Safari, P., & Pourhashemi, M. R. (2022). Semiotic analysis of cultural representations in Iranian English textbooks. Contemporary Educational Researches Journal, 12(4), 226–245. https://doi.org/10.18844/cerj. v12i4.8484

Sahin, F., Adıgüzel, S., & Nibat, G. C. (2021). Examining pre-service science teachers' diagnostic question preparation skills on Seasons, climate, and weather movements. International Journal of Innovative Research in Education, 8(2), 54–77. https://doi.org/10.18844/ijire.v8i2.5411

Sengupta, N., & Ghosh. (2019). Traditional knowledge in modern India. Springer India. https://link.springer.com/content/pdf/10.1007/978-81-322-3922-2.pdf

Singh, R., Sharma, R.K., Babu, S., et al. (2020). Traditional Ecological Knowledge and Contemporary Changes in the Agro-pastoral System of Upper Spiti Landscape, Indian Trans-Himalayas. Pastoralism 10, 15. https://doi.org/10.1186/s13570-020-00169-y

Souther, S., Colombo, S., & Lyndon, N. N. (2023). Integrating traditional ecological knowledge into US public land management: Knowledge gaps and research priorities. Frontiers in Ecology and Evolution, 11, 988126. https://www.frontiersin.org/articles/10.3389/fevo.2023.988126/full

Tavoosy, Y., & Jelveh, R. (2019). Language teaching strategies and techniques used to support students learning in a language other than their mother tongue. International Journal of Learning and Teaching, 11(2), 77–88. https://doi.org/10.18844/ijlt.v11i2.3831

United Nations (2017) Resolution adopted by the General Assembly on 6 July 2017, Work of the Statistical Commission pertaining to the 2030 Agenda for Sustainable Development

United Nations Educational (2022), Scientific and Cultural Organization. Education for Sustainable Development. https://en.unesco.org/themes/education-sustainable-development.

Vilesov E.N. et al., (2009). Physical geography of Kazakhstan. Kazakh Universiteti. Almaty.

Waheeb, S. A. (2023). Environmental and cultural sustainability of the architectural elements of two historical mosques in historic Jeddah. Journal of Umm Al-Qura University for Engineering and Architecture, 14(1), 26-35. https://link.springer.com/article/10.1007/s43995-022-00011-z

Yang, R. (2023). Embracing Western values while cleaving to traditions: Experiments of the Chinese idea of a university at Peking and Tsinghua. Discourse: Studies in the Cultural Politics of Education, 44(3), 348-363. https://www.tandfonline.com/doi/abs/10.1080/01596306.2023.2200074

IRSTI 14.07.09

DOI10.51889/2960-1649.2023.15.3.002

G. ABDIKARIMOVA*, G. KAMIYEVA

Abai Kazakh National Pedagogical University (Almaty, Kazakhstan) e-mail: g.abdikarimova@abaiuniversity.edu.kz

CHARACTERISTICS OF FOSTERING AN INNOVATIVE MINDSET IN THE PEDAGOGICAL ABILITIES OF A BIOLOGIST

Abstract

The article explores the potential applications of incorporating elements aimed at fostering an innovative approach within the pedagogical expertise of biologists. This involves honing diverse skills and paying particular attention to seminars, especially when preparing students in the field of biology for pedagogical proficiency. Given the contemporary landscape of digital education, there exists a plethora of opportunities for autonomously addressing developmental needs and requirements.

Adhering to modern demands, it becomes significantly crucial to impart the utilization of innovative methodologies during technology-oriented lessons that strive to impart knowledge of superior quality to society. In pursuit of this objective, the article concludes by studying methods devised by students during seminar sessions. Throughout the lesson, students concentrate on exploring and assessing the extent to which filler words are employed, devising strategies to eliminate them, comparing week-to-week outcomes, and presenting these findings according to a set schedule.

To substantiate these matters with concrete evidence, the article suggests documenting students' efforts throughout several sessions. This documentation encompasses scenarios involving collaborative work, the reinforcement of skills within seminar settings through diverse techniques, drawing attention to the development of focus from the outset of experiments, employing a collection of stickers for reflective analysis, and evaluating the

teacher's language during the conceptual formation phase. As the seminar concludes, a comprehensive summary of the lesson is provided, leading to overarching conclusions and recommendations.

Keywords: skills, innovation, trajectory, pedagogical methodology, attentiveness, proficiency, reflection.

Introduction. The imperative to optimize the education system for the advancement of global civilization is an escalating concern. Achieving alignment with universal cultural values and environmental consciousness necessitates the cultivation of innovative trajectories within educational and developmental paradigms. The custodian of this transformative endeavor is undoubtedly the educator. As aptly articulated by Y. Altynsarin (Tekesbaeva & Tekesbaeva, 2019), a proficient teacher holds paramount significance, for within the crucible of pedagogical practice resides the heart of academia. It is pertinent to note that the purview of effective instruction extends beyond the mere acquisition of pedagogical proficiency, transcending into the realm of authentic self-expression. Manifested succinctly as "Be yourself," this philosophy underscores the educator's ultimate purpose: the holistic cultivation, refinement, and advancement of their students' future (Buzaubakova, 2005).

Central to this endeavor is the imperative of nurturing the pedagogical competence of instructors, with the primary objective being the grooming of students equipped to navigate complex societal interactions and dynamically engage with the contemporary currents of education (Van den Beemt et al., 2022). The conventional archetype of the teacher as a "disseminator of knowledge" has evolved into an orchestrator of the learning milieu, a proficient manager of scholastic dynamics, and an architect of conditions conducive to comprehensive cognition. This recontextualization engenders the notion that students should embark on the journey of self-directed learning. It is paramount to emphasize that this transition does not undermine the pivotal role of educators; instead, it heralds a paradigm shift in their responsibilities. The teacher metamorphoses from a repository of knowledge into a navigator, guiding students through the intricate labyrinth of knowledge acquisition (Nazarova, 2018; Noh & Kim 2019).

Concomitantly, the evolution of educational content hinges intricately upon the artistic prowess of educators in their pedagogical pursuits.

A masterful teacher's toolkit encompasses an eclectic array of instructional methodologies. Proficiency therein empowers the educator to deftly convey complex subject matter, adeptly tailor tasks to varying cognitive thresholds, and seamlessly oscillate between traditional and avant-garde pedagogical strategies. Mastery extends to seamlessly integrating instructional tools, and strategically orchestrating tasks to foster inquiry and exploration, thus nurturing students' innate aptitude while fomenting an enduring passion for the subject matter (Bertagina, 2021).

Validation for these propositions is buttressed by the insights garnered from scholarly analyses of educational reforms within the nation. Evidenced by prevailing scientific discourse, educational reforms currently underway underscore the imperative of revitalizing curricular content across all tiers of instruction, transitioning from a trajectory of linear growth to one marked by holistic, sustainable development (Peters et al., 2022). These reforms herald a paradigm shift in instructional methodologies, fostering novel perspectives and cultivating innovative dispositions. This transformative paradigm encapsulates overarching commitment an to pedagogical excellence, demanding both adeptness in implementing evolving standards and a proactive drive to engender qualitative advancements. Recognizing the pivotal role of educators in the transformative evolution of educational content, concerted efforts are directed toward enhancing the pedagogical acumen of the teaching cohort (Teacher's Guide (second "Nazarbayev Intellectual Schools" Center of Pedagogical Excellence. 2015).

Henceforth, in the preparation of students within the domain of biology for the acquisition of pedagogical aptitude, it would be suboptimal to espouse Confucius's dictum: "Tell me, and I will forget; show me, and I may remember; involve me, and I will understand."

Main part. *Purpose of study:* The principal aim of this inquiry is to ascertain the distinctive attributes characterizing the evolution of

the innovative trajectory encompassing the pedagogical competence specific to the realm of biology.

Scientific Significance of the Article. The inherent value of this scholarly exposition lies in the meticulous delineation of the nuanced facets governing the maturation of the pioneering orientation inherent to the pedagogical dexterity exhibited by practitioners within the sphere of biology.

Pedagogical Competence denotes the proficient orchestration of professional duties by a practitioner (Caena & Redecker, 2019). It entails an exhaustive apprehension of the intricacies inherent to the vocation, coupled with an adept mastery thereof at an elevated echelon. Mastery, in this context, constitutes an amalgamation of individual attributes that empowers an educator to execute their professional obligations at an elevated standard.

Talent is the zenith of expertise, representing the consummate amalgamation of human volition and inventive prowess (Gallardo-Gallardo, 2018). Talent exemplifies an intrinsic valuation of the child, culture, and creativity.

Safeguarding the pristine sanctity of the childhood milieu in environmental terms. Proficiently engaging with the curricular content and instructional paradigms. Commanding innovative pedagogical methodologies.

Emanating an educator who cultivates affirmative interrelations within their social milieu, concurrently fostering a nurturing ecosystem conducive to the holistic advancement of the child.

Literature Review. Within the realm of scholarly inquiry, the conceptual underpinnings of creativity have emerged and undergone systematic examination during the 19th and 20th centuries. The essence of creativity is encapsulated in its etymology, signifying an act of revelation or innovation. Creativity is the generative process that engenders both tangible and intangible cultural artifacts (Flanagan, 2021). The personal attributes of creative individuals, the manifestation of innate aptitude and sagacity, and the varying strata of creative capabilities have garnered scientific scrutiny. A spectrum of scholars have delved into the realms of psychological exploration. Notably, within

the Kazakhstani context, the contributions of Sabyrov (1999) have probed diverse facets of personality development and creative expression.

Creativity, innately inherent within every individual, becomes particularly conspicuous during childhood, as the youthful mind ardently engages in imaginative play and fanciful ideation. This mode of cognitive enterprise encompasses an array of activities that yield qualitative material and spiritual manifestations, catering to multifarious societal needs. Creative cognition, characterized by novel modes of thinking, engages in the resolution of hitherto uncharted predicaments.

The etymological origins of "creativity" underscore its intrinsic association invention and innovation. The phenomenon is construed as an elevated form of human agency, encapsulating autonomy and imaginative faculties. However, no standardized formula exists to unearth optimal solutions for the gamut of pedagogical scenarios that educators encounter. Esteemed scholar Zharykbaev & Kaliyev's (1995) affirmation resounds: An individual harboring a creative intellect is one who confronts challenges autonomously, devoid of reliance on pre-established methodologies.

Turgynbaeva (2012), in her monographic elucidation, propounds that creativity constitutes a purpose-driven endeavor with inherently problematized attributes, yielding both tangible and abstract achievements by synthesizing myriad internal linkages. Noteworthy voices in the discipline, have collectively contributed to an explication of creative potential, characterizing it as the repository of knowledge, skills, and behaviors that underpin adaptive responses to novel contexts. It is this resource that spawns innovation and novel outcomes, whilst serving as a conduit for personal development and self-actualization.

Pedagogical creative potential constitutes a defining aspect of an individual's identity, an ethos shared by Nurakhmetov & Petrusevich (2019). This perspective illuminates creativity as a dynamic process that enables the fortification of an individual's cognitive and social prowess. The creative potential of educators is founded upon a comprehensive nexus of knowledge and competencies, honed through the calibration

of pedagogical practice. The cultivation of novel sensibilities is fostered through continual engagement with the zeitgeist and the cultivation of elevated cognitive faculties. Pertinently, the confluence of natural and social attributes engenders creative self-cultivation, an imperative prerequisite for autonomous decision-making (McLaughlan, 2023).

A symbiotic relationship between "creativity" and "ability" emerges, as underscored by Tazhibaev (1962), who positions "ability" as an inherent individual attribute manifesting in effective execution within a specific domain of activity. The interconnectedness of development, wherein biological, societal, and child-specific factors coalesce to shape the creative landscape. Creativity permeates an individual's cognitive faculties, operational activities, artistic creations, and the enlivening substance of material existence (Zhalmukhanova, 2018).

Materials and methods. The present investigation brings to the fore the pivotal role of creativity within the sculpting of the prospective archetype of an educator, in delineating the distinctive contours governing the evolution of the innovative trajectory underpinning the pedagogical acumen specific to biologists. In the contemporary milieu, every societal framework confronts the imperative of conceptualizing a bespoke "specialist model" or a professional profile attuned to the exacting requisites posed by specialized roles.

According to Slastenin & Podymova, (1997), the rubric of a teacher's professional profile encompasses a multifaceted assemblage:

A cogent comprehension of the societal political milieu.

The amalgam of social-psychological, ethical-pedagogical, and personal attributes is intrinsic to the educator.

The nexus of psychological and pedagogical preparation.

Attainment of professional training.

Profound grounding in the subject matter of instruction.

These attributes find their origin within the broader contours of pedagogical requisites that undergird effective instructional practice (Mukhamedzhanova, 2006).

Participants. The study's participants included teachers and students in a selected school in Kazakhstan.

Data collection tool. The study collected data through the observation method. The researchers observe studying methods devised by students during seminar sessions.

Data analysis. Throughout the lesson, the researchers concentrate on exploring and assessing the extent to which filler words are employed, devising strategies to eliminate them, comparing week-to-week outcomes, and presenting these findings according to a set schedule. To substantiate these matters with concrete evidence, the article suggests documenting students' efforts throughout several sessions.

Results and discussion. In the context of cultivating pedagogical eminence, it is imperative to duly account for the instructor's adherence to disciplinary norms and stipulated standards. To this end, a comprehensive assessment of the frequency of acronym deployment among biology students enrolled at the Institute of Natural Sciences and Geography was undertaken within the ambit of seminar sessions. The observational scrutiny encompassed scrutiny of the extent of acronym utilization among secondyear students majoring in Biology throughout the seminar module. The outcomes derived from this empirical exploration distinctly unveil noteworthy patterns in the usage of acronyms. Particularly germane is the analysis of the amassed data presented herein, prominently exhibited within Table 1, elucidating the trajectory of students' acronym usage during the inaugural seminar.

Table 1. Students' acronym usage during the inaugural seminar.

No	Student	That's it	This one
1	Ibraeva Gulbanu	10	5
2	Tasheva Saltanat	7	4
3	Jakyp Daulet	12	9

Subsequently, with the intent of mitigating the prevalence of these conventional expressions, an instructional intervention was administered wherein students were directed to engage in the recording of their pedagogical discourse via a combined video and audio medium, subsequently subjecting themselves to its auditive review. The salient outcome stemming from this pedagogical

maneuver was a discernible diminution in the utilization of the identified clichés. This transformative approach is detailed in Table 2, which delineates the measure of students' reliance on acronyms throughout the proceedings of the third seminar session. Table 3 displays the level of students' use of acronyms during teaching in the seventh seminar.

Table 2. The measure of students' reliance on acronyms in the third seminar session.

No	Student	That's it	This one
1	Ibraeva Gulbanu	5	3
2	Tasheva Saltanat	4	2
3	Jakyp Daulet	6	5

Table 3. The level of students' use of acronyms during teaching in the seventh seminar.

No	Student	That's it	This one
1	Ibraeva Gulbanu	2	1
2	Tasheva Saltanat	2	1
3	Jakyp Daulet	3	2

The application of biological methodologies in the elucidation of the analytical deductions ensuing from the aforementioned observations yielded substantial utility, particularly encompassing:

The Control Method

The Comparison Method

The Historical Method

The Experimental Method

Moreover, the confluence of diverse modalities and technological tools contributed significantly, with particular salience accorded to the following:

Critical Thinking

Tiered Training

Collaborative Techniques such a

Brainstorming, Bingo, Five Fingers

Presentation Strategies

Dialogic Pedagogies

Visual Modalities

E-textbook Resources Audio-Visual Materials

ICT-Enhanced Pedagogical Tools

Simultaneously, within the seminar milieu, it became evident that substantial outcomes were attainable through a meticulous analysis of lesson dynamics, centered on the constituents inherent to the pedagogical approach. In the endeavor to present these propositions grounded in empirical veracity, an appraisal of students' efforts over a series of instructional sessions was undertaken. Manifested through the accompanying depictions, a trajectory of tasks calibrated to augment students' proficiencies during pedagogical engagement is discernible. The visual materials (picture 1) encapsulate the evolutionary progression of these pedagogical interventions aimed at skill enhancement within the instructional realm.





Picture 1- Students are studying in a seminar class using different methods.

In the preceding context, the depicted scenario underscores students' active engagement in collaborative group tasks, thereby imparting wisdom to observers while experiential engendering the cultivation of self-regulatory methodologies within the student body (Yik et al., 2022). This pedagogical endeavor aligns with the cardinal aspiration of fostering selfmastery techniques, aimed at instilling a state of equanimity during professional engagements, engendering aptitude in relaxation techniques, nurturing intrinsic self-training propensities, and inculcating a readiness for benevolent contributions and optimistic work appraisal. The purview of self-mastery techniques encompasses a spectrum of modalities such as occupational therapy, music therapy, bibliotherapy, and simulation games, among others.

The subsequent focus coalesces around the essential considerations pertinent to concentration-enhancing exercises. In substantiation of this perspective, reference is drawn to instructional interventions rendered by educators within the seminar milieu.

The ensuing tableau (picture 2) unfolds as an exploration of methodologies designed to captivate learners' attention. Central to this discourse is the act of concentrating on specific objects, images, or ideas for delineated durations, wherein two classifications emerge: voluntary and involuntary attention. A pedagogue endowed with honed attentional and concentrative faculties possesses the discernment to grasp the concurrent undertakings of students within the classroom milieu.





Picture 2- Students are doing experiments to focus their attention in the seminar class

At the same time, you can see the reflection of students on the lesson during the seminar (picture 3).

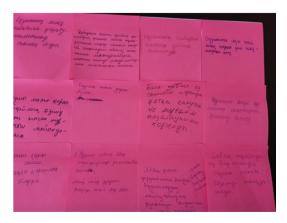


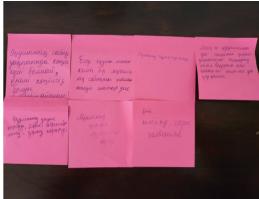


Picture 3- Students analyzing reflection in a seminar class.

Consequent to the comprehensive analysis of inscribed on the affixed stickers, as provided by reflective processes within the seminar lesson, we hereby present the collated information

the participating students.





Picture 4. The results of the students' thoughts written on the stickers made for reflection during the seminar are shown.

Through a meticulous examination of sentiments expressed on the affixed stickers, several discernible conclusions have been deduced, elucidating students' apprehensions vis-à-vis their responses. These conclusions encompass:

Apprehension about students' lack of engagement and interest in the instructional content.

Concerns related to students' potential aversion towards the educator, accompanied by the prospect of encountering challenging inquiries.

Unease surrounding instances of student vocal escalation and the display of unfavorable conduct within the learning environment.

Embedded within these insights is the ability to glean a contemporary perspective on learners' emotional dispositions during pedagogical interactions. The prevalent surge of negative occurrences disseminated across social media platforms significantly impacts students, thereby underscoring the imperative for rigorous attention not solely to the transference of knowledge but also to the cultivation of adept pedagogical skills within instructional contexts (Bakir & Alsaadani 2022; Panckhurst & Marsh 2011; Abdullahi 2023). Consequently, the acquisition of preparedness to navigate a multifarious array of scenarios assumes an exigent role in line with the exigencies of the contemporary era.

Additionally, Picture 4 furnishes an illustrative exposition of the reflective analysis aimed at nurturing heightened pedagogical attentiveness. The cultivation of advanced pedagogical attentiveness underpins the faculty to concurrently retain multiple objects of focus

while perpetuating unwavering and immediate cognitive engagement (De Leng & Pawelka 2020).

Essentially, the crux of the educator's role entails the systematic, consistent, and authentic augmentation of professional aptitude. Guided by the maxim "Professional development is the synergy of experience and reflection," an instructional practitioner is enjoined to meticulously scrutinize and evaluate each lesson, scrutinizing areas warranting refinement through a rational lens. This deliberate process engenders the dexterity to discern optimal strategies for the enhancement of individualized pedagogical expertise.

Within the seminar class context, a pedagogical session is convened, featuring the engagement of an esteemed Uzbek guest, delineating the thematic purview of cultivating the concept encapsulating the essence of pedagogical discourse (Picture 5).

The discourse of the teacher's speech is a dynamic conduit through which the instructor's attributes find articulation, revealing significations embedded in objects, phenomena, and relational dynamics, thereby fostering the development of students' characteristics. Pedagogical engagements play a pivotal role in shaping the teacher's professional orientation, enhancing pedagogical methodologies, and facilitating the attainment of targeted outcomes. The spectrum of pedagogical competencies both internal encapsulates external and proficiencies that permeate the teacher's practice. Notably, particular emphasis is directed toward the teacher's external demeanor encompassing





Picture 5- seminar class context encapsulating the essence of pedagogical discourse.

sartorial choices, conduct, facial expressions, and nonverbal communication. Of paramount significance, the teacher's "personal qualities" exert a profound influence on the efficacy of pedagogical endeavors. These qualities, notably encompassing ambition, perseverance, industriousness, humility, attentiveness, restraint, empathy, tact, open-mindedness, and integrity, assume concrete importance in the educational context (Sadirbekova, 2018).

Other scholars who complement this idea, returning to Schön's roots in Dewey, define reflective thinking as "the active, constant, and careful consideration of any belief or assumed form of knowledge in light of the grounds and subsequent conclusions that support it". In other words, reflective thinking involves drawing conclusions, generalizing, and using reflection on the past to stimulate reflection on the future—and ultimately, shaping future action through the development of reflection Schön's action. Conceptualization and implementation of reflective practice in teaching and teacher education have been criticized for lack of theoretical and conceptual clarity; being free when it becomes a compulsive ritual; and insufficient attention to issues of context and relevance. (Segal, 2023).

A synthesis of various studies underscores that a quintessential aspect of the teacher's role is that of a manager. The capacity for managerial competence ought to be extensively cultivated through pragmatic undertakings. The characterization of managerial competence is an amalgamation of knowledge, skills, and capabilities inherent to individuals (Tusupbekova, 2020).

Control, within the teacher's managerial purview, emerges as a salient facet, encapsulating the determination and appraisal of students' cognitions, proficiencies, and behavioral patterns (Baikulova et al., 2021).

Conclusion. The utilization of innovative technologies by educators, driven by the commitment to meet educational requisites, plays a pivotal role in shaping a requisite threshold of knowledge attainment. The dynamic and captivating trajectory of pedagogical instruction hinges upon the teacher's perpetual quest for rational methodologies, propelling the evolution and rejuvenation of pedagogical practices. Contemporary biology educators harness novel methods and platforms during instructional sessions to engender both the quality and engrossing nature of lessons. This orientation is substantiated by the modern educational landscape's emphasis on individual interests, fostering students' capacity to make informed choices, exercise independent decision-making, and engage responsibly within society.

To actualize this endeavor, the pursuit of enhancing educational quality encompasses a crucial dimension: ensuring equitable access for all stakeholders in the educational process to premium educational resources and technologies. This objective seeks to address students' educational needs that will equip them for success within the rapidly evolving global landscape.

Innovation stands as an imperative to meet these demands. It is defined as the introduction of novelty into educational and instructional endeavors, engendering fresh methods, techniques, and tools alongside their practical application. Within the discourse of innovation, varied definitions have been offered by scholars. For instance, E. Rogers underscores innovation as "an idea that is novel to a specific individual." Likewise, Miles posits that "innovation embodies a distinct new transformation, one that is projected to advance systematic objectives and solutions."

The conceptual purview of "innovation" has long been integrated into pedagogical discourse, and its characterizations range from "novel" to "transformative" across scholarly works. This term's usage resonates widely in educational theory and praxis; however, the scientific community has yet to offer a definitive, comprehensive definition. Many extant definitions fall short of imparting an allencompassing understanding.

Our analyses are guided by Ryan and Deci's Self-Determination Theory framework. Ryan and Deci posit that students' levels of engagement, and resultant learning outcomes are largely determined by the degree to which their core psychological needs have been met: feelings of autonomy, connectedness, and competence. Supportive social conditions that facilitate student autonomy and peer connection increase perceived ownership of learning activities, intrinsic desire to learn and participate, and higher-level thinking. This sense of autonomy increases feelings of competence and satisfaction, and decreases stress, but must be accompanied by adequate scaffolding and instructor support. Through this mechanism, connectedness, autonomy, and competence have been consistently associated with student engagement and learning outcomes among undergraduate students in various fields.

Nonetheless, central to the new pedagogical paradigm is the creation of a platform that fosters the development of individual personality traits among students. This paradigm accentuates the humanitarian ethos of education, wherein individuals transcend being mere objects of study to become agents of creativity and knowledge, motivated by an innate drive for artistic expression.

Thus, the strategic integration of diverse forms of games within seminar settings assumes paramount significance in nurturing students' traits. Corroborating this assertion, the research of American educator Edgar Dale attests that retention rates are approximately 20% for auditory input, 30% for visual input, and 70% for tactile and participatory engagements.

Zh. Abiev, S. Babaev, and A. Kudiyarova assert that the imperative of pedagogical activity within the ambit of contemporary education, socio-cultural evolution, and innovation development in pedagogical practice is underscored by multifarious conditions (Torybaev et al., 2021).

Recommendations. Primarily, the ongoing socioeconomic transformations within society necessitate a profound overhaul of the educational system, methodological approaches, and technological frameworks that underpin diverse educational institutions. These reframing positions pedagogical innovation as a tool for rejuvenating the educational policies of biology instructors, grounded in creation, mastery, and application.

Secondly, the heightened humanization of educational content, coupled with the dynamic evolution of subject domains and the introduction of novel disciplines, engender an unceasing quest for novel collaborative forms and instructional technologies. This dynamic reinforces the elevated standing and reputation of pedagogical education among educators.

Thirdly, the disposition of biology educators towards embracing and incorporating pedagogical innovations into their practices has evolved. While the past saw innovation-oriented activities primarily executed through practical applications of prevailing innovations, the contemporary milieu necessitates a more profound engagement characterized by alternative and research-driven approaches. In this context, educational administrators' activities should encompass the evaluation and appraisal of teachers' introduced innovations, alongside fostering a conducive environment for their implementation and utilization.

To achieve this, Reflective journal writing constructs and expands pre-service teachers' understanding of their teaching. Reflective journals serve as a personal space for pre-service teachers to clarify their thinking processes and to create a connection between their theoretical knowledge and the real classroom.

Fourthly, the integration of general education institutions into market dynamics and the proliferation of non-state educational entities within new instructional paradigms have engendered a palpable competitive environment.

Hence, as innovative biology educators adeptly harness diverse innovative approaches and platform methodologies within educational frameworks, the quality of instructional sessions is poised for marked enhancement.

References

Abdullahi, N. J. K. (2023). Social network sites and professional development of lecturers. International Journal of Learning and Teaching, 15(1), 18–32. https://doi.org/10.18844/ijlt.v15i1.8312

Baikulova, A. M., Amanova, A. K., & Jumazhanova, G. K. (2021). Bolaşaq müğalimderdiñ basqaruşylyq qüzyrettiligin qalyptastyru. Bulletin of Toraygyrov University, Pedagogical Series, 4.

Bakir, R., & Alsaadani, S. (2022). What, who, and when? How social networking achieves online digital engagement in an architectural design studio. J. Eng. Appl. Sci. 69, 56. https://doi.org/10.1186/s44147-022-00101-8

Beauchamp C. (2015). Reflection in teacher education: Issues emerging from a review of current literature. Reflective Practice, 16(1), 123-141. https://doi.org/10.1080/14623943.2014.982525

Bertagina, A. A. (2021). Updated Knowledge as a Guarantor of the Future: Proceedings of the International Scientific and Practical Conference "Pedagogical Heritage of Ibray Altynsarin". Aktobe, Aktobe Regional University, 211-213.

Buzaubakova, K. (2005). Formation of Innovative Pedagogical Competencies: A Study in Kazakhstan School Context. Kazakhstan School, 11-12, 27-29.

Caena, F., & Redecker, C. (2019). Aligning teacher competence frameworks to 21st century challenges: The case for the European Digital Competence Framework for Educators (Digcompedu). European journal of education, 54(3), 356-369. https://onlinelibrary.wiley.com/doi/abs/10.1111/ejed.12345

De Leng, B., & Pawelka, F. (2020). The use of learning dashboards to support complex in-class pedagogical scenarios in medical training: How do they influence students' cognitive engagement? RPTEL 15, 14 https://doi.org/10.1186/s41039-020-00135-7

Flanagan, P. J. (2021). Making Tangible the Intangible Gestures of Craft. Contactless Human Activity Analysis, 293-333. https://link.springer.com/chapter/10.1007/978-3-030-68590-4 11

Gallardo-Gallardo, E. (2018). The meaning of talent in the world of work. Global talent management, 33-58. https://www.taylorfrancis.com/chapters/edit/10.4324/9781315200170-3/meaning-talent-world-work-evagallardo-gallardo

McLaughlan, T. (2023). International undergraduates' perceptions of social engagement in online and face-to-face learning environments: a photo-elicitation approach to thematic analysis. Smart Learn. Environ. 10, 11 https://doi.org/10.1186/s40561-023-00230-4

Mukhamedzhanova, A. (2006). Mechanisms of Using Innovative Pedagogical Technologies. School of Kazakhstan, 4, 14-16.

Nazarova, N. M. (2018). Factors and Trends in Professional Training for Special Education Personnel in Russian Federation Universities. Special Education, 11, 5-11.

Noh, G.O., & Kim, D. (2019). Effectiveness of a self-directed learning program using blended coaching among nursing students in clinical practice: a quasi-experimental research design. BMC Med Educ 19, 225 https://doi.org/10.1186/s12909-019-1672-1

Nurakhmetov, S. T., & Petrusevich, A. A. (2019). Pedagogicheskoe soprovozhdenie professional'no-lichnostnogo stanovleniya budushchego oficera v usloviyah vzaimodejstviya s voenno-professional'nym soobshchestvom. Human Science: Humanistic Studies, (1), 112-116. https://elibrary.ru/item.asp?id=37282703

Panckhurst, R., & Marsh, D. (2011). Using Social Networks for Pedagogical Practice in French Higher Education: Educator and Learner Perspectives. Revista de Universidad y Sociedad del Conocimiento 8, 253–271. https://doi.org/10.7238/rusc.v8i1.961

Peters, M., Elasri Ejjaberi, A., Jesús Martínez, M., & Fabregues, S. (2022). Teacher digital competence development in higher education: Overview of systematic reviews. Australasian Journal of Educational Technology, 38(3), 122–139. https://doi.org/10.14742/ajet.7543

Sabyrov T. (1999). Bolashaq mugalimderdin didaktikalyq daiyndygyn jetildiru [Improving the didactic training of future teachers]. – Almaty: RBK. – 83 b. [in Kazakh]

Sadirbekova, D. K. (2018). Formation of Managerial Competence of Future Teachers. Doctoral Dissertation, Almaty. Segal, A. (2023). Rethinking Collective Reflection in Teacher Professional Development. Journal of Teacher Education, 00224871231188702. https://journals.sagepub.com/doi/abs/10.1177/00224871231188702

Slastenin, V. A., & Podymova, L. S. (1997). Pedagogy: innovative activity. M.: Master.

Tazhibaev, T. T. (1962). Prosveshchenie i shkoly Kazakhstana vo vtoroi polovine XIX veka. [Education and schools of Kazakhstan in the second half of the 19th century].

Teacher's guide (second edition) "Nazarbayev Intellectual Schools" Center of Pedagogical Excellence. (2015). 33.

Tekesbaeva, A. M., & Tekesbaeva, G. M. (2019). Bastauysh synyp oqushylarynyn dγnietanymyn qalyptastyruda Ybyrai Altynsarin shygarmalarynyn manyzy. Bulletin of WKSU, (2), 76-83. https://elibrary.ru/ item.asp?id=45668408

Turgynbaeva, B. A. (2012). Development of potential of future teachers: professional creative way. Almaty: Polygraphy-service K°.

Tusupbekova, G. T. (2020). Methodology of Teaching Biology: Targeting in Teaching. Almaty: Lantar Trade, 223.

Van den Beemt, A., Groothuijsen, S., Ozkan, L., & Hendrix, W. (2022). Remote labs in higher engineering education: engaging students with active learning pedagogy. Journal of Computing in Higher Education, 1-21. https://link.springer.com/article/10.1007/s12528-022-09331-4

Yik, B.J., Raker, J.R., Apkarian, N. et al. (2022). Evaluating the impact of malleable factors on percent time lecturing in gateway chemistry, mathematics, and physics courses. IJ STEM Ed 9, 15 https://doi.org/10.1186/ s40594-022-00333-3

Zhalmukhanova, B. Kh. (2018). Methodological Toolkit "Methods Employed in Educational Work under the Updated Educational Program". Atyrau.

Zharykbaev, K., & Kaliyev, S. (1995). Anthology of educational thought in Kazakhstan-A.". Almaty: Rauan.

IRSTI: 17.71.07 DOI 10.51889/2960-1649.2023.15.3.003

H.K. CHENGEL 1, U.N. ZHANBERSHIEVA 2, K.T. KUDAIBERGENOVA3*

¹Haji Bayram Veli University (Ankara, Turkey) ^{2,3}Korkyt Ata Kyzylorda University (Kyzylorda, Kazakhstan) email: kkunimzhan@mail.ru

A LOOK AT NATIONAL EDUCATION IN THE WORKS OF THE STORYTELLER TURMAGAMBET IZTILEUOV

Abstract

In literary studies, we see that research on the works of Syr region storytellers has led to the joint writing of various new directions. The article reveals the scenes of national education and cognitive foundation in the works of Syr region storyteller T.Iztleuov. In other words, the influence of national education on the psyche of the nation, its mental attitudes, and imagery in a broad concept is taken entirely and interpreted as a pledge of education.It provides for the formation of the worldview of the younger generation, and the education of patriotism. It follows from this that the examples and aitys, the poems of T. Iztleuov are a poetic expression of the spirit of the nation. The culture, history, and education of the nation as a whole are preserved in the works of Syr region storytellers. It is also established that one of the main functions of education is morality. Therefore, taking the education of a person as an object, considering him in a scientific system, and taking into account the need to study his cognition and thinking depending on psychological units and didactic concepts, in our article we set a goal to analyze their paradigms.

Keywords: materials, cognition, national worldview, semantic paradigm, didactics, spiritual wealth, national spirit, edification, propaganda-commandment, world civilization.

and cultural ties are a treasure of spiritual value, which have been enriching the world of the soul and the world with the teachings of morality generations. Today, every nation is returning special place in regional literature, plays a special

Introduction. We all know that art, literary to its spiritual values and giving reasonable education to its children. On this occasion, it is remembered that our forefathers practiced their thoughts and commandments in the field of and faith in the centuries, old history of human education. It is clear that T. Iztileuov, who has a