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Olga POLIAK, PhD (Ped.), Assoc. Prof.

ORCID ID: 0000-0002-1981-4536

e-mail: poliak.olga78@knu.ua

Taras Shevchenko National University of Kyiv, Kyiv, Ukraine

MODERN STANDARDS OF HIGHER EDUCATION PEDAGOGY: XXI CENTURY LEARNING

Background. Modern standards of pedagogy in higher education prioritise student-centred approaches, integration of technology, active learning, personalised learning, critical thinking, collaboration and creative problem solving. These skills are essential for students to navigate an increasingly complex and interconnected world. Instead of focusing solely on memorisation and rote learning, educators encourage students to analyse, evaluate and synthesise information. They provide open-ended problem-solving opportunities that allow them to think critically, approach problems from different angles, and develop innovative solutions. By seamlessly integrating technology into the learning process, educators create dynamic and interactive learning environments that accommodate different learning styles and promote digital literacy skills.

Purpose and objectives. To outline the trend in contemporary pedagogy in secondary schools that embraces learner-centred approaches that prioritise active learning and personalised learning. Emphasise the effectiveness of active learning methods, such as group discussions, practical experiments and project-based learning, which encourage students to become active participants in their learning. Demonstrate that these methods will foster deeper understanding, critical thinking skills and creativity as students apply their knowledge in real-world settings.

Results. Student-centred approaches, such as active learning and personalised teaching, promote engagement, critical thinking and creativity, empowering students to take ownership of their education. Collaborative skills are developed through group projects and discussions, preparing students for life in a globalising society.

Conclusions. Modern assessment strategies emphasise flexibility and adaptability, using performance-based assessment and continuous feedback to evaluate student learning. In general, modern pedagogy in secondary schools aims to educate XXI century learners, equipping them with the necessary skills to succeed in a constantly changing world.

Keywords: pedagogy, High school, modern standards, education, XXI century, learner, teaching methods, technology integration, student-centered, active learning, personalized learning, critical thinking, problem-solving, assessment strategies, flexibility, adaptability.

Background

In the ever-evolving landscape of education, high schools play a pivotal role in shaping the intellectual and personal growth of students. To meet the unique needs of XXI-century learners, modern standards of pedagogy have emerged, challenging traditional teaching methods and emphasizing student-centered approaches. This essay explores the key components of modern pedagogy in high schools, focusing on the integration of technology, fostering student engagement, promoting critical thinking and collaboration, embracing personalized learning, implementing creative problem-solving strategies, and utilizing flexible and adaptive assessment strategies.

One of the hallmarks of modern pedagogy in high schools is the seamless integration of technology into the learning environment. In the digital age, students are increasingly technologically adept, and harnessing the power of technology can significantly enhance their educational experience. Interactive whiteboards, tablets, educational software, and online resources provide students with opportunities for immersive and interactive learning. By incorporating technology, educators can create dynamic lessons that cater to diverse learning styles, encourage active participation, and foster digital literacy skills (Mahatma Gandhi Institute of Education, 2019).

Modern pedagogy in high schools embraces student-centered approaches that prioritize active learning and personalized instruction. Active learning techniques, such as group discussions, hands-on experiments, and project-based learning, encourage students to become active participants in their education. These methods foster deeper understanding, critical thinking skills, and creativity, as students apply their knowledge in real-world contexts.

Furthermore, personalized instruction recognizes that each student possesses unique strengths, interests, and learning styles. By tailoring instruction to individual needs, educators can provide customized pathways that support student success. Utilizing adaptive learning software and data-driven analytics, high school teachers can track

students' progress and identify areas where additional support or enrichment is needed. Personalized learning empowers students to take ownership of their education and promotes self-directed learning skills (Mahatma Gandhi Institute of Education, 2019).

Literature review. High schools with modern pedagogical standards prioritize the development of critical thinking, collaboration, and creativity. These skills are essential for students to navigate an increasingly complex and interconnected world. Rather than solely focusing on memorization and rote learning, educators encourage students to analyze, evaluate, and synthesize information. They provide opportunities for open-ended problem-solving tasks, enabling students to think critically, approach challenges from different angles, and develop innovative solutions (Thornhill-Miller et al., 2023).

Collaboration is another key aspect of modern pedagogy. By engaging in group projects, discussions, and peer feedback, students learn to effectively communicate, cooperate, and appreciate diverse perspectives. Collaborative learning environments foster social skills, empathy, and cultural competence, preparing students for success in a globalized society.

Modern pedagogy in high schools places a strong emphasis on personalized learning and creative problem-solving strategies. Personalized learning recognizes that students have different interests, learning styles, and paces of learning. By providing tailored educational experiences, educators can meet students where they are and nurture their individual talents and passions.

Creative problem-solving strategies encourage students to think beyond traditional boundaries and find innovative solutions to complex problems. High school teachers foster creativity by incorporating open-ended assignments, design thinking methodologies, and real-world applications of knowledge. These strategies allow students to develop a growth mindset, embrace challenges, and become resourceful problem solvers in various domains (Cardno, Howse, & Tolmie, 2019).

Traditional assessment methods, such as standardized tests and memorization-based exams, are gradually being supplemented or replaced by more dynamic and authentic assessment strategies. Modern pedagogy in high schools embraces a broader range of assessment techniques that focus on holistic evaluation of student learning. Performance-based assessments, portfolios, projects, and presentations allow students to demonstrate their understanding and skills in meaningful ways. These assessments also encourage creativity, critical thinking, and problem-solving abilities, reflecting the real-world contexts in which students will apply their knowledge.

Flexibility and adaptability are emphasized in modern assessment practices. Recognizing that learning is a dynamic process, educators provide opportunities for ongoing feedback and revision. Formative assessments are used to gauge student progress throughout the learning journey, enabling timely intervention and personalized support. By embracing flexibility and adaptability in assessments, high schools foster a growth mindset among students and empower them to take ownership of their learning (Cummins, 2020).

It is also impossible to consider the transformation of learning in the XXIst century without also addressing formative assessment – assessment that allows the teacher to evaluate learning as it happens. Assessment for deeper understanding and comprehension competence is therefore inextricably linked to learning and should be used to inspire deeper learning. To assess deeper understanding, it is important to assess the degree to which students' knowledge is integrated, coherent and contextualised. Formative assessment, in the form of continuous feedback, will play a leading role in twenty-first century assessment. It is particularly useful for clarifying learning objectives, providing ongoing monitoring, providing feedback, responding to student progress, encouraging adaptation and improvement of learning outcomes, and engaging students in meaningful self- and peer-assessment. Formative assessment identifies gaps in learning so that they can be addressed before they lead to a more fundamental misunderstanding of knowledge or misapplication of skills. It is formative assessment tools that will play an important role in the twenty-first century classroom, providing teachers and students with clear guidance on what constitutes an acceptable level of achievement. Students also need to learn how to assess their own learning (Ala-Mutka, 2010). This will help them to master the content and improve their metacognitive skills, including the ability to learn how to learn and reflect on what they have learned. This suggests that learning improvement is best achieved through "massive customisation, efficiency and quality improvement driven by central goals, large-scale high-stakes testing, national strategies and inspection regimes". The importance of taking standards seriously and accepting what they represent, while allowing students to create personal expressions of achievement, should be emphasised.

The next step should be to redefine the role and function of the teacher, noting that highly qualified teachers have the strongest impact on student achievement, without excluding the fact that many factors influence student performance, including individual characteristics and family background. But research has consistently shown that among education-related factors, teachers are the most important. However, the role of the teacher in the twenty-first century must move away from imparting knowledge to guiding, discussing and measuring student progress. In the classrooms of the future, teachers may also take on the role of "guest professors" to support student learning. Students are now

exposed to a rich digital educational landscape outside the classroom. "People's educators" are creating vast online educational resources that include videos, testimonials, and online support. There are also numerous online tutorials and online mediation resources that allow prospective students and teachers to find each other outside of formal educational institutions.

If the primary goal of twenty-first century education is to build learners and support their development into active, independent, lifelong learners, then teachers must become "learning coaches" – a role that is very different from that of the traditional classroom teacher. Learning coaches can provide guidance to help students develop skills, but their primary role is to offer support to help students achieve their learning goals. Teachers as learning coaches will encourage students to interact with knowledge – to understand, critique, manipulate, design, create and transform it. Teachers will need to develop students' intellectual curiosity, problem identification and problem solving skills, and their ability to create new knowledge with others (Bull, & Gilbert, 2012).

Twenty-first-century teachers will not be experts in every topic in the curriculum, but will need to become experts in figuring out, with their students, "how to do something, how to learn something, or how to use something to do something new". A key part of their role will be to model confidence, openness, perseverance and commitment for students in the face of uncertainty (Bull, & Gilbert, 2012). Rather than serving solely as instructors or lecturers of personalised learning, teachers will be free to take on a variety of roles as moderators, mentors and project designers that emphasise the relevance of subject material to the real world. Teachers' roles will evolve from those who transmit knowledge to those who facilitate and organise learning. This change creates the potential for teachers to have deeper, more meaningful engagement with students and a more creative role in the design and delivery of curriculum. However, it will take time for teachers to develop their own units or access third-party learning content and incorporate these offerings into classroom activities. Teachers will also need substantial professional development to support their transformation, especially on the potential and range of social media and Web3.0 applications. Teachers also need to develop as creative individuals, co-creating knowledge with students in the classroom. Teachers will stimulate deeper interaction and articulation by guiding students to develop skills such as formulating arguments to support their positions, sharing and communicating those arguments to others through multimedia (including images, text, sound, movement, sequencing, and interactivity), constructing their own meaning, and collaborating with others to extend that meaning. Teachers also need to become learning resource coordinators and facilitators. It may be useful for teachers to experiment with new designs and strategies to be prepared to offer relevant, effective and high quality learning experiences in the future. Teachers can build better connections with colleagues (e.g. through interdisciplinary projects and modules in higher education), forge stronger links with people and organisations in their communities, and emphasise student growth through real-world research projects, improve their skills in teaching them to work together in small groups, and focus on helping students understand each discipline (or subject) as a system of thought (with its own codes, methods, strengths and limitations) rather than on the transmission of content (Bull, & Gilbert, 2012).

But, significant professional development obviously involves much more than simply adding new knowledge

and technical skills to teachers' existing repertoires. It requires them to "«paradigm shift» – to break with and replace their past ways of thinking and knowing with an entirely new understanding of their role and its purpose" (Bull, & Gilbert, 2012, p. 6). However, transforming the skills of individual teachers will not be enough. Bull and Gilbert emphasise that change needs to occur throughout the system through intentional interaction between individuals at all levels (Bull, & Gilbert, 2012, p. 8). This is an important task, and new forms of professional development will be needed to support teachers. If today's teachers are to meet the needs of twenty-first century students, they must develop not only what they know, but also how they know it. Twenty-first-century learning focuses on the need to develop students' cognitive, inter- and intrapersonal abilities. A necessary precursor to this, however, is strengthening teachers' capacity and awareness of their own learning. Bull, & Gilbert (2012) argue that any form of twenty-first century professional development must "consider and integrate both individual and organisational development". Individual learning as well as collaborative learning should be fostered as teachers progress together to develop their "communities of practice".

Conclusions, next steps and future challenges. This article has explored the many possible futures and forms of learning in the digital age, as well as pedagogical techniques to help students acquire new competencies and skills to meet the challenges of the twenty-first century. Education should prepare students to address collaborative problem-solving scenarios that are constant and have no clear solutions. Real-world challenges are very complex, often ill-defined and interdisciplinary in nature, spanning multiple domains (social, economic, political, environmental, legal and ethical). Students should be given the opportunity to reflect on their ideas, hone their analytical skills, strengthen their critical and creative thinking abilities and demonstrate initiative. In particular, the ability to evaluate new contributions and perspectives, build new capacities and strengthen autonomy will be crucial.

Many factors are driving changes in the way today's students learn. These factors may vary from nation to nation, but the idea is basically the same: education is failing to prepare students for the challenges ahead. Students are missing out on experiences that will prepare them for more satisfying lives and productive work. Countries are also missing out on opportunities to prepare young people for citizenship, and economies are suffering from a lack of innovation. The twenty-first century has enormous potential to reaffirm the role of education in preparing students to meet complex social, economic and environmental challenges.

Shifting from teacher-led to self-directed learning to self-directed learning will equip them with a range of competencies and skills needed to succeed in today's global societies. Individualised and tailored learning will help students to reach their full potential. They will be better prepared to engage with their own communities, virtually and in person, and to communicate confidently with people from different cultures, while continuing to learn throughout their lives. The increasing pace at which new developments are emerging will require young people to communicate quickly and to recognise the importance of lifelong learning. Retraining and updating competencies will allow students of all ages to adapt to new expectations in the workplace and in twenty-first century life.

Education providers need to adopt standards and curricula that are comprehensive but flexible, and focus on content that expands thinking and reasoning to prepare students to meet the challenges and pressures of

the twenty-first century. There is also an urgent need for curricula that are open to student input, interdisciplinary in focus, and effectively combine informal and formal learning. Approaches such as participation, collaborative learning, personalised learning, transferable learning, project-based learning and real-world contexts will be key to fostering this growth. Educators' commitment to lifelong learning through continuous professional development, professional learning communities and mentoring will be at the heart of this new pedagogy.

The next step is to combine all of these educational innovations and supports to improve every student. Students of the twenty-first century can expect to be part of a culture that values participation with ample opportunities to initiate, create and share their creations. They are expected to communicate and collaborate across contexts, engage in peer-to-peer learning, and develop as global citizens. Through the use of student-centred pedagogy such as problem-based, inquiry and project-based learning, students will gain insight, understanding, ability and confidence as they grapple with real-world issues and problems. Approaches that encourage students to question their own beliefs and those of their peers will enhance reflection, metacognition and the creation of new knowledge. Networked education will allow students to engage in more personalised and equitable learning opportunities, through collaboration with their own communities and teams of students separated by time and distance. Pedagogical innovations will need to equip students with the skills and competencies to operate in a digital culture, using media and informal pathways to enrich their learning and develop basic forms of literacy. Teachers will need meaningful support and time to use the resources and tools available to create personalised learning experiences that are motivating and engaging, but effective, relevant and challenging.

Education providers will still offer face-to-face learning, but this will be complemented by non-formal and virtual opportunities. Personal responsibility for learning will be important, and students will be able to have a say in what their learning profile looks like. New learning tools will be developed. Technology will support personalised learning processes and promote inclusion and equity. With the emergence of lifelong learning as the paradigm of the future, it is reasonable to expect that learning strategies and pedagogical approaches will undergo a dramatic shift and create new pathways for students of all ages and abilities. The contribution of information and communication technologies will enable more student-centred approaches, enabling personalised learning. Some have expressed concern that without more robust curricula, more engaging pedagogy, and more balanced assessment, the emphasis on twenty-first century skills will be superficial, sacrificing long-term gains for the appearance of short-term progress. These policies and practices are new, and making the transition from the current system to one that has the capacity and structures needed to succeed will require professional, organisational and political action. Ministries of education around the world must find better ways to balance their dual roles of regulatory oversight and capacity building and support. Changes need to take place not only inside classrooms, schools and central leadership, but also outside, in the community.

Results

Of course, teachers cannot change the education system on their own, nor can countries address the global shortcomings of education systems in isolation. All countries will face the consequences if today's students are not adequately prepared to collaborate and solve the world's economic, environmental, health, social and

political problems. Each nation can contribute to the global experience of how best to implement a twenty-first century education system. Countries can form alliances to find solutions to overcome the obstacles to a major overhaul of education. Each nation should explore new ideas put forward by its citizens and amplify the collective impact of the resulting innovations by addressing these challenges through regional partnerships and coalitions that take into account local needs and context. Regional inventories are needed to assess the state of policy and practice. Elements and benefits of promising practices and innovations can be shared, and those that work can be scaled up. Finally, the complex work of radical transformation of learning can be leveraged through international networks, some of which are already emerging. The role of educational institutions in the future and their ability to transform radically remain uncertain. Countries need to recognise the many reasons why twenty-first century learning needs to be different. They must critically evaluate traditional education to determine whether institutions are meeting current expectations. Every nation has a different vision of what education in the 21st century should look like. Innovations that create successful learning in one country can have a ripple effect as other countries adopt and adapt these methods for their own use. Through increased international cooperation and collaboration, each nation can participate in building a global learning network as dominant and pervasive as existing international networks in business, finance and communication.

Discussion and conclusions

Modern standards of pedagogy in high schools have revolutionized the way education is delivered, creating a

learner-centric environment that prepares students for success in the 21st century. By integrating technology, fostering student engagement, promoting critical thinking and collaboration, embracing personalized learning, implementing creative problem-solving strategies, and utilizing flexible and adaptive assessment strategies, high schools are nurturing the intellectual, social, and emotional development of students. These modern pedagogical approaches empower students to become lifelong learners, critical thinkers, and active contributors in an ever-changing world.

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Ольга ПОЛЯК, канд. пед. наук, доц.

ORCID ID: 0000-0002-1981-4536

e-mail: poliak.olga78@knu.ua

Київський національний університет імені Тараса Шевченка, Київ, Україна

СУЧАСНІ СТАНДАРТИ ПЕДАГОГІКИ ВИЩОЇ ШКОЛИ: НАВЧАННЯ ХХІ СТОЛІТТЯ

Вступ. Сучасні стандарти педагогіки у вищій освіті віддають пріоритет підходам, орієнтованим на студента, інтеграції технологій, активному навчанню, персоналізованому навчанню, критичному мисленню, співпраці та творчому розв'язанню проблем. Ці навички необхідні студентам, щоб орієнтуватися в більш складному та взаємопов'язаному світі. Замість того, щоб зосереджуватися виключно на запам'ятовуванні та зубрінні, педагоги заохочують учнів аналізувати, оцінювати та синтезувати інформацію. Вони надають відкриті можливості для розв'язання проблем, які дозволяють їм мислити критично, підходити до проблем із різних поглядів і розробляти інноваційні рішення. Завдяки плавній інтеграції технологій у навчальний процес викладачі створюють динамічні й інтерактивні навчальні середовища, які адаптують різні стилі навчання та сприяють розвитку навичок цифрової грамотності.

Мета і завдання. Окреслити тенденцію в сучасній педагогіці, яка охоплює підходи, орієнтовані на студента, які віддають пріоритет активному та персоналізованому навчанню. Підкреслити ефективність активних методів навчання, таких як групові дискусії, практичні експерименти та проєктне навчання, які заохочують студентів стати активними учасниками свого навчання. Обґрунтувати, що ці методи сприятимуть глибшому розумінню, навичкам критичного мислення та креативності, коли студенти застосовують свої знання в умовах реального світу.

Результати. Підходи, орієнтовані на студента: активне навчання та персоналізоване викладання, сприяють залученню, критичному мисленню та творчості, надаючи студентам можливість брати на себе відповідальність за свою освіту. Навички співпраці розвиваються через групові проєкти й дискусії, готуючи студентів до життя у глобалізованому суспільстві.

Висновки. Сучасні стратегії оцінювання наголошують на гнучкості й адаптивності, використовуючи оцінювання на основі успішності та постійний зворотний зв'язок для оцінювання навчання студентів. Загалом, сучасна педагогіка в середній школі спрямована на навчання учнів ХХІ-го ст., озброєння їх необхідними навичками для досягнення успіху у світі, що постійно змінюється.

Ключові слова: педагогіка, вища школа, сучасні стандарти, освіта, ХХІ ст., учень, методи навчання, інтеграція технологій, студентоцентризований, активне навчання, персоналізоване навчання, критичне мислення, розв'язання проблем, стратегії оцінювання, гнучкість, адаптивність.

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