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Development of Recurrent Skills of Future Teachers of Preschool Organizations Based on Artificial Intelligence Technologies

Abstract

Introduction. The recurrent nature of the professional activity of a preschool educator in a dynamically changing educational environment necessitates not a one-time acquisition of professional skills, but their sustained, cyclically reproducible application in practical work. *Methodology and Methods.* The empirical basis of the study consisted of a closed-ended survey of 49 third-year students enrolled in the Preschool Education and Upbringing Programme. *Results.* The survey results among third-year students of a pedagogical specialization revealed that the majority of respondents encountered the concept of “recurrent skills” for the first time; however, they acknowledged the need for their purposeful development, critically assessed the existing educational Programme as insufficiently oriented towards their formation, and expressed a preference for teaching practice with reflective components and AI-based simulations over traditional formats such as mentoring and portfolio-based approaches. *Theoretical Significance.* The study introduces the concept of “recurrent skills” as an independent category of pedagogical knowledge, thereby expanding the theoretical understanding of the nature of professional development of a preschool educator. *Practical Significance.* The findings may be applied in the design of educational programs for the training of future preschool educators, oriented towards the cyclically reproducible acquisition of professional skills through the use of reflective practices and artificial intelligence technologies.

Keywords: recurrent skills, future preschool educator, artificial intelligence technologies.

Introduction. The professional activity of a preschool educator (Lillvist et al., 2014) is recurrent in nature, encompassing the organization of daily routines, monitoring children’s development, engaging with families, and planning structured activities. Consequently, the traditional teacher training system has been oriented towards the initial formation of these skills. However, the contemporary preschool education system is undergoing a period of profound transformation, driven by the rapid advancement of technology, the revision of professional standards (Ministry of Education of the Republic of Kazakhstan, 2025), and increasingly complex professional demands placed on educators. In a dynamically changing educational environment, the system of preparing future preschool educators faces

a new challenge: how to ensure not a one-time acquisition of professional skills, but their sustained, repeatable, and cyclically reproducible application in practical work.

The problem of developing teachers’ professional skills has been examined across various scholarly traditions, each of which has made a substantial contribution to understanding the mechanisms of professional formation and its continuous nature. Within the cultural-historical activity theory of Vygotsky and Leontiev (Cong-Lem, 2022), the nature of skill development was fundamentally substantiated: through repeated, purposeful execution of an action, it undergoes gradual automatization and transitions to the level of an operation - that is, the skill ceases to require conscious control and becomes embedded in the structure of activity

as a stable component. This framework allows professional pedagogical skills to be understood not as static formations acquired once during training, but as dynamic structures in a state of continuous development, requiring systematic reinforcement through practical activity.

The concept of the zone of proximal development, originally formulated in the context of child learning, was productively transposed into the context of teachers' professional formation. The work of Warford (2011) demonstrated that pedagogical skills do not simply automatize as experience accumulates, but undergo cyclical de-automatization at each new stage of professional growth: encountering more complex professional tasks, altered working conditions, or updated standards causes previously mastered operations to revert to the status of consciously performed actions, thereby initiating a new cycle of skill development at a qualitatively higher level. Professional development of the educator thus assumes a recurrent, spirally ascending character, rather than representing a linear accumulation of competencies.

The theory of Continuing Professional Development (CPD) systematically reveals the mechanisms by which an educator's professional competencies are regularly updated in a changing educational environment. The research of Sheridan et al. (2009) convincingly demonstrates that the sustained professional development of a preschool educator is ensured not by one-off educational events, but by a structured system of recurring reflective experience that involves cyclical returns to key professional situations with a progressively deepening level of critical engagement. In turn, the research of Merino et al. (2025) emphasizes that in the context of the digital transformation of education, continuing professional development acquires a new dimension: the educator is compelled not only to refine subject-specific and methodological competencies, but simultaneously to acquire technological tools and integrate them into already established professional practices. Questions regarding the preparation of future educators drawing on innovative technologies have been addressed in

the research of Cong-Lem (2022) and Shabani et al. (2010), who consider digital and interactive tools as instruments capable of ensuring the repeated, varied reproduction of professional situations within an educational context - thereby bringing the preparation process closer to the genuine recurrent logic of the preschool educator's professional activity.

Despite the substantial body of research in the field of teachers' professional development, the phenomenon of recurrent skills as an independent concept - reflecting the repeatability, renewability, and cyclical nature of the professional competencies of a preschool educator - remains insufficiently studied. A particularly important question concerns the role of artificial intelligence technologies as a tool for developing and sustaining recurrent skills in the process of preparing future educators.

The purpose of this article is to reveal the essence of the concept of "recurrent skills of future preschool educators", to define their structural characteristics, to substantiate the potential of artificial intelligence technologies as a means of developing them, and to assess future educators' readiness to develop the skills under investigation. Recurrent skills of a future preschool educator are professional skills characterized by the repeatability of their reproduction in pedagogical practice, the cyclical nature of their actualization under changing educational conditions, and their renewability at a qualitatively new level of professional development.

The word "recurrent" derives from the Latin "recurrens", meaning "returning, repeating" (Lewis & Short, 1879), and in the scholarly context denotes a process that reproduces itself cyclically, returning to its starting point at a new level. Unlike skills formed on a single occasion and applied in standard situations, recurrent skills represent a dynamic professional structure that is not fixed in a finished form, but is continuously reproduced, updated, and deepened in the course of pedagogical activity. Their essence is revealed through three interrelated characteristics.

The first characteristic is repeatability. The professional activity of a preschool educator is

cyclical by nature and involves the systematic reproduction of the same pedagogical actions: organizing daily routines, conducting developmental activities, observing children, and engaging with parents. According to Leontiev’s (1975) activity theory, it is precisely through the repeated execution of an action that it gradually becomes automatized and transitions to the level of an operation, becoming a stable element of the educator’s professional repertoire. Repeatability is not mechanical duplication, but the conscious reproduction of a skill that ensures its consolidation and refinement.

Recurrent skills are not merely repeated; they are actualized under new educational conditions (cyclical actualization): with each new group of children, within the framework of an updated professional standard, and in an evolving sociocultural context. Vygotsky (1934) demonstrated that development is not a linear process - it “passes through the same point at each new turn, advancing towards a higher level”. Applied to the professional skills of an educator, this means that the same skill - for example, diagnosing a child’s development - is reproduced cyclically, yet each time in a new context that demands its reinterpretation and adaptation.

Unlike simple repetition, renewability as the third characteristic implies qualitative enrichment

of the skill: each cycle of its reproduction is accompanied by professional reflection, the accumulation of experience, and the attainment of a higher level of pedagogical mastery. This is consistent with the theory of continuous professional development (CPD), according to which the professional skills of an educator are not static; they are continuously renewed in response to the challenges of the professional environment (Sheridan et al., 2009). Warford (2011), in his concept of the zone of proximal teacher development, demonstrated that a skill, having reached the level of automatization, undergoes re-automatization upon encountering new professional tasks, thereby initiating a new cycle of its acquisition at a higher level. Thus, taken together, these three characteristics distinguish recurrent skills from adjacent concepts: unlike “stable skills”, they are not fixed in an unchanging form; unlike “skills being formed”, they have already been acquired but continue to develop; unlike “general competencies”, they are tied to specific, recurrent situations within the professional activity of the preschool educator. Drawing on a systems approach to analyzing the professional competence of an educator, the structure of recurrent skills can be represented as the unity of four interrelated components: cognitive, operational, motivational-axiological, and reflective (Table 1).

Table 1

Structure of recurrent skills

Component	Description
Motivational-axiological component	Determines the orientation and intensity of the reproduction of recurrent skills and encompasses professional motivation, a value-based disposition towards pedagogical activity, and a readiness for continuous professional self-improvement. This component is of particular significance specifically in relation to recurrent skills: without sustained intrinsic motivation, the repeated reproduction of professional actions risks becoming a formal routine, losing its developmental potential. Research into the emotional intelligence of preschool educators demonstrates that professional fulfilment and a sense of joy derived from pedagogical activity are the most critical elements ensuring the stability of professional motivation throughout the entire career of a preschool educator (Xie et al., 2024). The motivational-axiological component serves as the internal driving force behind the renewability of recurrent skills, prompting the educator not merely to reproduce mastered actions, but to strive for their qualitative renewal.
Cognitive component	The theoretical foundation of recurrent skills encompasses professional knowledge of the developmental patterns of preschool-age children, the psychological and ped

agogical bases for organizing the educational process, and an understanding of the mechanisms underlying one's own professional growth. According to the model of teacher professional competence proposed by Baumert and Kunter (2013), professional knowledge constitutes the system-forming element without which no skill can be reproduced at a qualitatively new level. With respect to recurrent skills, the cognitive component ensures the meaningfulness of each new cycle of skill reproduction: the educator does not merely repeat an action mechanically, but understands its nature, purpose, and potential for adaptation to new conditions. Research in the field of teacher professional expertise confirms that it is precisely cognitive capacities that determine the quality of professional response in recurring situations (Lin et al., 2024).

Operational component	Constitutes the practical core of recurrent skills and encompasses the set of specific pedagogical competencies that are reproduced systematically and purposefully in the professional activity of the preschool educator: the ability to organize a developmental environment, conduct pedagogical observation, build interaction with children and parents, and design and implement educational situations. As demonstrated by the findings of Pinya-Medina et al. (2024), it is precisely the operational competencies of preschool educators that require the most systematic and structured reproduction across varied professional contexts. The operational component directly realizes the characteristic of repeatability inherent in recurrent skills: it is through the repeated practical reproduction of an action that its professional stability is established.
Reflective component	Ensures cyclicity by serving as the mechanism for the comprehension and reinterpretation of each cycle of professional activity. Reflection is defined as a conscious and systematic process of deepening one's understanding of professional experience, integrating cognitive, emotional, and motivational elements (Hommel et al., 2023). This component transforms the simple repetition of a professional action into a genuinely recurrent process: each new cycle of skill reproduction concludes with reflection, which becomes the point of departure for the next, qualitatively superior cycle. Li (2025) demonstrates that the reflective practice of future educators encompasses a cycle of deliberation, planning, action, and evaluation of outcomes which structurally corresponds to the nature of recurrent skills.

All four components of recurrent skills function not in isolation, but within a unified professional-educational cycle: the cognitive component ensures the meaningfulness of reproduction, the operational component ensures its practical realization, the motivational-axiological component provides the internal driving force, and the reflective component ensures qualitative renewal upon the completion of each cycle. The interrelation of these components renders recurrent skills a holistic and dynamic professional formation, rather than a mere sum of repeatable competencies.

Introducing the concept under investigation into scholarly discourse allows for a new perspective on the problem of preparing future preschool educators: the emphasis shifts from the one-time development of a skill to the

creation of conditions for its sustained cyclical reproduction and qualitative renewal, including through the use of artificial intelligence technologies. The appeal to artificial intelligence technologies as a tool for developing the recurrent skills of future preschool educators is not coincidental - it is determined by the very nature of this phenomenon. If recurrent skills by their essence require repeated, cyclically organized reproduction across varied professional situations, then traditional forms of preparation - lectures, seminars, and teaching practice - are limited in their capacity to provide the necessary frequency, variability, and individualization of such reproduction.

Artificial intelligence technologies (Ifenthaler et al., 2024) offer the possibility of unlimited repetition of professional situations within a

safe learning environment. AI-based simulators of pedagogical situations, chatbots modelling the behavior of children and parents, and interactive case studies with adaptive feedback create conditions for the repeated reproduction of the same skill across diverse contexts, which constitutes a key condition for developing its recurrent character. The future preschool educator gains the opportunity to “live through” the same pedagogical situation repeatedly, each time varying the conditions and refining their professional response, thereby realizing the first characteristic of recurrent skills, namely, their repeatability.

Equally significant is the fact that artificial intelligence (Crompton & Burke, 2023) possesses a unique capacity for the adaptive escalation of learning tasks in accordance with the level of skill acquisition. AI-based adaptive learning systems track the dynamics of a student’s professional development and automatically propose tasks of increasing complexity, thereby realizing the mechanism of skill de-automatization and its transition to a qualitatively new level. AI prevents a skill from becoming “fixed” in an automatized form by continuously generating new professional challenges, thus ensuring the renewability of recurrent skills - their third essential characteristic - in alignment with Warford’s (2011) concept of the zone of proximal teacher development, according to which a skill, having reached the level of automatization, undergoes re-de-automatization upon encountering new professional tasks, initiating a new cycle of acquisition at a higher level.

A substantial role in the development of recurrent skills is also played by the continuous and personalized feedback provided by AI technologies. Unlike the episodic feedback characteristic of traditional instruction, AI tools record each professional action performed by the student, analyze it, and deliver immediate, targeted, and substantive feedback that initiates a new cycle of reflection and refinement. It is precisely reflection and feedback that, according to the theory of continuing professional development, constitute the driving forces behind the renewal of an educator’s professional skills (Merino et al., 2025), which directly

corresponds to the characteristic of cyclical actualization of recurrent skills under changing educational conditions.

Generative artificial intelligence (Yu & Guo, 2023) offers opportunities for designing varied pedagogical scenarios that closely approximate the real conditions of a preschool setting. Future preschool educators can use generative AI tools to independently create and test didactic materials, lesson plans, and interaction scenarios involving children of different ages and developmental levels. Each such cycle of design and testing constitutes a complete iteration of the recurrent development of a skill: from reproduction through reflection to renewal - thereby organically completing the logic of all three characteristics of recurrent skills within a single professional-educational cycle. Thus, artificial intelligence functions not merely as an auxiliary technological tool, but as a system-forming instrument organically embedded in the logic of the recurrent development of professional skills of the future preschool educator. The convergence of the key didactic properties of AI - the infinite reproducibility of professional situations, adaptability to the individual trajectory of skill acquisition, and the continuity of feedback - with the essential characteristics of recurrent skills renders artificial intelligence technologies the most appropriate instrument for their development within the system of professional preparation of future preschool educators.

Materials and Methods. The study involved 49 third-year students enrolled in the degree Programme 6B01201 Preschool Education and Upbringing. The selection of this respondent group was determined by the fact that third-year students already possess sufficient experience of professional preparation, have completed several teaching placements, and are capable of meaningfully evaluating both the content of the educational Programme and their own level of professional readiness. At the same time, they remain in the process of training, which renders the data obtained particularly significant for improving the content of preparation.

A closed-ended questionnaire comprising seven questions, each with four response options (A, B, C, D), was used as the data collection

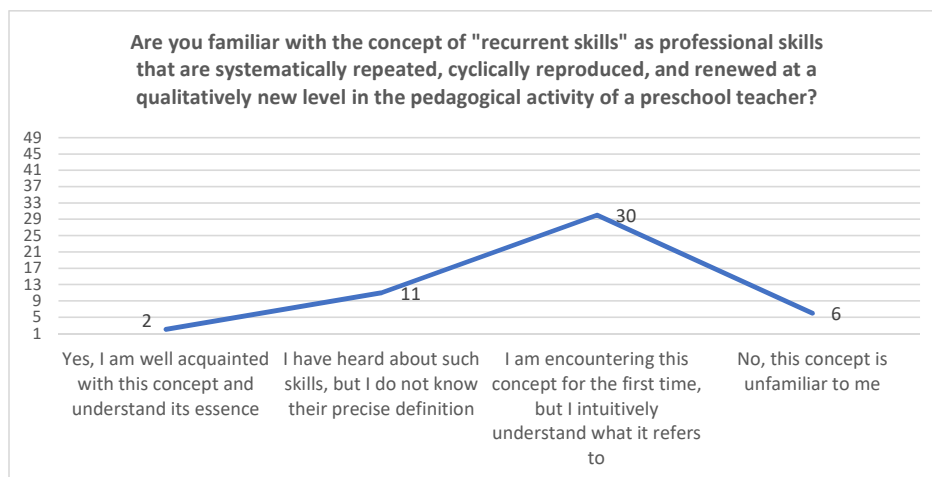
instrument. The first three questions were of a general nature and aimed at identifying the basic professional orientations of the students, while the four core questions were directly focused on the key aspects of the phenomenon under investigation. The present article presents and analyses the results of the four core questions that most fully address the research objectives set. The closed format of the questionnaire ensures the comparability of respondents' answers, minimizes the subjectivity of interpretation, and enables accurate quantitative data processing. Each of the four core questions is directed at diagnosing a distinct aspect of students' readiness: the first identifies the level of awareness of the concept of recurrent skills; the second examines attitudes towards the necessity of their purposeful development in professional preparation; the third assesses the capacity of the educational Programme to create conditions for the recurrent development of skills; and the fourth explores students' preferences regarding the most effective tools and conditions for developing recurrent skills.

The survey was conducted in a group format under classroom conditions. Before completing the questionnaire, students were provided with a brief explanation of the purpose of the study and the essence of the concept of "recurrent skills" to ensure a shared understanding of the key term among all participants. Completion of the questionnaire was carried out anonymously, which contributed to obtaining more objective and candid responses. The average time required to complete the seven questions was 20–25 minutes. The survey was conducted in full compliance with all fundamental ethical principles of research. Before the commencement of the survey, all participants were informed of the purpose and objectives of the study and provided voluntary informed consent to participate. Students were advised of their right to decline participation or to discontinue completing the questionnaire at any point without any consequences for their academic activities. The survey was conducted on the basis of complete anonymity: participants' personal data were neither recorded nor used. The data obtained were employed exclusively for

scholarly purposes and processed in aggregated form, precluding the identification of any individual respondent. The confidentiality and security of data at all stages of the study were ensured in accordance with the requirements of research ethics. The data obtained were subjected to quantitative analysis: for each of the four core questions, the absolute number and percentage distribution of responses for each option were calculated. The results are presented in the form of summary charts reflecting the distribution of respondents' answers. The total sample comprised 49 participants, which is sufficient for conducting descriptive statistical analysis within the framework of a pilot study.

Results. The survey results revealed that more than 61% of respondents encountered the concept of "recurrent skills" for the first time yet intuitively understood what it referred to. Approximately 22% of students had heard of such skills but were unaware of their precise definition. Only around 4% of respondents were well acquainted with the concept and understood its essence, while approximately 12% were entirely unfamiliar with it (Figure 1). The low level of terminological awareness is entirely predictable: the concept of "recurrent skills" is not enshrined in either the current professional standard or the educational Programme for the preparation of preschool educators, and therefore the majority of students had not encountered the term in a formal academic context. Nevertheless, it is noteworthy that a significant proportion of respondents, over 61%, intuitively grasp the essence of the phenomenon without knowing its name. This suggests that the phenomenon is genuinely present in their professional experience yet has not been given terminological expression. This observation is consistent with the position of Cong-Lem (2022), according to which professional concepts frequently exist in pedagogical practice long before their scholarly conceptualization. The identified gap between a practical understanding of the phenomenon and its terminological acquisition substantiates the necessity of purposefully introducing the concept of "recurrent skills" into the content of professional preparation of future preschool educators.

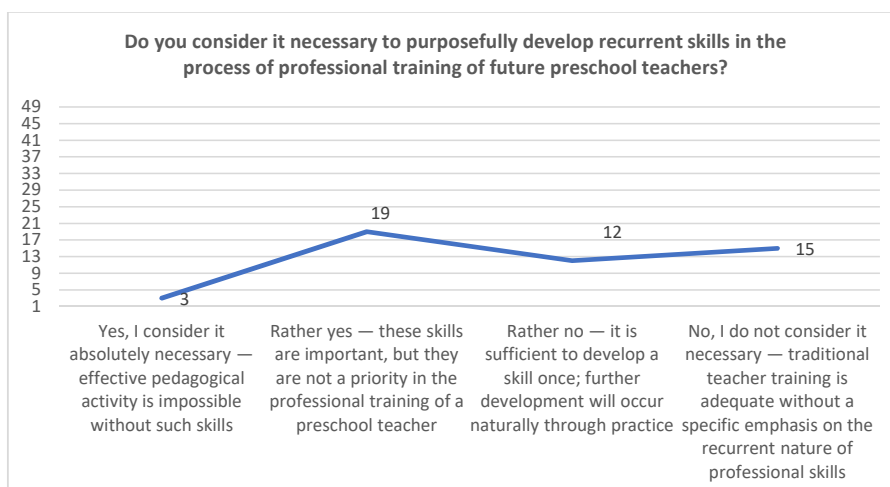
Figure 1
Level of awareness of the concept of recurrent skills



The results of the second question (Figure 2) present a heterogeneous yet broadly positive picture. Approximately 39% of students consider the development of recurrent skills to be rather necessary, acknowledging their importance while not regarding them as a priority of professional preparation. Around 31% believe that traditional preparation is sufficient without any special emphasis on recurrence. Approximately 24% lean towards the view that it is enough to form a skill on a single occasion. Only around 6% are firmly convinced of the necessity of purposefully developing recurrent skills. The distribution of responses reflects an orientation typical of students in pedagogical specializations, one that perceives skill development as a completed process within the

course of training, without an awareness of the need for its subsequent cyclical renewal. This phenomenon is well described in the theory of continuing professional development: students tend to perceive professional preparation as a linear rather than a cyclical process (Merino et al., 2025). The considerable degree of uncertainty in the responses is also explained by the fact that students do not yet possess sufficient practical experience to fully appreciate the recurrent nature of the professional activity of a preschool educator. In aggregate, more than 45% of respondents nonetheless acknowledge a certain value of recurrent skills, which provides a favorable foundation for incorporating the concept under investigation into the content of professional preparation.

Figure 2
Attitudes towards the necessity of their purposeful development in professional preparation

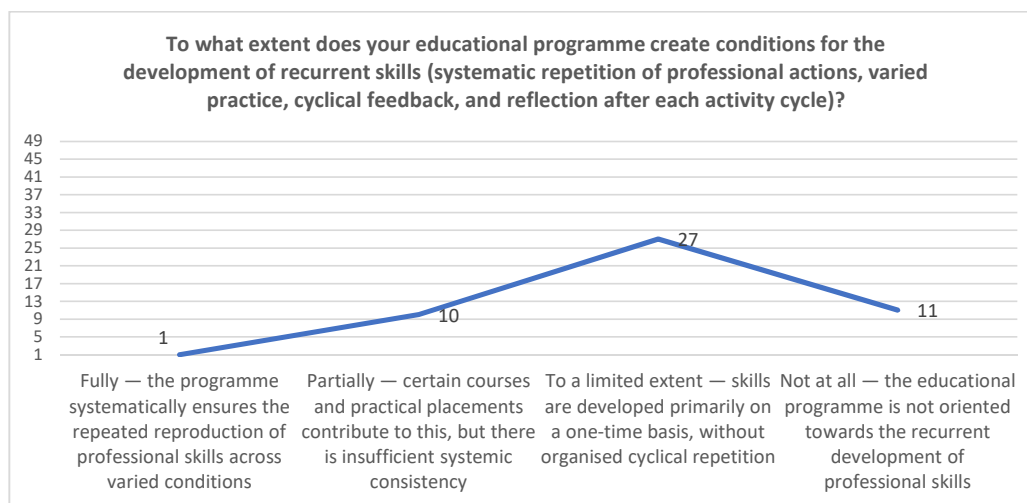


More than 55% of students assess the capacity of their educational Programme as negligible, indicating that skills are developed primarily on a single occasion without organized cyclical repetition. Approximately 22% believe that the Programme creates no such conditions whatsoever. Around 20% of respondents note a partial correspondence between the Programme and the requirements of recurrent skill development. Only approximately 2% consider that the Programme fully ensures the repeated reproduction of professional skills under varied conditions (Figure 3). The assessment of the educational Programme by the majority of students is entirely predictable

and is corroborated by data from international research. Sheridan et al. (2009) indicate that traditional preparation programs for preschool educators generally ensure the initial formation of skills, but do not create systemic conditions for their cyclical reproduction and qualitative renewal. The results of this question reveal a key contradiction: students recognize that their professional skills require repeated reproduction across varied situations, yet the educational Programme does not provide sufficient organizational and pedagogical conditions for this. This contradiction constitutes the principal problem area for improving the professional preparation of preschool educators.

Figure 3

Assessment of the capacity of the educational programme to create conditions for the development of recurrent skills



The survey results reveal a consistent hierarchy of student preferences regarding tools that contribute to the development of recurrent skills (Figure 4). The greatest support among respondents (39%) was received by the format of systematic teaching practice with mandatory reflection. In second place, with a narrow margin, came simulations and modelling of pedagogical situations using artificial intelligence technologies, favored by approximately 37% of students. Less support was given to mentoring with regular feedback (approximately 14%) and professional development portfolios (approximately 10% of respondents). The leading position of teaching

practice with a reflective component is entirely predictable and theoretically well-founded. Third-year students, having completed several placements, have empirically verified that direct engagement in professional activity constitutes the fundamental condition for developing stable pedagogical skills. This position is consistent with Leontiev’s (1975) activity approach, according to which a skill is developed, consolidated, and reproduced primarily through the repeated execution of real practical actions, rather than through their theoretical comprehension in isolation from an activity-based context. The incorporation of mandatory reflection into the structure of practice further

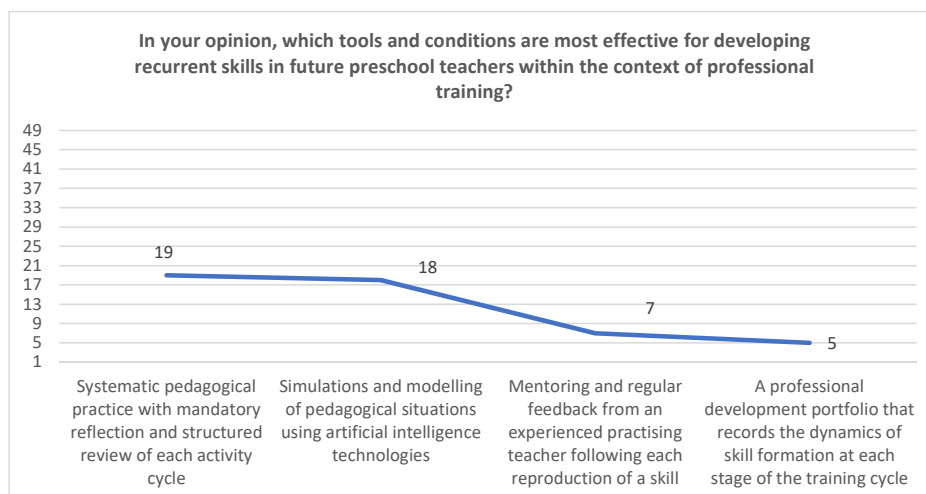
enhances its developmental potential: reflective analysis of one’s own experience ensures the conscious consolidation of a skill and creates conditions for its qualitative reproduction at a new level, which corresponds to the spirally recurrent model of the educator’s professional development.

A significant finding is the confident second-place position of AI technologies, which surpassed the traditional formats of mentoring and portfolio, demonstrating a high level of technological readiness among future preschool educators and their openness to innovative tools of professional development. The appeal of AI simulations may be attributed to their

capacity to reproduce pedagogical situations repeatedly, in varied forms, and under controlled conditions - which is particularly important for the development of recurrent skills: unlike real practice, a simulated environment allows the student to return to the same professional situation multiple times, adjusting their own actions without the risk of negative consequences for the actual educational process. The high level of interest in this tool is consistent with the findings of contemporary research in the field of digital pedagogy, which records a sustained tendency towards the integration of AI technologies into the system of professional preparation of educators (Abdalla et al., 2024).

Figure 4

Tools and conditions for the development of recurrent skills



Students tend to perceive the portfolio as a documenting and reporting instrument, underestimating its reflective and analytical potential. In the scholarly literature, however, the portfolio is regarded as a tool that ensures the systematic recording and critical examination of professional experience over time, which makes it a significant component of recurrent professional development. The modest interest in mentoring, in turn, reflects students’ limited personal experience of interaction with a mentor within the context of teaching practice, which reduces the subjectively perceived value of this format. Thus, the results obtained demonstrate that students consciously prioritize tools that provide direct, repeatable, and technologically mediated immersion in professional activity

- which corresponds to the recurrent logic of pedagogical skill development.

Discussion. The central contradiction revealed by the present study is as follows: the phenomenon described by the concept of “recurrent skills” is genuinely experienced by future preschool educators in the course of their professional formation, yet it has neither terminological recognition within their preparation system nor a conceptual analogue in the global pedagogical scholarship. The international academic literature does not offer direct analogues for comparison, as recurrent skills as an independent construct are absent from it. Nevertheless, several studies describe adjacent phenomena, and it is precisely the nature of their divergence from our results that

is of greatest analytical interest. Merino et al. (2025), examining the mechanisms of continuing professional development of educators, proceed from the assumption that the repeatability and cyclical nature of professional actions constitute a condition that the educational system must purposefully create. Our results suggest the contrary: students perceive the existing Programme as failing to provide this condition and independently seek tools capable of compensating for its absence. This divergence between institutional declarations and the subjective experience of learners reproduces a pattern identified by Warford (2011): educational programs are designed to support the initial acquisition of skills, but not their de-automatization and re-acquisition under conditions of increasing professional complexity, precisely the mechanism that constitutes the essence of recurrence.

The preference expressed by students for teaching practice with reflection is broadly consistent with international data, yet with an important qualification. Li (2025) and Hommel et al. (2023) regard reflection as a tool embedded within organizationally supported structures of professional development, whereas our students, judging by the results, associate it primarily with individual sense-making of practical experience outside any systematically constructed support framework. The distinction is significant: reflection as a personal habit and reflection as an institutionally organized cycle produce qualitatively different developmental effects, and it is the latter that ensures genuine recurrence of the skill. The high level of interest in AI simulations diverges from prevailing tendencies in international research, where technological tools traditionally occupy an auxiliary position relative to real practice and mentoring (Pinya-Medina et al., 2024). This divergence lends itself to interpretation through the logic of Shabani et al., (2009): a simulated environment makes it possible to manage the level of complexity of a professional task and to reproduce it repeatedly, that is, to artificially create the conditions of the zone of proximal professional development that, in real practice, arise spontaneously and irregularly. Students

intuitively select this tool not because they evaluate it as technologically appealing, but because it addresses a specific problem they perceive in their preparation: a deficit of manageable repeatability of professional situations.

The low level of interest in mentoring represents the most pronounced divergence from the international literature. Warford (2011) and Sheridan et al. (2009) regard accompaniment by an experienced practitioner as a condition without which productive progression through the zone of proximal professional development is fundamentally impeded. The fact that our students rank mentoring in second-to-last place reflects not their disagreement with this proposition, but rather the absence of any real experience of high-quality mentoring within existing teaching placements. A tool that a student has not experienced as developmental cannot be selected as preferable, and this in itself constitutes a diagnostic signal for the preparation system. A similar logic accounts for the low interest in portfolios: international researchers identify their reflective potential as significant (Li, 2025; Merino et al., 2025), yet this potential is realized only when specially organized work with the portfolio is in place, whereas in most programs it functions as an instrument of documentation rather than development.

Conclusion. The renewal of the preschool education system, driven by the revision of the professional standard and the growing complexity of demands placed on educators, brings to the fore a problem that has yet to receive a systemic resolution in the theory and practice of professional preparation: how to ensure not a one-time acquisition of professional skills, but their sustained, repeatable reproduction in a dynamically changing educational environment. The absence in pedagogical scholarship of an independent concept describing this phenomenon, despite its evident presence in the real professional activity of the preschool educator, defined the research problem.

With the aim of examining the degree to which future preschool educators are aware of the recurrent nature of professional skills and their

preferences in selecting tools for professional development, a survey of third-year students was conducted. The results demonstrated that the overwhelming majority of respondents intuitively grasp the essence of the phenomenon under investigation without possessing its terminological designation, critically assess the educational Programme as failing to provide conditions for the recurrent reproduction of professional skills, and express a preference for tools of managed repeatability teaching practice with reflection and AI simulations over traditional formats of mentoring and portfolio.

The totality of the data obtained demonstrates that the recurrent skills of the future preschool

educator represent not an abstract theoretical category, but a genuinely experienced characteristic of professional formation - one that students themselves identify at the level of practical experience long before its scholarly conceptualization. It is precisely this convergence between the practical experience of students and the theoretical lacuna in international scholarship that substantiates the necessity of introducing the concept of recurrent skills as an independent category of pedagogical knowledge, and of designing on its basis purposeful mechanisms for the professional preparation of future preschool educators.

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