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Svitlana SMOLINA

PhD (Pedagogy), Associate Professor, T. H. Shevchenko National University “Chernihiv Colehium”, 53 H. Polubotka Street, Chernihiv, Chernihiv region, postal code 14000 Ukraine (svitlanapost@ukr.net)

[ORCID: 0000-0003-0907-2054](https://orcid.org/0000-0003-0907-2054)

Nadiia GRYTSYK

PhD (Pedagogy), Associate Professor, T. H. Shevchenko National University “Chernihiv Colehium”, 53 H. Polubotka Street, Chernihiv, Chernihiv region, postal code 14000, Ukraine (Nadiela7027@gmail.com)

[ORCID: 0000-0001-7198-5327](https://orcid.org/0000-0001-7198-5327)

Nataliia ANTONENKO

Senior Lecturer at The Department of English Language Practice and Teaching Methodology, Rivne State University of the Humanities, 135/10 Soborna street, Rivne, postal code 33028, Ukraine (antnatasha73@gmail.com)

[ORCID: 0000-0002-6313-5397](https://orcid.org/0000-0002-6313-5397)

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EDUCATING ETHICAL MINDS: A HOLISTIC APPROACH TO TEACHER PROFESSIONAL DEVELOPMENT IN THE 21st CENTURY

Abstract. The Purpose of the Study. The research aims to study how ethical education, fostering critical thinking, empathy, and adaptability, is crucial for educators to prepare students for a complex world driven by rapid technological development, emphasizing teachers' role in integrating ethical discussions about technology within the curriculum. The authors emphasise that ethics education that fosters critical thinking, empathy, and adaptability is critical for educators. The purpose of the study is to examine how ethics education can assist educators in preparing students for life in a complex world defined by rapid technological development. This is important because in the 21st century, the rapid development of technology is changing the human experience, requiring adaptability, resilience, empathy and critical thinking. **The Research Methodology.** It was analysed the studies on ethical education, critical thinking, empathy, and adaptability, highlighting the importance of these attributes in teachers education and professional development. A scientific pedagogical survey was organised and conducted in the form of a written anonymous questionnaire of 100 4th year graduate students majoring in 014 Secondary Education (Language and Literature (English)), T.H. Shevchenko National University "Chernihiv Colehium", Chernihiv, Ukraine. It was provided the quantitative and qualitative analysis of its results, interpreting the insights of preservice teachers' experiences, challenges, and strategies in fostering ethical values and critical thinking skills amidst technological issues. The survey data were analysed to quantify and qualify educators' attitudes and perceptions regarding the integration of ethical insights in their education and development. The synthesized findings from the various data sources were provided comprehensive insights into the current state of educating ethical minds within the holistic approach to teacher professional development in the 21st century. The article aims to develop practical recommendations for educators, policymakers, and curriculum designers to enhance ethical education within the holistic educational system. **The Scientific Novelty.** In the 21st century, rapid tech growth reshapes human experiences, demanding adaptability, resilience, empathy, and critical thinking. This article supports holistic education, specifically focusing on ethics amidst tech challenges. It aims to go beyond traditional moral teaching, nurturing critical thinking and empathy as vital for ethical decision-making. The authors insist that educators hold a central role in addressing tech's ethical implications. The study encourages integrating tech ethics discussions into curricula to empower students for ethical discourse. Teacher - student communication serves as a moral compass for personal growth amid data overflow. **The Conclusion.** Holistic TPD fosters ethical citizens through teacher-led critical thinking, interdisciplinary learning, and tech-enabled experiences for a sustainable future.

Keywords: holistic education, teacher professional development (TPD), ethics, technology, pedagogy.

ФОРМУВАННЯ ЕТИЧНОЇ СВІДОМОСТІ: ЦІЛІСНИЙ ПІДХІД ДО ПРОФЕСІЙНОГО РОЗВИТКУ ПЕДАГОГІВ У 21 СТОЛІТТІ

Анотація. У статті розглядається роль етичної освіти в підготовці учнів до життя у складному світі, що визначається швидким технологічним розвитком. Автори стверджують, що етична освіта, яка сприяє розвитку критичного мислення, емпатії та адаптивності, є вирішальною для педагогів. **Мета дослідження** полягає у вивченні проблеми етичної освіти, що здатна допомогти педагогам у підготовці учнів до життя у світі зі швидким технологічним розвитком. Це важливо, оскільки у 21 столітті стрімкий розвиток технологій змінює людський досвід, вимагаючи адаптивності, стійкості, емпатії та критичного мислення. **Методологія дослідження.** У статті проаналізовані дослідження, присвячені розвитку етичної свідомості, критичному мисленню, емпатії та адаптивності; підкреслено важливість цих якостей в освіті та професійному розвитку вчителів. Висвітлено організоване та проведене наукове педагогічне опитування у формі письмового анонімного анкетування 100 студентів 4 курсу спеціальності 014 Середня освіта (Мова і література (англійська)) Національного університету "Чернігівський колегіум" імені Т.Г. Шевченка, м. Чернігова, Україна. Здійснено кількісний та якісний аналіз його результатів, інтерпретуючи уявлення про досвід, виклики та стратегії майбутніх учителів у формуванні етичних цінностей та навичок критичного мислення в умовах технологічних викликів. Дані опитування були проаналізовані для кількісної та якісної оцінки ставлення та сприйняття майбутніх учителів щодо інтеграції етичних знань у їхню освіту та розвиток. Узагальнено висновки з різних джерел даних, щоб надати всебічне уявлення про поточний стан виховання етичної свідомості в рамках цілісного підходу до професійного розвитку вчителів у 21 столітті. **Наукова новизна.** У 21 столітті стрімкий розвиток технологій змінює людський досвід, вимагаючи адаптивності, стійкості, емпатії та критичного мислення. У публікації розглянуто систему цілісної освіти, зосереджено увагу на етиці в умовах технологічних викликів. Освіта має на меті вийти за межі традиційного викладання моралі, розвиваючи критичне мислення та емпатію як життєво важливі чинники для прийняття етичних рішень. Доведено, що освітяни відіграють центральну роль у розв'язанні етичних питань, пов'язаних з технологіями. Дослідження заохочує включати обговорення етики технологій до навчальних програм, щоб розширити можливості учнів для етичного дискурсу. Спілкування між вчителем і учнем слугує моральним компасом для особистісного зростання в умовах перенасичення даними. **Висновок.** Автори стверджують, що цілісний підхід до професійного розвитку виховує етичних громадян, які здатні критично мислити, співпереживати та адаптуватися до змін у світі, що визначається технологіями.

Ключові слова: цілісна освіта, професійний розвиток учителів (ППУ), етика, технології, педагогіка.

The Problem Statement. The 21st century is characterised by the increasing pace and reach of technological development transforming human experiences and capabilities while creating new tensions and disruptions for all actors (Global Trends, 2021). Adaptability, resilience, empathy, critical thinking are crucial in overcoming these new tensions and disruptions. One of the ways of developing a sustainable society is a holistic approach to education. We focus on ethical education, stating that in the era of rapid technological development, the interrelation of ethics and education plays a vital role in human development. Educators face the challenge of preparing students to navigate an increasingly complex environment. We study an education model that goes beyond traditional moral instruction, fostering critical thinking, empathy, and adaptability as essential components of ethical decision-making.

In the context of globalisation, informational society, mutual influence of cultures, it is important to preserve the self-identification of an individual. It should be noted that the new generation does not know the world without the Internet, developing in the informational society, in constant flows of information, which causes a certain instability, the new generation still feels the need to have a basis for life, a launching pad for growth. Individual point of view is often chosen for such a basis. At the same time, the points of view of other individuals are at least not taken into account and, at most, there is an attitude to suppress other opinions (Smolina, 2019). The ability to communicate as an essential quality of a personality and, especially, of a teacher, is often disregarded. Students receive a huge amount of information without having the experience and time to make sense of it. They get ready-made models of action from publicly available sources, without the experience of critical reflection. It is the moral guidelines of an individual, the inner core

formed as a result of teacher-student communication that could help the next generation develop itself and society.

The Analysis of Sources and Recent Researches. There is a large list of literature outlining the issue of holistic education specifically focusing on ethics problems of a teacher's self-identification and professional growth in the 21st century. Research on holistic education was conducted by both foreign and Ukrainian scientists. In particular, the issue of identity holistic education in the context of professional and social self-identification of a person is disclosed by D. Hamanek (1999). The work written by R. Kurzweil (2005) focused on the effect of artificial intelligence on teacher's self-identification in particular. D. Johnson, & R. Johnson (2012), Michael (2015), S. Smolina (2019) & N. Grytsyk, T. Skoryk (2020) highlight an important place in their works of a teacher's self-identification and professional growth.

The Purpose of Publication. Therefore, the purpose of our article is to establish the role of the teacher in the socio-pedagogical space.

The Main Material Statement. *Defining the purposes of "Holistic Education"*. In the global pedagogical community, there is a growth towards "Holistic Education" (Johnson, 2023), which in Ukrainian pedagogy corresponds to the concept of "vyhovannia". In addition, in the modern scientific world, the problem of identity, professional and social self-identification of a person is relevant (Hamachek, 1999). Accordingly, the study of a teacher's identity nowadays is also significant, namely, the consideration of such concepts as "Professional Agency" (Guoyuan, 2020). and "Teacher Advocacy".

Teachers of Ukraine study the world's pedagogical experience in different countries of the world, using academic mobility. For example, the US Embassy supports dozens of programmes in Ukraine aimed at teachers' professional development (Professional

Development and Exchange for Teachers Trainers Programme, 2003). For illustration, in April-May 2023, 15 teachers from all over Ukraine took advantage of this opportunity through the Professional Development and Exchange for Teachers Trainers Programme. The programme was aimed at improving the professional competence of the participants, considering the possibilities of socio-emotional learning and learning with psychological support, which are particularly relevant in education during rough times. The content of this programme clearly demonstrates the shift towards prioritising holistic education in the educational process and teacher training in the United States of America. The roots of the shift we can find in the Fourth Industrial Revolution.

The Fourth Industrial Revolution has driven the technogenic paradigm in scientific thought, which links technology development to the overall change of humanity. Nowadays the role of artificial intelligence in human life is increasing globally, which may affect the identification, self-identification of an individual and a teacher in particular. In this regard, scientists around the world analyse the problem of singularity (Kurzweil, 2005). Ray Kurzweil believes that the singularity is a future period during which the pace of technological change will be so rapid and its impact so profound that human life will irreversibly change (Kurzweil, 2005). Hypothetically, we understand that there is a possibility to shift to a state where a person will have to coordinate his or her actions with artificial intelligence, or there will be no clear boundary between a person and artificial intelligence, or artificial intelligence will exceed humanity. However, the issue of energy supply for artificial intelligence and the existence of humanity itself remains open. After all, if artificial intelligence establishes control over humans, the question of the feasibility of humanity's existence arises. In addition, artificial intelligence does not need to enjoy itself, unlike humans, so it can destroy

everything that brings pleasure to humans as unnecessary. This may be one of the reasons for the moral and then physical decline of humanity. And it is pedagogy that can educate ethical minds.

The latest technologies can create unique texts, musical compositions, artistic paintings, literary and scientific works, etc. in seconds using big data. In other words, a person ceases to be a creator; it is enough to give a command for artificial intelligence. Will humans then remain humans? After all, it seems there will be no need to acquire any competencies, knowledge, skills, or abilities.

It is impossible to stop technology, so we can develop a personality instead. The key role in this process belongs to a teacher, who, first of all, identifies self in society, in the social and pedagogical space, and therefore understands his or her strategic and local goals.

The report “Global Trends 2040. A More Competitive World” notes that slowing economic growth and gains in human development, coupled with rapid societal changes, have left large segments of the global population feeling insecure, uncertain about the future, and distrustful of institutions and governments they view as corrupt or ineffective. Many people are gravitating toward familiar and like-minded groups for community and security, including ethnic, religious, and cultural identities as well as groupings around interests and causes. These groups are more prominent and in conflict, creating a cacophony of competing visions, goals, and beliefs (Global Trends, 2021). Taking into account these trends, it is clear that the educational process, at best, tries to correct the current state, instead of being a guide for the development of society. After all, it is the teacher who should be the person who educates the worldview, develops beliefs and helps to understand the goals. Accordingly, the teacher should be aware of his/her mission, identify and self-determine himself/herself in the national and world society; have a high level of professional

competence that are required for successful self-realisation in professional activities (Grytsyk & Skoryk, 2020).

Conceptualising and Measuring Factors of Teacher Professional Development To Fostering Ethical Education. Teacher professional development (TPD) refers to the ability of teachers to actively shape their professional identity, practice and learning, and to exercise control over their work and outcomes (Fullan ect., 2015). TPD is seen as a crucial dimension of effective teaching, as it enables teachers to meet the complex and dynamic demands of teaching, to innovate and adapt to changing contexts, and to engage in continuous professional learning and growth (Johnson ect., 2012). The concept of TPD to the extent to which teachers take responsibility for their professional learning and practice. It is based on the idea that teachers are not merely passive recipients of knowledge and instruction, but rather active agents who have the ability to make decisions and take action to improve their teaching and the learning of their students. The development of teachers' professional competence is seen as a key factor in improving the quality of teaching and student learning outcomes, especially in the context of ongoing educational reforms and the increasing complexity of teaching.

Conceptualising and measuring teachers' professional competence:

There is a growing body of literature on the conceptualisation and measurement of teacher competence. One approach to conceptualising teachers' professional competence is to view it as a multidimensional construct consisting of cognitive, motivational and behavioural components. Cognitive competence refers to the knowledge, skills and beliefs that enable teachers to act in their teaching practice. Motivational competence refers to the internal and external factors that motivate teachers to engage in professional learning and take responsibility for their practice.

Behavioural capacity refers to actions that teachers take to improve their teaching, such as seeking feedback or experimenting with new teaching methods.

Measuring teachers' professional engagement is typically done through surveys, interviews, or observation protocols. However, the development of more objective and reliable methods for measuring agency is an area of ongoing research.

Factors contributing to the development of teachers' professional competence:

There are a number of factors that contribute to the development of teachers' professional competence. One important factor is the quality of initial teacher preparation, which can equip teachers with the knowledge, skills and attitudes necessary to take responsibility for their professional learning and practice. Another factor is the availability of ongoing professional development opportunities that can help teachers develop the cognitive, motivational and behavioural components of agency.

Other factors that contribute to the development of teachers' professional competence include school culture and leadership, teacher collaboration and networks, and the role of external stakeholders such as policy makers and education researchers.

For example, support from school leadership that encourages teacher autonomy and experimentation can help to develop teachers' professional autonomy, while external policies that restrict teachers' decision-making can hinder it.

Challenges and opportunities in developing teachers' professional competence:

The development of teacher autonomy is associated with a number of challenges and opportunities. One challenge is the need to balance teacher autonomy with the need for accountability and compliance with standards and expectations. Another challenge is the limited resources available for professional development,

which can limit teachers' ability to engage in continuous learning and experimentation.

However, there are also opportunities for teachers to develop their professional activities. For example, the increasing availability of technology and online resources can provide teachers with access to new knowledge and support networks. Growing recognition of the importance of teachers' voices and agency in educational reforms can also create opportunities for teachers to take on leadership roles and contribute to policy and practice.

TPD t is an ongoing process which reflects the paradigms of society.

In contrast to the technogenic paradigm and the desire of R. Kurzweil (2016) and his followers to merge human intelligence with artificial intelligence, there is a paradigm of sustainable development, which involves not only the optimal use of natural resources but also a reduction in consumption, ecology of human relations, ethics, aesthetics, etc. Pedagogy should play a crucial role in actualising sustainable methods and ethical behaviours. It is clear that sustainable development in pedagogy requires an interdisciplinary, holistic approach, which engages students in sustainable development by involving them in the process. Pedagogy can promote the development of critical, analytical, creative thinking, as well as foster positive attitudes and behaviour towards the environment and society.

We can see that integrating sustainable development into pedagogy requires a theoretical framework that includes social, economic and environmental systems. The system approach, which views the world as a set of interconnected systems that influence each other, is particularly relevant for sustainable development in pedagogy. According to this approach, changes in one system can have a wave effect throughout the entire system. That is, sustainable development requires a holistic, long-term analysis, a

study that takes into account the impact of certain actions on several systems.

In addition to a systems approach, sustainable development pedagogy requires an understanding of the psychological and social factors that influence human behaviour. Social psychology, which studies how social and environmental factors affect people, can provide insights into how to promote sustainable values and ethical behaviours. For example, research has shown that social norms, such as peer pressure and community expectations, can be powerful motivators for sustainable behaviour. In addition, values such as environmental care, altruism, and social justice can be effective drivers of sustainable behaviour (Kollmuss & Agyeman, 2002).

Another strategy is to promote empirical learning. Empirical learning or learning by doing involves engaging students in real-world experiences that help them develop practical skills and abilities, and gain first-hand knowledge of social issues. Internships, professional exchange can be used to promote holistic education.

Information and communication technologies also contribute to the promotion of holistic education. Online resources, such as videos, podcasts and interactive simulations, can be used to provide students with access to information and knowledge about holistic education.

The Conclusion. Thus, holistic education in the context of TPD is a concept that supports the intersection of ethics and education. The teacher plays a crucial role in this process. Teachers can communicate the essence of ethical development by providing students with a platform for critical thinking, problem solving and decision-making on ethical issues. To integrate ethics into education, teachers have strategies such as interdisciplinary learning, experiential learning and the use of information and communication technologies. By applying these strategies,

pedagogy can contribute to fostering environmental and social responsibility, as well as creating a more sustainable future for society.

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