JOURNAL OF MULTIDISCIPLINARY SCIENCES AND INNOVATIONS
VOLUME 5, ISSUE 06
MONTHLY JOURNALS
ISSN NUMBER: 2751-4390
IMPACT FACTOR: 9,08

PEDAGOGICAL AND PSYCHOLOGICAL CHARACTERISTICS OF DEVELOPING THE PROFESSIONAL COMPETENCE OF FUTURE PRIMARY SCHOOL TEACHERS

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Abstract

A future primary school teacher is a student undergoing professional development at a higher pedagogical education institution and preparing for pedagogical activity by gradually acquiring theoretical knowledge, methodological skills, personal and professional values, a culture of communication, and digital pedagogical experience. Professional competence does not emerge as a fully developed quality; rather, it is formed throughout the educational process through understanding pedagogical situations, completing practice-oriented tasks, evaluating one's own performance, working with digital resources, gaining experience during teaching practice, and developing a professional identity. This article examines the pedagogical and psychological characteristics of developing the professional competence of future primary school teachers, with particular emphasis on professional motivation, methodological thinking, communicative readiness, reflective activity, digital competence, and adaptation to a SMART educational environment.

Keywords: professional development, pedagogical activity, methodological skills, communicative readiness, legal and regulatory foundations, digital educational environment, SMART technologies, self-assessment ability, professional competence.

Introduction

The development of the professional competence of future primary school teachers cannot be limited solely to improving educational content, updating curricula and syllabi, or introducing contemporary technological tools. This process is closely connected with internal psychological mechanisms such as students' professional self-awareness, motivation for pedagogical activity, methodological thinking, communicative readiness, psychological adaptation to the digital educational environment, self-assessment abilities, and readiness for reflective activity.

Therefore, the development of the professional competence of future primary school teachers should be examined not only from the perspective of organisational and pedagogical conditions but also through the integration and interaction of pedagogical and psychological factors.

The Law of the Republic of Uzbekistan "On Education," the Concept for the Development of the Higher Education System of the Republic of Uzbekistan until 2030, and the "Digital Uzbekistan – 2030" Strategy identify improving the quality of education, preparing competitive specialists, effectively using contemporary information and communication technologies in the educational process, and developing digital infrastructure as priority objectives.

These legal and regulatory foundations require the professional competence of future primary school teachers to be interpreted not merely as a collection of traditional pedagogical knowledge but as a complex pedagogical and psychological quality integrated with the digital educational environment, SMART technologies, learner-centred education, reflective assessment, practical and methodological activity, and continuous professional self-development.

Theoretical and Methodological Foundations

The UNESCO ICT Competency Framework for Teachers and the European Commission's Digital Competence Framework for Educators—DigCompEdu—serve as important methodological foundations in this regard.

According to these approaches, educators' digital competence is understood not merely as the ability to operate technological tools but as a comprehensive competence associated with curriculum design, pedagogical processes, assessment systems, educational resources, learner engagement, and continuous professional development.

From this perspective, SMART technologies are considered in the present study not as ordinary technical tools or supplementary digital opportunities but as an integrated educational environment that helps clarify pedagogical objectives, design methodological activities, organise feedback, personalise education, increase learners' engagement, and support the reflective development of future teachers.

Local scientific studies have also examined the development of future educators' information competence, information and communication readiness, and digital literacy as important areas in the formation of professional competence.

In these studies, digital readiness is directly connected with the future primary school teacher's methodological activity, lesson design, use of electronic resources, organisation of interactive communication with learners, and assessment of educational outcomes.

This demonstrates that digital competence should not be developed as an isolated component of professional competence. Instead, it should be integrated with methodological, communicative, reflective, and practice-oriented activities.

Local research on the development of social and creative competencies also indicates that the use of SMART technologies should be associated with communicative cooperation, problem-solving, creative task performance, and ensuring learners' active participation in the educational process.

This approach confirms that SMART technologies should not be used merely as tools for transmitting information when developing the professional competence of future primary school teachers. They should be applied as pedagogical instruments that support the interactive organisation of education and promote independent thinking, creativity, professional communication, and reflective analysis among students.

Pedagogical and Psychological Factors in Professional Competence Development

The development of the professional competence of future primary school teachers through SMART technologies is a complex process realised through the interaction of pedagogical and psychological factors.

Therefore, SMART technologies should be regarded as important pedagogical and psychological instruments that support not only the digital literacy of future teachers but also their methodological thinking, communicative culture, professional responsibility, and reflective development.

The pedagogical and psychological profile of a future primary school teacher is characterised by a combination of motivational, cognitive, reflective, communicative, creative, and digital-psychological qualities that determine readiness for professional activity.

Professional Motivation and Identity

The development of stable professional motivation among future teachers is of particular importance. Such motivation is manifested through an interest in working with children, a responsible attitude towards education and upbringing, a sense of involvement in the development of primary school pupils, and an understanding of the social significance of the teaching profession.

Professional motivation encourages future teachers to deepen their theoretical knowledge, improve their methodological skills, search for innovative approaches, and critically evaluate their own professional performance.

According to the self-determination theory developed by Richard Ryan and Edward Deci, an individual's intrinsic motivation increases when the psychological needs for autonomy, competence, and social relatedness are satisfied.

From this perspective, the professional competence of students develops more sustainably when they perceive pedagogical activity not as an external obligation or a formal requirement but as a personal value, an opportunity for professional self-realisation, and a means of continuous professional growth.

Autonomy allows students to make independent pedagogical decisions, select appropriate methods, and take responsibility for the outcomes of their activities. The need for competence is fulfilled when students recognise their ability to complete professional tasks successfully and achieve meaningful results. Social relatedness develops through constructive cooperation with lecturers, fellow students, schoolteachers, pupils, and parents.

Consequently, a higher education environment aimed at developing professional competence should provide future primary school teachers with opportunities for independent decision-making, practice-oriented activity, collaborative learning, constructive feedback, and professional self-expression.

Methodological Thinking and Practical Readiness

Methodological thinking is another important component of the professional competence of future primary school teachers. It involves the ability to analyse educational objectives, select appropriate teaching methods, design lesson stages, anticipate possible learning difficulties, evaluate learners' individual characteristics, and adapt educational materials to specific pedagogical situations.

SMART technologies expand the possibilities for developing methodological thinking by enabling students to design interactive lessons, create multimedia resources, organise differentiated tasks, collect information about learners' achievements, and provide immediate feedback.

However, the use of digital technologies produces meaningful educational outcomes only when it is based on clearly defined pedagogical objectives. Therefore, future teachers should learn not only how to operate digital tools but also how to determine their pedagogical relevance, methodological effectiveness, age appropriateness, and influence on learners' cognitive and emotional development.

Practical readiness develops through the systematic integration of theoretical education with pedagogical practice. During teaching practice, future teachers apply acquired knowledge in real classroom situations, communicate with pupils, design and conduct lessons, use digital educational resources, and analyse the effectiveness of their pedagogical decisions.

Such experience helps students understand the complexity of professional activity, identify their strengths and weaknesses, and develop realistic perceptions of the teaching profession.

Communicative Readiness

Communicative competence occupies a central position in the professional preparation of future primary school teachers. A primary school teacher communicates not only with pupils but also with parents, colleagues, school administrators, psychologists, and other educational specialists.

Therefore, future teachers should be able to express their ideas clearly, listen actively, provide constructive feedback, prevent and resolve conflicts, create a psychologically safe learning environment, and establish relationships based on trust and mutual respect.

SMART technologies can support communicative development through collaborative online tasks, digital discussions, virtual projects, interactive presentations, and peer-feedback activities. At the same time, excessive reliance on digital communication may reduce the quality of direct interpersonal interaction.

For this reason, digital and face-to-face communication should be balanced in the professional preparation of future teachers. Students should develop the ability to select the most appropriate form of communication depending on the pedagogical situation, educational objective, and individual needs of learners.

Reflective Activity and Self-Assessment

Reflective competence enables future teachers to analyse their own pedagogical activity, identify the causes of successes and difficulties, evaluate the effectiveness of selected methods, and determine directions for further professional development.

Reflection transforms practical experience into professional knowledge. Without reflective analysis, even extensive pedagogical experience may remain fragmented and fail to contribute sufficiently to professional growth.

SMART technologies create additional opportunities for reflective activity. Students can maintain electronic portfolios, record and analyse lessons, receive digital feedback, conduct online self-assessments, compare planned and achieved outcomes, and monitor the dynamics of their professional development.

Self-assessment should not be limited to identifying mistakes. It should encourage students to understand their achievements, recognise available resources, set realistic professional goals, and develop strategies for self-improvement.

The effectiveness of reflective self-assessment depends on clearly defined criteria, constructive feedback, psychological safety, and students' willingness to evaluate their own activity objectively.

Creative and Digital-Psychological Readiness

The contemporary primary school teacher is expected to respond creatively to changing pedagogical situations, design engaging learning activities, adapt educational resources, and encourage pupils' initiative and independent thinking.

Creative competence develops when students are given opportunities to solve open-ended problems, propose alternative teaching approaches, design original educational materials, and evaluate different solutions to pedagogical challenges.

SMART technologies broaden the creative potential of education by providing access to multimedia content, virtual simulations, digital storytelling tools, interactive platforms, and collaborative project environments.

Nevertheless, the abundance of digital resources may also cause information overload, reduced concentration, anxiety, and dependence on ready-made materials. Therefore, the development of digital-psychological readiness is particularly important.

Digital-psychological readiness involves the ability to adapt confidently to technological change, critically evaluate digital information, manage online workloads, maintain emotional stability, protect personal data, and use technologies in accordance with ethical and pedagogical requirements.

A future teacher should be able to perceive digital technologies not as a source of psychological pressure but as manageable professional tools. This requires gradual familiarisation with digital environments, appropriately structured learning tasks, methodological guidance, emotional support, and opportunities to gain positive practical experience.

Conclusion

The development of the professional competence of future primary school teachers is a multidimensional pedagogical and psychological process. Its effectiveness depends on the integration of professional knowledge, methodological skills, intrinsic motivation, communicative readiness, reflective self-assessment, creativity, practical experience, and digital competence.

SMART technologies create significant opportunities for improving professional preparation, personalising education, organising interactive learning, providing immediate feedback, and supporting reflective development. However, their effectiveness is determined not by the mere availability of technological tools but by their pedagogically appropriate and psychologically grounded application.

Therefore, higher pedagogical education institutions should establish an integrated learning environment in which future primary school teachers are able to combine theoretical knowledge with practical experience, develop professional motivation, improve methodological thinking, participate in meaningful communication, evaluate their own activity, and use digital technologies creatively and responsibly.

Such an approach contributes to preparing professionally competent, reflective, adaptable, creative, and digitally capable primary school teachers who can respond effectively to the changing requirements of contemporary education.

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