods that establish conditions for student engagement; organizational methods that structure learning activities and self-directed development; stimulation methods that sustain cognitive and professional growth throughout instruction; and monitoring methods that provide formative feedback on student progress. Each category comprises specific methods oriented toward students' holistic personal-professional development rather than narrowly cognitive outcomes. The classification advances instructional theory by offering a functional organization principle and holds practical value for faculty development, curriculum design, and teaching evaluation in higher education contexts internationally.

1. Introduction

1.1. Context and background

How instructors teach matters. This straightforward observation has generated a substantial body of research demonstrating that teaching methods significantly shape student learning in higher education (Biggs & Tang, 2011; Ramsden, 2003). The accumulated evidence is compelling: a landmark meta-analysis of 225 studies found that active learning approaches increase examination performance by approximately half a standard deviation and reduce failure rates by 55% compared to traditional lecturing (Freeman et al., 2014). Such findings have intensified scholarly and institutional interest in understanding, classifying, and improving teaching methods across disciplines and national contexts (Laurillard, 2012; Prince, 2004).

Within this broader landscape, psychological-pedagogical disciplines occupy a distinctive position. These fields – encompassing educational psychology, pedagogy, developmental psychology, and related areas – prepare professionals to understand human development, learning processes, and the interpersonal dynamics essential to educational and helping professions. Students in these disciplines must acquire not only theoretical knowledge but also practical competencies, professional values, and the capacity for ongoing self-development (Bransford et al., 2005; Shulman, 1987). The teaching methods employed in these disciplines should, accordingly, address this multidimensional developmental agenda. Yet despite their importance for preparing educators, psychologists, and related professionals, teaching methods for psychological–pedagogical disciplines have received limited systematic attention in the international literature, with most classification frameworks addressing general didactics rather than these specialized areas.

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1.2. Problem statement

Existing classifications of teaching methods, while valuable, present several limitations when applied to psychological–pedagogical disciplines. Classic taxonomies developed in the Soviet and post-Soviet pedagogical tradition organized methods primarily by the level of students' cognitive activity – distinguishing explanatory-illustrative, reproductive, problem-based, partially-search, and research methods (Lerner, 1981; Skatkin, 1982) – or by their role in different components of the instructional process (Babansky, 1988). These classifications advanced didactic theory considerably and remain influential in Eastern European educational contexts. However, they were designed for general education and do not specifically address the goals of holistic personal-professional development central to psychological-pedagogical preparation.

International frameworks offer alternative organizing principles. Joyce et al. (2014) categorize teaching approaches into information processing, social, personal, and behavioral system families. Marzano (2007) structures instructional strategies around lesson segments and pedagogical decision points. Hattie (2009) synthesizes evidence on high-impact teaching practices based on effect sizes. While these contributions provide valuable guidance, they too lack specificity for disciplines focused on human development, professional identity formation, and interpersonal competence. None adequately addresses how teaching methods might be organized according to their function in promoting students' comprehensive development as emerging professionals.

Contemporary challenges sharpen the need for renewed attention to this question. Digital transformation has expanded the repertoire of available methods while complicating selection decisions. Growing emphasis on student self-development and lifelong learning requires teaching approaches that cultivate autonomous learning capacities. Preparation for uncertain professional futures demands methods that develop adaptability alongside specific competencies. Four contemporary pressures in particular shape the demands now placed on instruction in psychological-pedagogical disciplines: the rising diversity of student bodies in life experience, sociocultural background, and prior learning trajectory (Gay, 2018; Ha et al., 2025); the imprevisibility of professional futures and the corresponding need for adaptive, future-ready competencies (Organisation for Economic Co-operation and Development, 2019; World Economic Forum, 2023); the rapid integration of hybrid and AI-enabled delivery contexts, including generative-AI tutoring assistants (Marienko et al., 2026; Zahorodko & Semerikov, 2026); and the renewed call for critical-reflective thinking that is simultaneously emancipatory and oriented toward social justice and sustainability (Alharbi, 2026; Freire, 2005; Sudirman et al., 2024). We return to each of these in Section 6 after presenting the classification. A classification specifically designed for psychological-pedagogical disciplines, grounded in contemporary theoretical approaches and organized by functional contribution to student development, could guide both practice and research in addressing these challenges.

1.3. Purpose and research questions

This paper aims to develop and present a theoretically grounded classification of methods for improving the teaching of psychological-pedagogical disciplines in higher education institutions. The classification draws on an integrated methodological framework combining axiological, acmeological, systemic, synergetic, and person-oriented approaches to address the holistic development of future professionals.

The study addresses three research questions:

RQ1: What theoretical foundations should guide the classification of teaching methods for psychological-pedagogical disciplines in higher education?

RQ2: What functional categories best organize methods for improving psychological-pedagogical teaching?

RQ3: What specific methods comprise each functional category, and how do they contribute to students' holistic personal-professional development?

1.4. Significance of the study

This study contributes to educational research and practice along several dimensions. Theoretically, it advances classification scholarship by proposing a functional organization of teaching methods specific to psychological-pedagogical disciplines. Rather than organizing methods by information source, cognitive demand, or instructional phase, the proposed classification groups methods according to their primary function in the educational process: motivating engagement, organizing learning activities, stimulating continued growth, or monitoring progress. This functional principle offers a fresh perspective on method selection and combination. The study also integrates multiple theoretical approaches – axiological, acmeological, systemic, and person-oriented – that have typically been applied separately, demonstrating their complementary contributions to understanding effective teaching.

The reconceptualized definition of teaching method advanced here extends beyond traditional cognitive-focused formulations. Defining a teaching method as a way of psychological–pedagogical management of personal-professional development positions methods as tools for comprehensive student formation, not merely knowledge transmission. This conceptualization aligns with contemporary understanding of professional education as developing the whole person (Bransford et al., 2005; Korthagen, 2010).

Practically, the classification provides a framework for faculty development programs, curriculum design, and teaching evaluation in psychological-pedagogical education. It offers guidance for instructors seeking to select and combine methods that address multiple dimensions of student development. For institutions, it suggests a systematic approach to reviewing and enhancing pedagogical preparation programs.

Internationally, the study bridges Eastern European pedagogical traditions – particularly Ukrainian and post-Soviet didactic scholarship – with global research on teaching and learning in higher education. This cross-cultural synthesis enriches the diversity of perspectives available to the international educational research community while making a tradition of pedagogical thought more accessible to English-language readers.

The remainder of the paper is organized as follows. Section 2 presents the theoretical framework guiding classification development, explicating the integrated methodological approach and defining key constructs. Section 3 reviews relevant literature on teaching methods, existing classification systems, and psychological-pedagogical education. Section 4 describes the methodology employed for developing the classification. Section 5 presents the classification framework itself, detailing each of the four functional categories and their component methods. Section 6 discusses theoretical contributions, comparisons with existing classifications, the cultural contingency of operationalization, the framework's response to contemporary challenges, and implications for practice and research. Section 7 acknowledges limitations and suggests future research directions. Section 8 offers concluding remarks.

2. Theoretical framework

The classification developed in this study rests on an integrated theoretical foundation drawing from multiple methodological approaches. This section explicates these conceptual underpinnings, defines key constructs, and articulates the guiding principles that shaped classification development.

2.1. Conceptual foundations

Developing a classification of teaching methods for psychological–pedagogical disciplines requires theoretical resources adequate to the complexity of professional education. No single framework sufficiently addresses the multiple dimensions involved: the value-laden nature of educational content, the developmental trajectory toward professional excellence, the systemic character of educational processes, and the centrality of student agency. Accordingly, this study integrates several complementary approaches, each contributing a distinct analytical lens.

The *axiological approach* foregrounds the values embedded in psychological–pedagogical content and the value-forming function of education (Raths et al., 1966). Teaching methods, from this perspective, are not merely techniques for information transfer but instruments for cultivating professional values, ethical orientations, and meaningful engagement with disciplinary knowledge. This resonates with international scholarship emphasizing education's role in developing not just competence but character (Walker, 2006).

The *acmeological approach* – developed primarily in post-Soviet scholarship – focuses on the trajectory toward professional excellence and peak performance (Derkach & Zazykin, 2004). This perspective directs attention to how teaching methods support progressive mastery and the formation of professional identity. International parallels appear in research on expertise development and professional formation (Dall'Alba, 2009; Ericsson et al., 2006).

The *systemic approach* treats educational processes as integrated wholes rather than collections of discrete elements. Applied to teaching methods, this perspective emphasizes coherence among instructional components and alignment between methods and educational goals. Biggs's constructive alignment framework exemplifies this systemic thinking in Western scholarship, insisting that intended learning outcomes, teaching activities, and assessment tasks form an integrated system (Biggs, 1996; Biggs & Tang, 2011).

The *person-oriented approach* places student development at the center of educational design. This aligns closely with the student-centered learning paradigm that has gained prominence internationally (Barr & Tagg, 1995; Weimer, 2013). Both traditions shift focus from what instructors do to what students experience and how they develop.

The *activity-based approach*, rooted in Vygotskian cultural-historical psychology, emphasizes learning through purposeful action and social interaction (Leont'ev, 1978; Vygotsky, 1978). This perspective connects to experiential learning theory (Kolb, 2014) and active learning research (Bonwell & Eison, 1991; Freeman et al., 2014) in international scholarship.

Finally, the *synergetic approach* attends to self-organization processes in complex systems, recognizing that student development involves emergent properties that cannot be directly transmitted but must be supported and facilitated. This resonates with transformative learning theory's attention to perspective transformation as an emergent outcome of educational experience (Mezirow, 1991).

Integrating these approaches enables a multidimensional analysis of teaching methods that attends simultaneously to values, development, system coherence, student agency, meaningful activity, and emergent growth.

2.2. Key constructs defined

Several constructs require explicit definition to establish shared understanding.

Teaching method is reconceptualized here as a way of psychological-pedagogical management of students' personal-professional development within a designed system of interaction between their self-directed learning activity and the instructor's axiologically and acmeologically informed pedagogical activity. This definition extends beyond traditional formulations that emphasize knowledge transmission or cognitive activation (Joyce et al., 2014). It positions teaching methods as instruments for comprehensive development, encompassing cognitive, affective, and practical dimensions oriented toward professional formation.

Psychological-pedagogical disciplines refers to academic fields concerned with the scientific foundations of psychology and pedagogy as applied to professional practice. These include educational psychology, general pedagogy, developmental psychology, pedagogical methodology, and related courses that prepare students for educational, helping, and human development professions. The term captures both the content (psychological and pedagogical knowledge) and the applied orientation (preparation for professional practice) characteristic of these fields.

Holistic personal-professional development denotes comprehensive growth encompassing knowledge acquisition, skill formation, value internalization, professional identity development, and capacity for self-directed continued learning. This construct resists reduction to any single dimension, insisting that effective professional preparation addresses the whole person (Bransford et al., 2005; Korthagen, 2010).

Functional classification organizes teaching methods according to their primary function or role in the educational process, rather than by surface features (e.g., information source), cognitive demands, or instructional phase. This organizing principle asks: What does this method primarily contribute to student development?

Self-activity refers to students' self-initiated, self-directed engagement in learning and development. More than mere participation, self-activity implies ownership, initiative, and autonomous regulation of one's learning processes. The concept connects to self-determination theory's emphasis on autonomy as fundamental to intrinsic motivation and deep learning (Ryan & Deci, 2017).

2.3. Guiding principles

Three principles guided the classification's construction.

The *principle of goal-orientation toward developmental outcomes* stipulates that methods should be classified according to their contribution to specified developmental goals rather than their procedural characteristics. This principle reflects the backward design logic prominent in curriculum scholarship (Wiggins & McTighe, 2005): clarity about desired outcomes should guide all instructional decisions, including method selection.

The *principle of functional differentiation* recognizes that different methods serve different primary functions in the educational process. Some methods primarily establish motivational conditions; others organize learning activities; still others sustain engagement over time or provide feedback on progress. While any given method may serve multiple functions, identifying primary function enables systematic organization and purposeful selection.

The *principle of systemic integration* holds that the classification should represent methods not as isolated techniques but as components of an integrated instructional system. The four functional categories – motivational, organizational, stimulation, and monitoring – correspond to essential functions that any effective instructional system must fulfill. Effective teaching combines methods from multiple categories in coherent, mutually reinforcing configurations.

These principles together establish that teaching methods for psychological-pedagogical disciplines should be understood, organized, and selected based on their functional contribution to students' holistic development within systematically designed educational experiences.

3. Literature review

This section reviews scholarship relevant to classifying teaching methods for psychological-pedagogical disciplines. It examines international perspectives on teaching methods in higher education, surveys existing classification systems, considers the specific context of psychological-pedagogical education, and identifies gaps that the present study addresses.

3.1. Teaching methods in higher education: international perspectives

Research on teaching methods in higher education has matured considerably over recent decades, moving from practitioner wisdom and theoretical speculation toward evidence-based understanding. Several landmark contributions have shaped the field.

Ramsden (2003) distinguished between teaching as telling, teaching as organizing student activity, and teaching as making learning possible – a progression reflecting increasingly sophisticated understanding of instructional quality. This framework positioned teaching methods not as ends in themselves but as means for facilitating student learning, a perspective that has become foundational. Biggs and Tang (2011) extended this thinking through constructive alignment, arguing that effective teaching requires coherence among intended learning outcomes, teaching and learning activities, and assessment tasks. Methods, in this view, should be selected based on their capacity to engage students in activities likely to produce desired learning outcomes.

Laurillard (2012) offered a conversational framework identifying six learning types – acquisition, inquiry, discussion, practice, collaboration, and production – each requiring different pedagogical approaches. This typology provides one basis for understanding which methods support which kinds of learning. Entwistle's research on approaches to learning further illuminated how teaching methods influence whether students adopt deep or surface approaches to their studies (Entwistle, 2009).

The evidence base for teaching method effectiveness has grown substantially. Freeman et al. (2014) conducted a meta-analysis of 225 studies comparing active learning with traditional lecturing in science, engineering, and mathematics courses. Active learning increased examination scores by 0.47 standard deviations and reduced failure rates by 55%. Prince (2004) reviewed engineering education research reaching similar conclusions about active learning's benefits. Hattie (2009) synthesized over 800 meta-analyses, identifying high-impact teaching strategies including feedback, metacognitive strategies, and direct instruction when appropriately implemented.

Active learning has emerged as an umbrella concept encompassing numerous specific methods. Problem-based learning engages students in solving complex, ill-structured problems that drive knowledge acquisition (Hmelo-Silver, 2004; Savery, 2006). Project-based learning extends engagement over time through sustained inquiry and production (Krajcik & Blumenfeld, 2006). Collaborative learning structures peer interaction to achieve shared learning goals (Johnson et al., 2014). The flipped classroom inverts traditional sequencing, moving information transmission outside class to reserve face-to-face time for application and discussion (Bishop & Verleger, 2013). Case-based teaching employs realistic scenarios to develop analytical and decision-making capabilities (Herreid, 2007). Each approach has accumulated evidence of effectiveness in appropriate contexts, though implementation quality significantly moderates outcomes.

Technology-enhanced methods have expanded the pedagogical repertoire. Blended learning combines online and face-to-face elements (Garrison & Vaughan, 2008). Simulation and virtual environments enable experiential learning in controlled settings (Chernikova et al., 2020). Learning analytics offer new possibilities for monitoring and personalizing instruction (Long & Siemens, 2011). More recent syntheses have begun to map the post-2020 landscape: Skau et al. (2026) document a 2005–2023 turn toward qualitative and reflective methodologies in teacher-education research; Chumpitaz Campos and Lomba-Portela (2024) review the systematic teaching of research competences through technology-mediated approaches; and Salendab et al. (2025) catalogue innovative pedagogies for holistic student development across higher-education contexts. These developments create both opportunities and challenges for method selection and classification.

3.2. Classification systems for teaching methods

Scholars have proposed various systems for organizing the diversity of teaching methods, differing in their organizing principles and analytical purposes.

In the Soviet and post-Soviet pedagogical tradition, classification efforts were particularly systematic. Lerner (1981) and Skatkin (1982) developed an influential typology based on the level of students' cognitive activity, distinguishing five method types: explanatory-illustrative (presenting ready-made knowledge), reproductive (practicing given procedures), problem presentation (modeling problem-solving processes), partially-search or heuristic (guiding student discovery), and research (independent investigation). This classification advanced didactic theory by linking method selection to cognitive engagement goals and remains influential in Eastern European educational contexts.

Babansky (1988) proposed an alternative organization based on methods' roles in different components of the instructional process. His classification distinguished methods of organizing and implementing educational-cognitive activity, methods of stimulating and motivating learning, and methods of control and self-control. This functional perspective – grouping methods by what they accomplish in the teaching-learning process – represents an important conceptual move that informs the present study, though Babansky's specific categories require updating for contemporary contexts.

International classification efforts have taken different approaches. Joyce et al. (2014) organized teaching methods into four families based on their theoretical orientations: information processing models (emphasizing cognitive development), social models (leveraging group dynamics), personal models (focusing on individual development), and behavioral systems (applying reinforcement principles). This theoretically grounded organization helps practitioners understand the assumptions underlying different approaches.

Marzano (2007) structured instructional strategies around the practical demands of teaching, distinguishing routine events that establish classroom conditions, strategies for introducing and developing content, and methods enacted on the spot in response to student needs. This pragmatic organization serves planning and reflection purposes. Anderson et al. (2001) revised Bloom's taxonomy of educational objectives, providing a two-dimensional framework (knowledge types by cognitive processes) that can guide method selection by clarifying what kinds of learning are sought.

These classification systems make valuable contributions but share certain limitations when applied to psychological-pedagogical disciplines. Most were designed for general educational contexts rather than professional preparation programs. They typically emphasize cognitive outcomes, giving less systematic attention to affective development, professional identity formation, and capacity for self-directed growth. None organizes methods specifically according to their function in promoting holistic personal-professional development.

3.3. Psychological-pedagogical education: state of the field

Preparing professionals for educational and human development fields presents distinctive pedagogical challenges. Students must acquire theoretical knowledge, develop practical competencies, internalize professional values, and form professional identities – simultaneously and integratively (Bransford et al., 2005).

Research on teacher education has illuminated these challenges. Cochran-Smith and Zeichner (2005) comprehensive handbook documented the complexity of teacher preparation, noting persistent debates about the relative emphasis on disciplinary knowledge, pedagogical skill, and field experience. Shulman (1987) influential concept of pedagogical content knowledge highlighted how effective teachers transform subject matter understanding into teachable representations – a capability requiring integration of multiple knowledge types that must be developed through appropriate pedagogical methods.

Korthagen (2010) advocated for realistic teacher education that connects theoretical learning with practical experience through systematic reflection. His work emphasized that professional competence emerges through cycles of action and reflection, not through knowledge transmission alone. Grossman et al. (2009) analyzed teaching practice across professions, identifying common challenges in helping novices develop practical judgment and situational responsiveness.

Professional identity formation has received growing attention. Beijaard et al. (2004) reviewed research on teacher professional identity, finding that identity develops through ongoing interpretation of experience and is shaped by contexts, relationships, and available cultural resources. Teaching methods that engage students in examining their developing professional selves – through reflection, dialogue, and authentic practice – support identity formation in ways that purely cognitive approaches cannot.

The preparation of psychologists and counselors involves parallel considerations. Students must develop not only knowledge of psychological theories and research but also therapeutic competencies, ethical sensitivity, and personal qualities conducive to helping relationships (Kaslow, 2004). Experiential methods, supervision, and reflective practice figure prominently in psychology education for these reasons.

Across psychological-pedagogical fields, effective preparation requires teaching methods addressing multiple developmental dimensions simultaneously. Yet literature specifically addressing how methods should be classified and selected for these disciplines remains limited. Recent post-2020 contributions have begun to fill in adjacent terrain. Systematic reviews of reflective writing in higher education (Sudirman et al., 2024) and longitudinal studies of reflective-journal practice and lifelong-learning skills (Alt et al., 2022) document how method-level interventions cultivate professional self-awareness. Frameworks for culturally inclusive learning (Ha et al., 2025) press educators to integrate social and emotional dimensions of diversity into mainstream pedagogy. Holistic taxonomies such as AlAfnan's (2025) integration of cognitive, affective, and psychomotor domains echo the present study's commitment to whole-person professional formation. Each of these strands enriches but does not replace the systemic classification task this paper undertakes.

3.4. Gaps in current knowledge

The foregoing review reveals several gaps that motivate the present study.

First, existing classification systems were developed primarily for general educational contexts rather than psychological-pedagogical disciplines specifically. The distinctive goals of professional preparation in these fields – including not only knowledge and skill development but also value internalization, identity formation, and cultivation of self-directed learning capacities – are not adequately addressed by available frameworks.

Second, most classifications organize methods by surface features (information source, grouping arrangement), cognitive demands, or instructional phase, rather than by their function in promoting comprehensive student development. A functional classification asking what different methods primarily contribute to the educational process could better guide purposeful method selection.

Third, the rich tradition of didactic scholarship in Eastern European contexts, including systematic classification work by scholars such as Lerner, Skatkin, and Babansky, remains largely unknown to international audiences. Integrating insights from this tradition with contemporary international scholarship could enrich understanding while making valuable perspectives more widely accessible.

Fourth, contemporary challenges – including digital transformation, emphasis on self-development and lifelong learning, and preparation for uncertain professional futures – require teaching method frameworks that address emerging demands. Classifications developed in earlier eras, while foundational, require updating and extension. The post-2020 surge in generative-AI and hybrid-pedagogy scholarship (Belkina et al., 2025; Chiu, 2024; Qian, 2025; Semerikov, Vakaliuk, Mintii, Bondarenko, & Kanevska, 2026; Wang et al., 2025) has further widened this gap: classification frameworks have not yet caught up with the methodological and instructional questions raised by AI-mediated learning environments, which existing taxonomies treat at best peripherally.

The present study addresses these gaps by developing a theoretically grounded, functionally organized classification of teaching methods designed specifically for psychological-pedagogical disciplines in higher education, integrating Eastern European and international scholarship.

4. Methodology

This section describes the research approach employed to develop the classification of teaching methods for psychological-pedagogical disciplines. Given the theoretical nature of the study, particular attention is paid to explicating the analytical processes and validation criteria used.

4.1. Research design

This study employed a theoretical-analytical research design appropriate for developing conceptual frameworks and classification systems (Jabareen, 2009). Unlike empirical studies that collect and analyze data from participants or settings, theoretical research synthesizes existing knowledge, identifies patterns and relationships, and proposes new conceptual structures that organize understanding (Torraco, 2005). Such work is essential for advancing fields where accumulated knowledge requires integration and where practitioners need organizing frameworks to guide decision-making.

The research process combined systematic analysis of pedagogical literature, conceptual synthesis, and logical-deductive reasoning. This approach aligns with established methods for theory development and conceptual framework construction in education and social sciences (Leshem & Trafford, 2007; Whetten, 1989). The goal was not to test hypotheses about teaching method effectiveness but to propose a coherent organizational scheme that could inform both practice and future research.

4.2. Analytical framework

The classification development was guided by the integrated theoretical framework presented in Section 2, combining axiological, acmeological, systemic, synergetic, person-oriented, and activity-based approaches. This integration provided multiple analytical lenses through which to examine teaching methods and their contributions to student development.

Each approach contributed distinct analytical questions. The axiological lens asked: What values does this method help cultivate? The acmeological perspective inquired: How does this method support progression toward professional excellence? The systemic approach considered: How does this method relate to other instructional components? The person-oriented lens focused on: How does this method engage students as developing persons? The activity-based approach examined: What meaningful activities does this method enable?

Applying these questions across the range of identified teaching methods enabled analysis of each method's primary function and contribution to holistic student development. Methods were then grouped according to their predominant functional contribution, yielding the four-category classification structure.

4.3. Classification development process

The classification emerged through a multi-stage analytical process conducted over an extended period of scholarly work.

Stage 1: **Literature analysis.** The first stage involved an *integrative literature review* of pedagogical scholarship on teaching methods in higher education, conducted in the tradition of Torraco (2005) and Whittemore and Knafl (2005) and informed by the broader systematic-review methodology articulated by Tranfield et al. (2003) and Petticrew and Roberts (2006). An integrative review was preferred over an aggregative meta-analysis because the goal was conceptual synthesis across heterogeneous source types – theoretical, empirical, and historical – rather than the pooling of comparable effect sizes. The search drew on Scopus, Web of Science, ERIC, and Google Scholar for English-language sources, complemented by the V. Sukhomlynskyi State Scientific and Educational Library of Ukraine catalogue for Ukrainian- and Russian-language pedagogical scholarship. Search-term combinations were of the form (*teaching methods* OR *classification* OR *taxonomy*) AND (*higher education* OR *teacher education* OR *psychological-pedagogical*) AND (*motivation* OR *organization* OR *stimulation* OR *assessment* OR *feedback*). Foundational didactic works from 1960–1990 were retained as theoretical anchors, while the contemporary scan covered 2000–2025 with deliberate emphasis on 2020–2025 post-pandemic and hybrid-learning scholarship. Inclusion criteria were: (i) peer-reviewed source or recognized scholarly book; (ii) explicit engagement with teaching-method classification, function, or evidence base in higher-education contexts; (iii) English, Ukrainian, or Russian language; and (iv) substantive theoretical or empirical argument about method effectiveness or function. Exclusion criteria were: (i) K-12 or pre-school focus without higher-education extrapolation; (ii) discipline-specific technical training without psychological–pedagogical relevance; and (iii) editorial or commentary pieces without empirical or systematic argument. Sources included foundational Soviet and post-Soviet scholarship on didactics and teaching methods (Babansky, 1988; Lerner, 1981; Skatkin, 1982), contemporary Ukrainian pedagogical literature, and international research on teaching and learning in higher education, including recent syntheses on the evolution of teaching-methods research (Skau et al., 2026), technology-mediated competence training (Chumpitaz Campos & Lomba-Portela, 2024), holistic-development frameworks (AlAfnan, 2025; Salendab et al., 2025), and reflective-practice methods (Alt et al., 2022; Sudirman et al., 2024). Analysis focused on existing classifications, their organizing principles, the specific methods identified, and their limitations when applied to psychological–pedagogical disciplines.

Stage 2: **Conceptual framework development.** Building on literature analysis, the second stage developed the integrated theoretical framework described in Section 2. This involved identifying complementary approaches, analyzing their respective contributions, and articulating principles for their integration. The reconceptualized definition of teaching method as psychological-pedagogical management of personal-professional development emerged from this stage.

Stage 3: **Functional category identification.** The third stage analyzed teaching methods through the lens of their primary functions in the educational process. Drawing on Babansky's functional perspective while extending it to address holistic development goals, four functional categories emerged as capturing essential and distinct contributions: motivation (establishing conditions for engagement), organization (structuring learning activities), stimulation (sustaining growth throughout instruction), and monitoring (providing feedback on progress). These categories were refined through iterative analysis ensuring mutual exclusivity of primary functions and collective exhaustiveness of essential instructional functions.

Stage 4: **Method identification and assignment.** The fourth stage identified specific methods through continued literature analysis, examination of pedagogical practice, and logical reasoning about what methods would fulfill each functional category. Methods were assigned to categories based on their primary function, recognizing that many methods serve secondary functions as well. Where assignment was ambiguous, methods were placed according to their most characteristic contribution while noting potential secondary functions.

Stage 5: **Refinement and integration.** The final stage reviewed the classification for coherence, comprehensiveness, and practical applicability. Relationships among categories were examined to ensure systemic integration. The classification was also reviewed for alignment with the theoretical framework's principles and for potential utility in faculty development and curriculum design contexts.

4.4. Validation approach

Given the theoretical nature of this study, validation relied on conceptual criteria rather than empirical testing (Whetten, 1989). The classification was evaluated against the following standards:

- *Comprehensiveness*: Does the classification address the full range of essential instructional functions? The four categories were assessed for whether they collectively capture what effective instruction must accomplish.
- *Coherence*: Are categories logically organized according to a consistent principle? The functional organization principle was applied consistently across all categories.
- *Distinctiveness*: Are category boundaries sufficiently clear? Each category was defined by a primary function distinguishable from other categories' functions.
- *Practical utility*: Does the classification provide actionable guidance? The framework was assessed for its potential to inform method selection and instructional design decisions.
- *Theoretical grounding*: Is each category supported by pedagogical theory? Connections to established theoretical frameworks were documented for each category.

In addition to these conceptual criteria, the classification was subjected to an expert face-validity review. A panel of seven faculty colleagues was assembled from the Ivan Ziaziun Institute of Pedagogical Education and Adult Education of the National Academy of Educational Sciences of Ukraine and from the Department of Pedagogy at Kryvyi Rih State Pedagogical University. All panelists held doctoral degrees in pedagogy or psychology and had at least ten years of higher-education teaching experience in psychological–pedagogical disciplines. Each panelist received the draft definition of *teaching method*, the four-category framework with its theoretical anchors, and the four method tables, and was asked to assess (a) conceptual clarity, (b) mutual exclusivity of the primary functions assigned to each category, (c) practical recognizability of the listed methods, and (d) completeness of each category relative to the reviewer's own teaching repertoire.

Two consensus suggestions led to refinements that the authors adopted. *First*, the working definition of *teaching method* originally referenced the instructor's "educational, developmental, and other goals" without specifying their temporal horizon. The panel recommended adding an explicit time-perspective dimension; the final definition in Section 2 therefore distinguishes long-term, medium-term, and short-term developmental goals (single session, instructional cycle, semester, or program arc), which has the further benefit of binding method selection more tightly to course-level and program-level planning. *Second*, panelists noted that the original draft under-emphasized the methods' connection to the holistic educational process – specifically, the diversity of organizational forms (lecture, seminar, webinar, individual

supervision) and the wartime conditions under which Ukrainian higher-education institutions currently operate, which place a premium on methods that travel across modalities. The exposition of the organizational and stimulation categories in Sections 5.3–5.4 was strengthened on this basis, and the integrative discussion in Section 5.6 was added to make the systemic linkage explicit.

One panelist proposed a third refinement – distinguishing terminologically between *method* and *technique* (Ukr. *pryiom*) within the defining text itself – that the authors respectfully declined. The same procedure can function as a stand-alone method in one classroom situation and as a technique embedded in a larger method in another; the boundary is therefore best located in the instructor's situated judgment rather than in the typology's definitional language. We note the suggestion here for transparency.

Face validation of this kind is expert-consensus-based rather than empirical, in line with established practice for conceptual-framework development (Jabareen, 2009; Whetten, 1989). It does not substitute for the implementation studies and classroom-level evidence needed to establish predictive or construct validity; those remain a future-research priority (Section 7).

4.5. Methodological considerations

Several methodological considerations warrant acknowledgment. First, as a theoretical study, the classification represents a conceptual contribution requiring empirical validation. Future research should test the classification's utility in practice and its relationship to instructional outcomes.

Second, the classification was developed primarily within the Ukrainian pedagogical tradition, drawing on both Ukrainian scholarship and international literature. While efforts were made to incorporate diverse perspectives, the framework may reflect cultural assumptions about educational purposes and processes that merit examination in other contexts.

Third, the assignment of specific methods to functional categories involved interpretive judgment. Some methods serve multiple functions, and reasonable scholars might classify certain methods differently. The assignments presented reflect considered analysis of primary function, but alternative categorizations could be defensible.

Fourth, the scope focused specifically on psychological-pedagogical disciplines. While many methods and principles may apply more broadly, generalizability to other disciplinary contexts has not been established.

These considerations do not invalidate the classification but rather specify the conditions under which it was developed and the directions in which it requires extension and testing.

5. Findings: the classification framework

This section presents the classification of teaching methods for psychological-pedagogical disciplines developed through the analytical process described above. The presentation begins with an overview of the framework's structure, followed by detailed examination of each functional category.

5.1. Overview of the classification

The proposed classification organizes teaching methods into four functional categories based on their primary contribution to the educational process: motivational methods, organizational methods, stimulation methods, and monitoring methods. Fig. 1 illustrates this framework.

The functional organization principle distinguishes this classification from alternatives that group methods by information source, cognitive demand, or instructional phase. Rather than asking how a method delivers content or what cognitive level it targets, the functional approach asks: What does this method primarily accomplish in the teaching-learning process? This question directs attention to the distinct contributions different methods make to students' comprehensive development.

The four categories correspond to essential functions that effective instruction must fulfill. *Motivational methods* address the fundamental challenge of engaging students with psychological–pedagogical content – establishing relevance, arousing interest, and creating conditions conducive to meaningful learning. Without adequate motivation, even well-designed learning activities fail to produce their intended effects.

Organizational methods structure how learning actually proceeds. These methods shape the activities through which students interact with content, develop competencies, and progress toward learning goals. They encompass both instructor-directed and student-directed learning arrangements, including various forms of active, collaborative, and experiential learning.

Stimulation methods sustain engagement and promote continued growth throughout the instructional process. While motivational methods establish initial conditions for learning, stimulation methods maintain momentum, deepen commitment, and encourage students to extend their efforts. These methods address the challenge of sustaining development over time rather than merely initiating it.

Monitoring methods provide information about student progress, enabling both instructors and students to assess learning, identify areas requiring attention, and adjust subsequent activities accordingly. Effective monitoring serves formative purposes, guiding continued development rather than merely certifying outcomes.

These categories are not isolated compartments but interconnected components of an integrated instructional system. Effective teaching typically combines methods from multiple categories in configurations suited to particular goals and contexts. Motivational methods create conditions that organizational methods can leverage; stimulation methods sustain what motivation initiates; monitoring methods inform adjustments across all other categories. The dashed arrows in Fig. 1 represent these synergistic relationships.

The central position of holistic personal-professional development in the figure reflects the classification's fundamental orientation. All methods, regardless of category, should ultimately serve the comprehensive development of students as emerging professionals – developing not only knowledge and skills but also values, identity, and capacity for continued self-directed growth. This developmental orientation distinguishes the classification from frameworks focused narrowly on cognitive outcomes or procedural skill acquisition.

The following subsections examine each category in detail, identifying specific methods, their theoretical bases, and their contributions to student development.

5.2. Motivational methods

Motivational methods establish the conditions for student engagement with psychological-pedagogical content. They address a fundamental pedagogical challenge: students cannot learn what they do not engage with, and engagement depends substantially on motivation (Ryan & Deci, 2017; Schunk et al., 2012). These methods work at the interface between students' existing interests, values, and goals and the learning opportunities that instruction provides.

Theoretically, the motivational methods category draws on several complementary traditions. Self-determination theory emphasizes that intrinsic motivation flourishes when learning environments support students' basic psychological needs for autonomy, competence, and relatedness (Ryan & Deci, 2017). Methods that offer meaningful choices, provide optimal challenge, and foster connection to peers and instructors support these needs. Expectancy-value theory highlights that motivation depends on students' beliefs about their likelihood of success and the value they attach to learning outcomes (Wigfield &

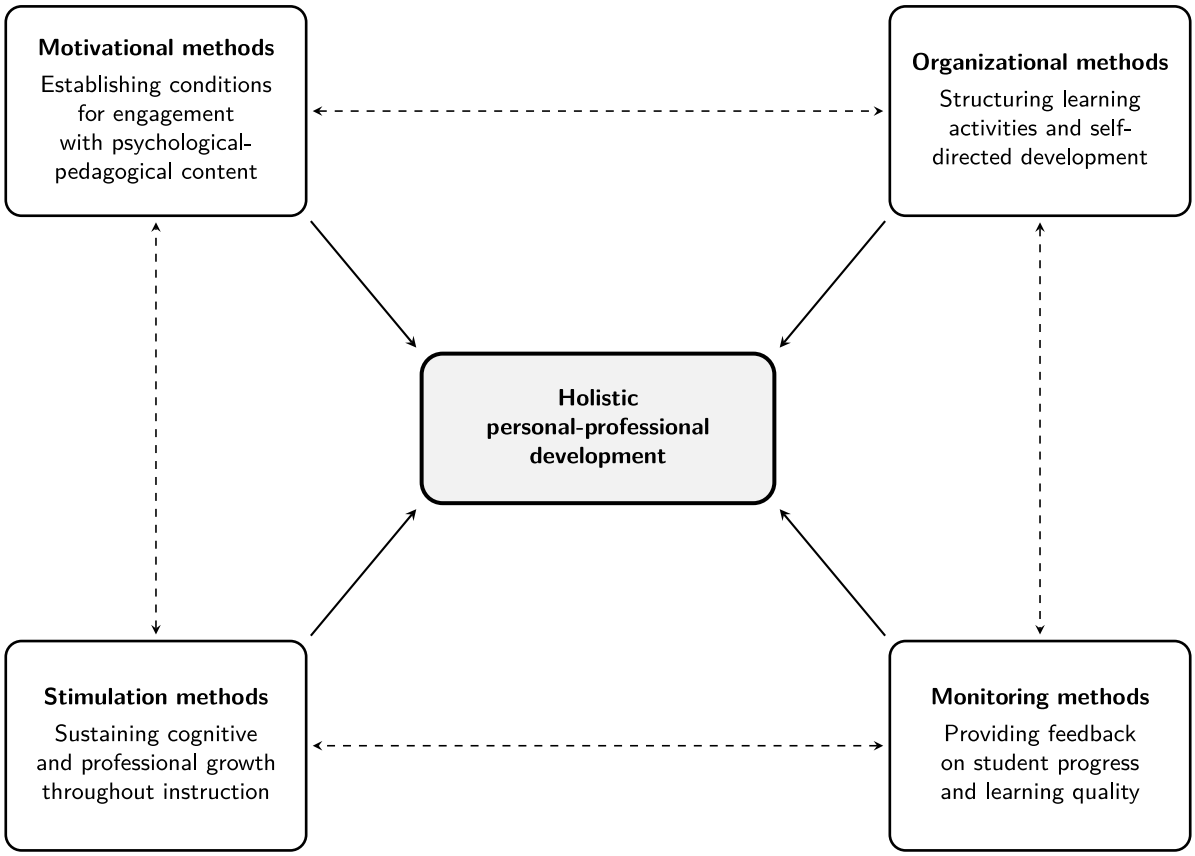

Fig. 1. Functional classification of teaching methods for psychological-pedagogical disciplines. Solid arrows indicate each category's contribution to the central developmental goal. Dashed arrows represent synergistic relationships among categories.

Eccles, 2000). Methods that build confidence and establish relevance address these motivational determinants.

Research on interest development indicates that situational interest – triggered by environmental features – can develop into more stable individual interest through repeated positive engagement (Hidi & Renninger, 2006). Motivational methods that spark curiosity and create positive emotional associations with content initiate this developmental process. The axiological approach in the theoretical framework connects here as well: methods that help students perceive the value embedded in psychological–pedagogical knowledge cultivate value-based motivation extending beyond instrumental concerns.

In practice, Table 1 presents representative motivational methods identified for psychological–pedagogical disciplines, with a digital-tool example for each.

These methods share a common orientation toward creating conditions in which meaningful learning becomes attractive and accessible. *Partner modeling of engaging activity* exemplifies the autonomy-supportive approach recommended by self-determination theory: when students participate in designing learning experiences, they develop ownership that sustains engagement. *Perspective outlining* and *value demonstration* address the value component of motivation, helping students perceive why psychological–pedagogical knowledge matters for their professional and personal development.

Creating emotional situations and *building on life experience* engage students affectively and personally, moving beyond purely cognitive appeals. Case studies involving ethical dilemmas, narratives of professional challenge and growth, and connections to students' own educational experiences create emotional resonance that deepens engagement. *Problem immersion* and *actualizing cognitive need* work through intellectual channels, creating productive disequilibrium that motivates knowledge-seeking.

Professional modeling connects to the acmeological orientation in the theoretical framework, presenting images of professional excellence that inspire developmental aspiration. When students observe how accomplished educators or psychologists draw on disciplinary knowledge, they glimpse possibilities for their own professional futures. *Success experience design* addresses the expectancy component of motivation: students who experience early success develop confidence that sustains effort through subsequent challenges.

Digital tools enrich rather than replace these methods, principally by lowering the threshold for autonomy-supportive design and by making the value structure of psychological-pedagogical content more vividly visible. Shared planning boards (Trello, Notion) and co-edited course agendas (Google Docs) operationalize *Partner modeling* by giving students a literal seat at the design table; short professional-practice videos and 360-degree case clips operationalize *Value demonstration* and *Creating emotional situations* by importing the affective texture of real practice; and adaptive low-stakes practice in Moodle, ALEKS, or Wooclap operationalises *Success experience design* by calibrating early-success scaffolds in real time (khan et al., 2025). Generative-AI assistants further enable instructor-curated analogy banks and personalized problem framings (Qian, 2025; Squalli Houssaini et al., 2024), provided that instructor oversight preserves disciplinary accuracy and ethical handling of student data.

In terms of holistic development, motivational methods contribute beyond their immediate engagement function. By helping students perceive value in psychological-pedagogical knowledge, these methods support value internalization – students come to value the content intrinsically rather than merely as means to credentials. By engaging students personally and emotionally, they foster the affective dimensions of professional identity. By building confidence and creating positive associations, they lay groundwork for lifelong engagement

Table 1
Motivational methods for psychological-pedagogical teaching.

Method	Description	Primary function	Digital tool example
Partner modeling of engaging activity	Instructor and students collaboratively plan learning activities, creating shared ownership and anticipation	Establishes autonomy and ownership	Shared planning board in Trello or Notion; co-edited agenda in Google Docs
Perspective outlining	Previewing valuable knowledge, skills, and professional capabilities students will gain from upcoming content	Establishes relevance and value	Visual course-map/skill-outcomes graphic (Mural, Canva)
Value demonstration at content nodes	Highlighting the significance of key concepts and their connection to professional practice and personal development	Deepens perceived value	Short clips of professional practice curated via YouTube or Mediasite
Creating emotional situations	Designing learning moments that evoke affective engagement through compelling cases, narratives, or dilemmas	Triggers emotional engagement	360-degree or VR case clips of educational crises (ImmerseMe, ENGAGE)
Building on life experience	Connecting new content to students' prior experiences, making abstract concepts personally meaningful	Activates prior knowledge and relevance	Student-submitted multimedia auto-biographies via Padlet
Problem immersion	Presenting authentic professional problems that create cognitive need for the knowledge to be learned	Creates cognitive necessity	Branching-scenario authoring (H5P, Twine) of a developmental case
Engaging analogies	Using vivid, memorable comparisons that illuminate difficult concepts and spark curiosity	Facilitates understanding and interest	Instructor-curated set of generative-AI analogy candidates
Actualizing cognitive need	Revealing gaps in current understanding that new learning will address, creating intellectual motivation	Stimulates curiosity	Pre-class diagnostic quiz in Moodle/Canvas surfacing knowledge gaps
Professional modeling	Demonstrating how accomplished professionals use psychological–pedagogical knowledge, inspiring aspiration	Provides aspirational models	Recorded master-class playlists; podcast interviews with practitioners
Success experience design	Structuring early learning experiences to ensure student success, building confidence and positive expectations	Builds self-efficacy	Adaptive low-stakes practice in Moodle Quiz, ALEKS, or Wooclap

with the discipline. Effective motivation thus initiates developmental processes that extend well beyond any single course or learning experience.

5.3. Organizational methods

Organizational methods structure how learning actually proceeds. They shape the activities through which students interact with psychological-pedagogical content, develop professional competencies, and progress toward learning outcomes. This category is the most extensive in the classification, reflecting the diversity of ways that meaningful learning activity can be organized.

Theoretically, the organizational methods category connects most directly to the activity-based approach in the theoretical framework. Following Vygotskian and activity theory traditions, this perspective holds that learning occurs through purposeful, socially mediated activity rather than passive reception (Leont'ev, 1978; Vygotsky, 1978). The question for instructional design becomes: What activities will engage students in ways that produce desired learning and development?

This perspective aligns with international active learning research demonstrating that methods engaging students in doing and thinking outperform passive approaches (Freeman et al., 2014; Prince, 2004). It also connects to experiential learning theory's emphasis on learning through concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb, 2014). Organizational methods operationalize these theoretical principles, specifying how learning activity is structured, sequenced, and supported.

The category encompasses both instructor-directed and student-directed arrangements. Some methods position the instructor as primary organizer of activity; others transfer organizational responsibility to students, cultivating self-directed learning capacities essential for professional development. The person-oriented theoretical approach emphasizes that students should progressively assume greater agency in organizing their own learning, a principle reflected in the range of methods included.

In practice, Table 2 presents representative organizational methods. Given this category's breadth, methods are organized into two groups: those widely recognized in international literature and those with particular relevance to psychological-pedagogical disciplines. For each method we also indicate a digital tool that supports its current operationalization.

The first group of methods – problem-based learning, project-based learning, collaborative learning, case-based teaching, simulation, and flipped learning – represents well-established approaches with substantial research support (Bishop & Verleger, 2013; Chernikova et al., 2020; Herreid, 2007; Hmelo-Silver, 2004; Johnson et al., 2014; Krajcik & Blumenfeld, 2006). Including these methods demonstrates that the proposed classification organizes familiar approaches within a coherent functional framework rather than inventing entirely novel techniques. The classification's contribution lies in its organizing principle and its attention to psychological-pedagogical contexts, not in claiming to discover previously unknown methods.

The second group highlights methods particularly suited to psychological-pedagogical education's distinctive goals. *Reflective practice exercises* operationalize the reflective dimension essential to professional development in educational and helping fields (Schön, 1987). *Microteaching* has long been recognized as effective for developing teaching skills through iterative practice with feedback (Allen & Ryan, 1969). *Professional situation modeling* and *self-directed inquiry* cultivate anticipatory and autonomous capacities respectively. *Peer teaching* embodies the principle that explaining deepens understanding while simultaneously developing instructional skills. *Digital portfolio development* supports both documentation and reflection on professional growth.

Digital tools are most consequential in this category because organizational methods are the load-bearing structure of any course.

Table 2
Organizational methods for psychological-pedagogical teaching.

Method	Description	Primary function	Example application / digital tool
	Widely recognized methods		
Problem-based learning	Students work collaboratively to investigate and resolve complex, authentic problems that drive knowledge acquisition	Develops analytical and problem-solving competencies	Analyzing classroom-management dilemmas; shared problem boards in Padlet or Miro
Project-based learning	Extended inquiry projects integrating research, design, and production of meaningful artifacts	Develops integrative and creative competencies	Designing educational interventions; collaborative project repositories in Notion or GitHub
Collaborative learning	Structured peer interaction to achieve shared learning goals through discussion, mutual explanation, and joint production	Develops communication and teamwork skills	Group analysis of developmental case studies; Microsoft Teams channels + co-edited Google Docs
Case-based teaching	Analysis of realistic scenarios requiring application of theoretical knowledge to practical situations	Develops professional judgment	Examining ethical dilemmas in counseling; branching-scenario authoring in H5P or Articulate
Simulation and role-play	Experiential engagement in simulated professional situations enabling practice without real-world consequences	Develops practical skills safely	Practicing parent–teacher conferences; avatar-based simulators (Mursion, SimSchool) or chatbot role-play
Flipped learning	Content acquisition outside class through readings or videos, with class time devoted to application and discussion	Maximizes active learning time	Pre-class video on learning theories; Panopto or YouTube delivery with Perusall social annotation
	Methods emphasized in psychological-pedagogical context		
Reflective practice exercises	Structured activities prompting examination of one's own learning processes, assumptions, and development	Develops metacognition and self-awareness	Reflective journals on teaching observations; private WordPress or Notion journals with prompt scaffolds
Microteaching	Brief teaching episodes with peer feedback enabling iterative skill development in low-stakes settings	Develops teaching competencies	Five-minute lessons with structured peer review; video peer-feedback platforms (GoReact, Edthena)
Professional situation modeling	Creating representations of professional scenarios for analysis and response planning	Develops anticipatory competencies	Modeling responses to student crises; decision-tree authoring in Twine or Articulate Storyline
Self-directed inquiry	Student-initiated investigation of questions arising from course content or field experience	Develops autonomous learning capacity	Independent literature reviews on chosen topics; Zotero/Connected Papers/instructor-vetted GenAI search assistants
Peer teaching	Students teaching content to classmates, deepening understanding through explanation	Consolidates knowledge through teaching	Student-led seminar sessions; collaboratively maintained class wiki or Mahara group page
Digital portfolio development	Ongoing curation and reflection on learning artifacts demonstrating competency development	Documents and promotes self-assessment	E-portfolios tracking professional growth; Mahara, Pathbrite, or institutionally-hosted ePortfolio

Blended-learning frameworks (Garrison & Vaughan, 2008) and recent systematic reviews of technology-mediated competence training (Chumpitaz Campos & Lomba-Portela, 2024) indicate that the relevant question is rarely whether to use a digital tool but how to align it with the method's purpose. Shared boards (Padlet, Miro) and team-collaboration suites (Microsoft Teams, Google Workspace) operationalize *Problem-based* and *Collaborative learning* by externalizing group cognition; branching-scenario authoring tools (H5P, Twine, Articulate) operationalize *Case-based teaching* and *Professional situation modeling* by letting students explore consequence; avatar-based simulators and conversational chatbots operationalize *Simulation and role-play* at lower cost than studio-based simulation. Generative-AI assistants extend the reach of *Self-directed inquiry* and *Microteaching* (Belkina et al., 2025; Squalli Houssaini et al., 2024), but as we discuss in Section 6.4, they are best treated as means within existing methods rather than as new methods in their own right.

In terms of holistic development, organizational methods contribute through the nature of the activities they enable: problem- and project-based learning develop not only cognitive competencies but also collaboration skills, persistence, and professional identity as students engage in authentic professional work; reflective exercises cultivate self-awareness and metacognition essential for continued professional growth; simulation and role-play allow students to develop and test professional selves in safe contexts; self-directed inquiry builds autonomous learning capacity that sustains development beyond formal education. Through carefully selected and sequenced organizational methods, instructors create the activity structures within which comprehensive professional formation occurs.

5.4. Stimulation methods

Stimulation methods sustain engagement and promote continued growth throughout the instructional process. While motivational methods establish initial conditions for learning, stimulation methods address the ongoing challenge of maintaining momentum, deepening commitment, and encouraging students to persist through difficulties and extend their efforts over time.

Theoretically, the distinction between motivation and stimulation reflects research demonstrating that initiating engagement differs from sustaining it (Schunk et al., 2012). Students may begin a course motivated but lose momentum when facing challenges, competing demands, or diminishing novelty. Stimulation methods address these threats to continued engagement.

Self-regulation theory provides one foundation for understanding stimulation (Zimmerman, 2002). Effective learners monitor their progress, maintain focus, and regulate effort in response to setbacks. Stimulation methods support and scaffold these self-regulatory processes, particularly for students still developing autonomous regulation capacities. Research on academic persistence indicates that sustained

Table 3
Stimulation methods for psychological-pedagogical teaching.

Method	Description	Primary function	Digital tool example
Progressive challenge calibration	Adjusting task difficulty to maintain optimal challenge as student competence develops	Sustains engagement through appropriate challenge	Adaptive mastery platforms (Khan-style adaptive units, ALEKS)
Encouragement and approval	Expressing recognition of student effort, progress, and achievement through verbal and written feedback	Reinforces continued effort	In-LMS micro-feedback comments; badge-issuing add-ons (BadgeOS, Open Badges)
Growth-oriented feedback	Providing feedback that emphasizes development, improvement strategies, and effort rather than fixed ability	Promotes persistence and growth beliefs	Rubric-based feedback in Turnitin or Gradescope with growth-focused descriptors
Constructive requirement setting	Establishing clear expectations and standards that communicate confidence in students' capacity to achieve	Creates productive accountability	Public course-level competency map in the LMS
Gamification elements	Incorporating game-design features such as points, levels, badges, or challenges into learning activities	Sustains engagement through achievement markers	Classcraft, Kahoot, Quizizz with leaderboards and quests
Productive competition	Structuring competitive elements that motivate effort while maintaining collaborative classroom climate	Energizes engagement through social comparison	Tournament brackets in Discord or Slack channels (see Section 6.3 for cultural adaptation)
Persuasion and inspiration	Using reasoned argument and inspirational communication to strengthen commitment to professional development	Deepens value commitment	Curated short-form video/podcast playlists from accomplished practitioners
Progress visualization	Making student advancement visible through portfolios, progress charts, or competency maps	Reinforces sense of development	Dashboards in Canvas, Moodle, or Brightspace; ePortfolio progress views
Peer recognition practices	Creating opportunities for students to acknowledge and celebrate classmates' contributions and growth	Builds supportive learning community	Kudos channels in Slack or Microsoft Teams; nomination forms in Google Forms
Self-improvement encouragement	Promoting habits and practices of continuous self-development extending beyond course requirements	Cultivates autonomous growth orientation	Goal-setting and habit-tracking apps (Notion, Todoist, Habitica) integrated with reflective journals

effort depends on ongoing encouragement, appropriate challenge, and reinforcement of progress (Duckworth et al., 2007).

Growth mindset research demonstrates that beliefs about ability malleability influence persistence (Dweck, 2006). Students who believe competence develops through effort persist longer than those viewing ability as fixed. Stimulation methods that reinforce growth beliefs and celebrate effort alongside achievement support sustained engagement. Flow theory suggests that optimal engagement occurs when challenge and skill are balanced and feedback is immediate (Csikszentmihalyi, 1990). Methods maintaining appropriate challenge levels and providing regular feedback create conditions conducive to sustained, absorbed engagement.

The stimulation category also connects to the synergetic approach in the theoretical framework. Self-organization in complex systems requires ongoing energy input; analogously, student development requires continued stimulation to sustain growth trajectories rather than settling into comfortable but limited patterns.

In practice, Table 3 presents representative stimulation methods for psychological-pedagogical disciplines, each with a digital-tool example.

Several methods warrant elaboration. *Progressive challenge calibration* operationalizes the flow principle of matching challenge to developing skill. As students gain competence, tasks that once stretched them become routine; sustaining engagement requires advancing challenge accordingly. In psychological-pedagogical education, this might involve progressing from analyzing simple cases to navigating complex, ambiguous professional scenarios.

Encouragement and approval and *growth-oriented feedback* address the affective dimension of persistence. Students facing difficulties benefit from recognition that their efforts are valued and that struggle signifies learning rather than inadequacy. Research on feedback indicates that process-focused feedback ("Your analysis strategy is improving") promotes persistence more effectively than person-focused feedback ("You are smart") (Dweck, 2006; Hattie & Timperley, 2007).

Gamification elements have attracted considerable attention in contemporary higher education (Dicheva et al., 2015); recent evidence indicates that gamified cooperative formats can simultaneously enhance creative problem solving and learning motivation (Chaiyarat, 2024). When thoughtfully implemented, features such as achievement badges, progress indicators, and challenge levels can sustain engagement, particularly for tasks requiring extended effort. The method requires careful design to avoid undermining intrinsic motivation through excessive external reward emphasis.

Constructive requirement setting reflects the productive role of appropriate expectations. Clearly communicated standards, when framed as expressions of confidence in students' capacity, create positive accountability that sustains effort. This method connects to the acmeological emphasis on progression toward excellence: high expectations communicate that excellence is both expected and achievable.

Digitally, the stimulation category benefits from tools that close the loop between effort and visible feedback in near-real time. Adaptive mastery platforms operationalize *Progressive challenge calibration* by recalibrating item difficulty to the learner (Semerikov, Nechypurenko, Vakaliuk, Mintii, & Fadieieva, 2026); LMS-native badging and rubric-feedback systems (BadgeOS, Turnitin, Gradescope) operationalize *Encouragement* and *Growth-oriented feedback* (Semerikov et al., 2025); gamified cooperative quiz platforms (Kahoot, Quizizz, Classcraft) operationalize both *Gamification elements* and – in carefully designed group formats – *Productive competition* (Chaiyarat, 2024); and habit-tracking apps integrated with reflective journals operationalize *Self-improvement encouragement* across the gap between formal study and self-directed

practice. The cultural adaptation of *Productive competition* is discussed in Section 6.3.

In terms of holistic development, stimulation methods cultivate orientations that extend beyond specific courses. Students who internalize growth mindsets, develop self-regulatory capacities, and experience the satisfaction of sustained effort acquire dispositions supporting lifelong professional development. The methods build not only persistence in immediate tasks but also the broader orientation toward continuous self-improvement essential for psychological-pedagogical professionals. Through stimulation methods, instructors help students become individuals who sustain their own development rather than depending on external pressure.

5.5. Monitoring methods

Monitoring methods provide information about student progress, enabling both instructors and students to assess learning, identify areas requiring attention, and adjust subsequent activities. While often associated primarily with grading and certification, monitoring in the present classification serves fundamentally formative purposes – guiding continued development rather than merely judging outcomes.

Theoretically, the foundation for this category draws heavily on assessment-for-learning research. Black and Wiliam (1998) landmark review demonstrated that formative assessment – assessment designed to provide feedback that improves learning – produces substantial learning gains. Subsequent work elaborated principles for effective formative practice: clarifying success criteria, eliciting evidence of understanding, providing feedback that moves learning forward, activating students as learning resources for one another, and activating students as owners of their own learning (Wiliam, 2011).

Feedback research has identified characteristics of effective feedback. Hattie and Timperley (2007) emphasized that feedback's impact depends on its focus (task, process, self-regulation, or self), timing, and relationship to clear goals. Nicol and Macfarlane-Dick (2006) outlined principles for feedback supporting self-regulated learning: clarifying good performance, facilitating self-assessment, delivering high-quality feedback information, encouraging dialogue, fostering positive motivation, providing opportunities to close performance gaps, and using feedback to improve teaching.

The emphasis on self-assessment connects to the person-oriented theoretical approach and to professional development goals. Professionals in psychological-pedagogical fields must continuously monitor and improve their own practice; developing self-assessment capacities during preparation is essential (Boud, 1995). Similarly, peer assessment develops evaluative judgment applicable both to one's own and others' work, a competency central to professional collaboration and continuing development (Topping, 1998).

Contemporary developments in learning analytics offer new monitoring possibilities. Digital traces of student activity can reveal patterns invisible to traditional observation, enabling personalized feedback and early identification of students requiring support (Long & Siemens, 2011; Semerikov, Bondarenko, et al., 2026). Recent work extends this with predictive analytics for early intervention (khan et al., 2025), framework-level guidance for implementing digital formative assessment (Kaya-Capocci et al., 2022), and large-language-model assisted scalable feedback (Narreddy et al., 2025). These technological affordances extend but do not replace the fundamental formative orientation of effective monitoring.

In practice, Table 4 presents representative monitoring methods for psychological-pedagogical disciplines, each with a digital-tool example.

The methods share an orientation toward generating actionable information. *Formative questioning* and *exit tickets* provide rapid feedback enabling instructors to adjust teaching within or between sessions. These lightweight methods, when used consistently, create continuous feedback loops that keep instruction responsive to student needs.

Structured self-assessment and *reflective monitoring journals* develop students' capacity to evaluate their own learning – a competency essential for autonomous professional development. These methods require explicit criteria and guided practice; students do not automatically know how to assess their own work accurately (Andrade, 2019). Through scaffolded self-assessment experiences, students develop the evaluative judgment they will need throughout professional careers.

Peer feedback and review serves dual purposes: the student receiving feedback gains external perspective on their work, while the student providing feedback develops evaluative capabilities. Research indicates that giving feedback may benefit learning as much as receiving it (Topping, 1998). In psychological-pedagogical education, peer feedback additionally models the collegial collaboration characteristic of professional practice.

Progress conferences and *performance observation with feedback* enable individualized formative guidance. These methods are resource-intensive but particularly valuable for developing complex professional competencies such as teaching skill or counseling practice. *Competency-based assessment* connects monitoring explicitly to professional standards, ensuring that feedback addresses capabilities that matter for professional practice.

Digital tools have transformed the monitoring category more visibly than any other, by making low-cost rapid feedback feasible at scale. Mentimeter-class polling tools operationalize *Formative questioning* and *Exit tickets*; rubric-bearing platforms (Turnitin, Gradescope, PeerScholar) operationalize *Structured self-assessment* and *Peer feedback*; LMS-native analytics and predictive-model integrations operationalize *Digital learning analytics* and feed instructor decisions in near-real time (Kaya-Capocci et al., 2022; khan et al., 2025); and large-language-model-mediated feedback systems are beginning to offer scalable formative comments on student writing while raising live questions about feedback quality and instructor oversight (Narreddy et al., 2025). Recent work on student well-being in higher-education learning environments (Konstantinidis, 2024) cautions that monitoring should always be designed to support, not surveil, the developing professional.

In terms of holistic development, monitoring methods cultivate capacities for self-directed professional growth. Students who develop accurate self-assessment abilities, comfort with constructive feedback, and habits of reflective practice acquire the means for continued development throughout their careers. The monitoring function is thus not peripheral to development but integral to it: effective professionals continuously monitor their own practice and learn from that monitoring. Through monitoring methods that engage students as active participants in assessment processes, instructors help develop professionals who can guide their own continuing formation rather than depending on external evaluation.

5.6. Integration and relationships among categories

The four functional categories – motivational, organizational, stimulation, and monitoring – are designed not as isolated compartments but as interdependent components of an integrated instructional system. Understanding their relationships is essential for effective application of the classification.

The categories exhibit both sequential and iterative relationships. Sequentially, effective instruction typically begins with motivational methods that establish conditions for engagement, proceeds through organizational methods that structure learning activities, employs stimulation methods to sustain effort throughout, and uses monitoring methods to assess progress and guide continued development. This sequence reflects the logical flow of instructional episodes: engagement must be established before activities can proceed productively, sustained through challenges encountered during learning, and assessed to inform subsequent instruction.

Table 4
Monitoring methods for psychological-pedagogical teaching.

Method	Description	Primary function	Digital tool example
Formative questioning	Ongoing questioning during instruction to check understanding and adjust teaching in real time	Provides immediate diagnostic information	Mentimeter, Poll Everywhere, or Wooclap in-class polls
Structured self-assessment	Guided activities in which students evaluate their own learning against explicit criteria	Develops self-monitoring capacity	Rubric-driven self-assessment in Turnitin, Gradescope, or LMS surveys
Peer feedback and review	Students providing constructive feedback on classmates' work using structured protocols	Develops evaluative judgment and feedback skills	PeerScholar, Eli Review, or LMS peer-review modules
Progress conferences	Individual or small-group meetings to discuss learning progress, challenges, and development plans	Enables personalized guidance	Zoom or Microsoft Teams office hours with shared progress dashboards
Reflective monitoring journals	Regular written reflection on learning processes, challenges encountered, and growth observed	Documents and promotes metacognitive awareness	Private WordPress, Notion, or LMS journal with prompt scaffolds
Competency-based assessment	Evaluation against specified professional competencies with feedback identifying development needs	Aligns assessment with professional standards	Competency dashboards (CompetencyPro, eMedley); LMS outcomes module
Performance observation with feedback	Systematic observation of student teaching or practice with detailed formative feedback	Guides skill development	Video peer-review tools (GoReact, Edthena, Sibme)
Digital learning analytics	Using data from learning management systems and other digital tools to track engagement and identify patterns	Enables early intervention and personalization	LMS analytics modules; predictive analytics integrations
Collaborative evaluation	Joint instructor-student assessment processes that engage students in evaluating their own work	Develops ownership of assessment	Co-edited rubrics in Google Docs; calibration in Eli Review or PeerScholar
Exit tickets and minute papers	Brief end-of-session assessments capturing student understanding or remaining questions	Provides rapid feedback for instructional adjustment	Google Forms or Mentimeter end-of-session prompts

Yet the relationships are not merely linear. Monitoring provides feedback that informs adjustments across all other categories. Assessment revealing inadequate motivation might prompt return to motivational methods; evidence of struggling students might indicate need for organizational adjustments; signs of flagging engagement might call for intensified stimulation. The classification thus supports iterative, responsive teaching that adapts to emerging student needs rather than proceeding mechanically through predetermined sequences.

The categories also exhibit functional complementarity. Motivational methods create conditions that organizational methods can leverage – students who perceive value in content engage more productively in learning activities. Stimulation methods sustain what motivation initiates, addressing the distinct challenge of maintaining engagement over extended periods. Monitoring methods serve the entire system, generating information that enables continuous improvement. No single category suffices; comprehensive instruction requires attention to all four functions.

This systemic integration reflects the theoretical framework's systemic and synergetic approaches. Just as complex systems require multiple interacting components to produce emergent properties, effective instruction requires the coordinated operation of methods addressing distinct functions. Student development emerges from this coordinated system rather than from any single method or category operating in isolation.

The classification's practical value lies precisely in this systemic perspective. Rather than offering isolated techniques, it provides a framework for designing coherent instructional systems that address the full range of functions necessary for students' holistic personal-professional development. Instructors can use the classification to audit their current practice – identifying functions that may be underserved – and to design instructional approaches that systematically address motivation, organization, stimulation, and monitoring in integrated configurations suited to particular goals and contexts.

6. Discussion

This section examines the proposed classification's contributions, situates it relative to existing frameworks, considers its international applicability, and explores implications for practice and research.

6.1. Theoretical contributions

The classification advances instructional theory in several respects. Most fundamentally, it proposes a functional organization principle for understanding teaching methods. Rather than grouping methods by information source, cognitive demand, or instructional phase, the classification organizes methods according to their primary contribution to the educational process: motivating engagement, organizing learning activities, stimulating continued growth, or monitoring progress. This functional perspective directs attention to what methods accomplish rather than their surface characteristics, supporting purposeful selection based on instructional needs.

The reconceptualized definition of teaching method represents a second contribution. Defining a teaching method as a way of psychological-pedagogical management of personal-professional development positions methods as instruments for comprehensive student formation. This definition extends beyond cognitive-focused formulations that dominate much instructional theory, foregrounding the affective, valuational, and identity dimensions of professional preparation.

Third, the classification demonstrates productive integration of multiple theoretical approaches. The axiological, acmeological, systemic, synergetic, person-oriented, and activity-based perspectives – often applied separately – here contribute complementary analytical lenses within a coherent framework. This integration models how theoretical resources from different traditions can be combined to address complex educational questions.

Finally, the explicit attention to holistic personal-professional development orients the classification toward comprehensive educational goals. The classification resists reduction to any single outcome dimension, insisting that effective teaching in psychological-pedagogical disciplines must address knowledge, skill, value, identity, and self-directed development capacities together.

6.2. Comparison with existing classifications

The proposed classification relates to existing frameworks in distinctive ways. Compared to Lerner (1981) and Skatkin (1982) cognitive activity classification – distinguishing explanatory-illustrative, reproductive, problem-based, heuristic, and research methods – the present framework organizes by function rather than cognitive level. Methods at various cognitive levels appear across the functional categories; what matters for classification is their primary contribution to the instructional process, not their cognitive demands alone.

Babansky (1988) classification by process components (organization, stimulation, control) provides the closest precedent for functional organization. The present classification extends Babansky's approach by adding the motivational category, differentiating stimulation from motivation, updating methods for contemporary contexts, and orienting the framework specifically toward psychological-pedagogical disciplines and holistic development goals.

Joyce et al. (2014) teaching models framework organizes approaches by theoretical family: information processing, social, personal, and behavioral systems. This theoretically grounded organization serves different purposes than functional classification. The present framework could complement Joyce and colleagues' work, with their theoretical families helping explain why methods work while the functional classification guides when to employ them.

Biggs and Tang's (2011) constructive alignment framework shares the systemic orientation of the present classification, emphasizing coherence among instructional components. The functional classification operationalizes systemic thinking at the method level, specifying the distinct functions that must be addressed for instructional systems to operate effectively.

6.3. International applicability

The classification was developed within the Ukrainian pedagogical tradition, drawing on both post-Soviet didactic scholarship and international literature. This origin raises questions about applicability across national contexts.

Several features support international applicability. The functional organization principle – distinguishing motivation, organization, stimulation, and monitoring functions – addresses universal instructional challenges. These functions must be fulfilled regardless of cultural context, though specific methods addressing them may vary. The classification's grounding in internationally recognized theoretical frameworks (self-determination theory, experiential learning, formative assessment) provides conceptual bridges to diverse scholarly traditions.

Some specific methods, however, reflect cultural assumptions that may require adaptation. Methods emphasizing particular forms of instructor authority, competition, or individual versus collective orientation may function differently across cultural contexts. International users should consider the classification's functional structure as broadly applicable while treating specific method inventories as requiring contextual adaptation.

A concrete illustration is the method of *Productive competition* (Table 3), which the framework places among the stimulation methods. In educational cultures situated toward the collectivist pole of Hofstede's individualism–collectivism dimension – many East-Asian, post-Soviet, and Latin-American contexts among them (Hofstede, 2001; Nisbett, 2003; Watkins & Biggs, 1996) – the method functions best when competition is staged *between small groups* rather than between individuals: instructor-formed teams calibrated to comparable zones of proximal development compete on a shared psychological–pedagogical task, with the cooperative atmosphere *within* each team being itself part of the assessed outcome. Digital channels (tournament brackets on Discord or Slack, shared Miro or Padlet boards) support this group-on-group format without exposing any individual student to face-threatening evaluation. In educational cultures situated toward the individualist pole – many Anglo-American and Western-European settings – the same functional method is more effective as an *individual-creative challenge*: each student submits their own response (a case analysis, a designed intervention, a reflective essay), and recognition rewards distinctiveness or innovation rather than out-performance of peers. Digital tools again mediate the operationalization – anonymous peer voting via Mentimeter, public showcase galleries via WordPress or Padlet – while preserving the stimulation function across both cultural configurations. The classification's claim is therefore not that any particular method is culture-free, but that the four *functions* – motivation, organization, stimulation, monitoring – are universal pedagogical necessities whose operationalization must be culturally adapted by the instructor in light of local norms, expectations, and patterns of social interaction.

Cross-cultural research examining how the functional categories manifest in different national contexts would advance understanding of both the classification's generalizability and the cultural specificity of teaching methods in psychological-pedagogical education.

6.4. Contemporary challenges and the functional framework

Recent commentary on higher education have rightly pressed for explicit engagement with four contemporary pressures on instruction: the diversification of student bodies, the imprevisibility of professional futures, the hybridization of teaching and learning environments through digital and generative-AI tools, and the renewed call for critical-reflective thinking oriented toward social justice and sustainability. We do not respond to these pressures by appending new methods to the four functional subsystems – the inventory is held deliberately stable in this revision – but by clarifying how the existing functional architecture already accommodates them through method *selection* and *combination*, and how the descriptive layer of each category should be read in that light.

Diverse student bodies. The breadth of methods retained within each functional category (forty-two methods across the four functions) is itself a structural answer to student heterogeneity: instructors facing groups with widely different life experience, sociocultural background, prior preparation, and interest profiles can choose among methods of differing student-centric valency – some leaning more strongly into autonomy support, others into structured scaffolding, still others into peer-mediated meaning-making – without abandoning the functional architecture. Culturally responsive teaching scholarship (Gay, 2018) and recent work on culturally inclusive learning (Grund & Holst, 2023; Ha et al., 2025; Semerikov, Nechypurenko, Vakaliuk, & Mintii, 2026) converge on the same principle: heterogeneity is met not through a single ideal method but through a wider repertoire deployed with situational judgment. This places a corresponding demand on faculty development, which we discuss in the implications subsection below.

Uncertainty and future-ready professional skills. The acmeological and synergetic anchors of the framework (Section 2) already direct teaching toward adaptive professional formation under conditions of complexity rather than toward stable expert reproduction. The OECD Learning

Compass 2030 (Organisation for Economic Co-operation and Development, 2019) and the World Economic Forum (2023) *Future of Jobs* report converge on a competence profile – analytical and creative thinking, resilience, self-efficacy, lifelong-learning orientation – that maps recognizably onto methods already present across the four functional categories (e.g., *Problem immersion*, *Self-directed inquiry*, *Progressive challenge calibration*, *Reflective monitoring journals*). The framework's contribution to the future-skills agenda lies less in the introduction of new methods than in the deliberate balance struck across all four functions when designing a program, so that future-ready dispositions are cultivated by the system of methods rather than by any single intervention (Salendab et al., 2025).

Hybrid and AI-enabled learning contexts. The recent surge in generative-AI scholarship in higher education – including systematic reviews (Belkina et al., 2025; Qian, 2025; Wang et al., 2025), case-based syntheses (Squalli Houssaini et al., 2024), and analyses of student perceptions (Chan & Hu, 2023; Jensen et al., 2025) – has not produced a consensus on whether AI assistants constitute new *methods* or new *means* deployed within existing methods. We take the second view: a ChatGPT-mediated case analysis is still case-based teaching; an AI-assisted formative quiz is still formative questioning; a chatbot rehearsal of a parent–teacher conference is still simulation and role-play (Narreddy et al., 2025; Somabut et al., 2025). This view preserves the functional architecture under technological turnover and lets the framework remain useful as new tools appear. The digital-tool examples added to Tables 1–4 and the digital-integration paragraphs closing each of Sections 5.2–5.5 operationalize this principle for current technologies, while Section 7 acknowledges the rate at which they will need updating.

Critical-reflective thinking, social justice, and sustainability. The methods of *Reflective practice exercises* (Table 2) and *Reflective monitoring journals* (Table 4) are the principal carriers of this value-loading within the framework. Schön (1987)-derived reflection-on-action, Freire's (2005) critical pedagogy, and recent systematic-review evidence on reflective writing in higher education (Alt et al., 2022; Sudirman et al., 2024) converge on the claim that reflection becomes emancipatory only when it is structured to surface assumptions, power relations, and consequences – not merely as private journaling. Education for Sustainable Development (Alharbi, 2026) adds a content commitment that instructors should read into reflective prompts and into the design of *Problem immersion* and *Building on life experience* (Table 1). The classification does not legislate these value-loadings; it makes room for them within methods that already exist.

In each of these four areas, the framework's contribution is therefore structural rather than substantive: it organizes the space within which instructors meet contemporary challenges, without prescribing a single method for any one of them. This is consistent with the conceptual stance, articulated in Section 2, that effective teaching emerges from *coordinated systems* of methods rather than from any individual technique.

6.5. Implications for practice and research

The classification holds several practical implications. For *faculty development programs*, it offers a framework for helping instructors expand their pedagogical repertoires systematically. Rather than presenting isolated techniques, faculty developers can use the classification to help instructors identify which functional areas their current practice addresses well and which may be underserved. Workshops might focus on developing competence with methods in specific categories, building comprehensive instructional capacity over time. This systematic-repertoire emphasis is increasingly recommended in the recent literature on innovative higher-education pedagogies (Salendab et al., 2025) and is essential for instructors meeting the diverse-student-body and future-skills pressures discussed in Section 6.4.

For *curriculum design*, the classification suggests that program planning should ensure adequate attention to all four functions across courses and experiences. Curriculum maps could indicate where motivational, organizational, stimulation, and monitoring methods are emphasized, identifying potential gaps in students' developmental experiences.

For *teaching evaluation*, the classification offers categories for analyzing instructional practice. Observation protocols might assess whether instruction addresses the four functions effectively. Self-reflection instruments could prompt instructors to examine their balance across functional categories.

For *professional learning communities*, the classification provides shared vocabulary for discussing teaching methods and their purposes. Colleagues can collaborate more effectively when they share conceptual frameworks for analyzing instruction.

The classification also opens several research directions. Most pressing is *empirical validation*: Do the four functional categories correspond to distinguishable dimensions of instructional practice? Do methods classified together function similarly? Do instructors and students perceive the proposed distinctions? Survey instruments, observation protocols, and experimental studies could address these questions.

Effectiveness research could examine whether systematic attention to all four functions improves outcomes compared to less comprehensive approaches. Studies might compare instructional designs emphasizing different functional configurations, identifying optimal balances for various goals.

Comparative studies could examine how the classification applies across disciplines, institutions, and national contexts. Does the functional structure generalize? How do specific methods vary across contexts while serving similar functions? Big-data work on trendlines in teacher-education research (Skau et al., 2026) and methodological scholarship on educational classification more broadly (Baokui, 2024) offer one such comparative entry point.

Technology integration research should investigate how digital tools and environments can support each functional category. How do learning analytics and predictive models (khan et al., 2025) enhance monitoring? How can digital environments support motivation or stimulation (e.g., through gamified cooperative formats; Chaiyarat 2024)? What organizational possibilities do emerging generative-AI technologies enable (Qian, 2025; Squalli Houssaini et al., 2024)?

These research directions could both test and extend the classification, advancing understanding of teaching methods in psychological-pedagogical education.

7. Limitations and future directions

Several limitations of this study warrant acknowledgment, each suggesting directions for future work.

The classification was developed through theoretical analysis rather than empirical investigation. While the conceptual foundations are robust and the functional categories logically grounded, the practical utility and validity of the categorization require empirical testing. Future research should examine whether instructors and students perceive the proposed distinctions, whether methods classified together function similarly in practice, and whether systematic attention to all four functional categories improves educational outcomes. Implementation studies in actual psychological-pedagogical courses would test the classification's practical value.

The classification was developed primarily within the Ukrainian pedagogical tradition, integrating post-Soviet didactic scholarship with international literature. Despite efforts to incorporate diverse perspectives, the framework may reflect cultural assumptions about educational purposes, instructor-student relationships, and valued outcomes that do not transfer seamlessly across national contexts. Comparative research examining the classification's applicability in different cultural settings would clarify which elements generalize and which require

contextual adaptation. Such research could also surface alternative functional categories or methods prominent in other traditions but absent from the present framework.

The assignment of specific methods to functional categories involved interpretive judgment. Many methods serve multiple functions; problem-based learning, for instance, addresses organizational, motivational, and stimulation functions simultaneously. Classification based on primary function necessarily simplifies this complexity. Alternative categorizations could be defensible, and future work might explore fuzzy or multi-dimensional classification schemes that capture methods' multiple contributions more fully.

The classification focuses specifically on psychological-pedagogical disciplines. While many methods and principles likely apply more broadly, generalizability to other disciplinary contexts has not been established. Research examining how the functional framework applies in other professional education fields – nursing, social work, management – or in general education contexts would test the classification's scope.

The rapidly evolving digital landscape presents ongoing challenges. New technologies continuously create pedagogical possibilities not envisioned when classifications are developed. While digital methods are incorporated, the framework will require periodic updating as technologies such as artificial intelligence, virtual reality, and adaptive learning systems mature. Research should examine how emerging technologies can support each functional category and whether technological developments call for revising the classification's structure.

This is most acutely true of generative AI. Between the first systematic reviews of ChatGPT in higher education and the present writing, the pace of capability change has outrun the pace of pedagogical scholarship (Belkina et al., 2025; Jensen et al., 2025; Qian, 2025; Wang et al., 2025). The position taken in this paper – that GenAI assistants are best treated as means deployed within existing methods rather than as new methods in their own right – is a working stance that the rapid evolution of the underlying technology may yet require us to revise. Concretely: if assistant-mediated learning becomes the dominant mode through which students rehearse case analysis, microteaching, or self-directed inquiry, the functional architecture may need to differentiate "instructor-mediated" from "assistant-mediated" operationalizations within each category, and the monitoring category in particular will need new tools for assessing learning that is produced in concert with an AI system. We therefore commit to a periodic revisit of the classification, and we invite international collaborators to test it under conditions of pervasive GenAI use (Chiu, 2024; Organisation for Economic Co-operation and Development, 2019).

Finally, any classification represents a particular moment in a field's development. As research on teaching and learning advances, understandings of effective methods evolve. The present classification should be viewed not as a final statement but as a contribution to ongoing scholarly conversation about how teaching methods can best be understood, organized, and selected to support students' holistic development.

Despite these limitations, the classification offers a theoretically grounded, practically oriented framework that can guide both instructional practice and future research. The limitations identified here specify not fatal flaws but productive directions for extending and refining this contribution.

8. Conclusion

This paper aimed to develop a theoretically grounded classification of methods for improving the teaching of psychological-pedagogical disciplines in higher education. Addressing three research questions, the study established theoretical foundations drawing on axiological, acmeological, systemic, synergetic, person-oriented, and activity-based approaches; identified four functional categories for organizing teaching methods; and elaborated specific methods within each category along with their contributions to students' holistic personal-professional development.

The proposed classification organizes teaching methods into motivational, organizational, stimulation, and monitoring categories based on their primary function in the educational process. Motivational methods establish conditions for engagement; organizational methods structure learning activities; stimulation methods sustain growth throughout instruction; and monitoring methods provide formative feedback on progress. Together, these categories address the essential functions that effective instruction must fulfill. The forty-two specific methods identified within these categories provide concrete options for instructors seeking to enhance psychological-pedagogical teaching.

The classification makes several contributions. Theoretically, it advances a functional organization principle that directs attention to what methods accomplish rather than their surface characteristics. The reconceptualized definition of teaching method – as psychological-pedagogical management of personal-professional development – extends beyond cognitive-focused formulations to encompass the full scope of professional formation. The integration of multiple theoretical approaches demonstrates how diverse intellectual resources can be combined productively. The explicit orientation toward holistic development keeps comprehensive educational goals central to instructional thinking.

Practically, the classification offers frameworks for faculty development, curriculum design, teaching evaluation, and professional learning communities. By identifying distinct functional categories, it helps instructors audit their current practice, expand their pedagogical repertoires systematically, and design instruction that addresses the full range of student developmental needs.

The classification emerges from integration of Eastern European pedagogical traditions with international scholarship on teaching and learning. This synthesis enriches the diversity of perspectives available to the global educational research community while making a productive tradition more accessible internationally.

Limitations acknowledged – including the theoretical nature requiring empirical validation, cultural specificity requiring cross-context examination, and the evolving digital landscape requiring ongoing updating – specify directions for future research rather than undermining the classification's present value.

As higher education continues to evolve and demands on psychological-pedagogical preparation intensify, systematic frameworks for understanding and improving teaching methods remain essential. The functional classification proposed here offers one such framework, grounded in theory and oriented toward the comprehensive development of professionals who will shape education and human development in the decades ahead.

CRediT authorship contribution statement

Oleksandr H. Kucheriavyi: Writing – original draft, Methodology, Investigation, Conceptualization. **Serhiy O. Semerikov:** Writing – review & editing, Visualization, Resources, Project administration, Investigation.

Ethical approval and consent to participate

Not applicable. This theoretical study involved no human participants, and no empirical data were collected.

Declaration of Generative AI and AI-assisted technologies in the writing process

During the preparation of this work, the author used Scopus AI to support the literature review process and identify relevant scholarly sources. Following use of this tool, the author reviewed, verified, and edited all content as needed. The author takes full responsibility for the content of the publication.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

No data were generated or analyzed during this study. This is a theoretical contribution based on literature analysisand conceptual synthesis.

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