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# COMMUNICATION ASPECTS IN DEONTOLOGICAL EDUCATION OF MEDICAL STUDENTS IN UKRAINE: TRADITIONAL AND DIGITAL LEARNING TOOLS

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**Abstract.** *The paper analyses communication aspects of deontological education at Ukrainian medical universities through traditional and digital learning tools. Deontological education is defined as an interdisciplinary, structured, and anticipatory process aimed at developing deontological competence, involving the development of personal moral and ethical qualities and values, required to qualitatively accomplish professional duties in the branch of health care by adhering to the moral laws, ethical principles and rules of professional behavior. The analysis of documents, regulating legal, ethical, behavioral, research, and academic directions of Ukrainian medical education has defined, that deontological education is integrated into the content of the Core Curriculum and professional medical education programs. Its tasks are determined in the system of general and professional competencies, as well as learning outcomes in the specialty 222 Medicine. The comparative review of dynamic changes in the core curriculum and syllabi of obligatory and elective courses has enabled the conclusion that purposeful and anticipatory deontological education by means of traditional and digital learning tools increases the effectiveness of the academic process and quality of higher medical education. Certain learning objec-*

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*tives of deontological education are defined in elective courses directed at obtaining theoretical and practical deontological knowledge in moral philosophy, medical ethics, esthetics, and communication. The research confirms the significance of the systemic approach to the development of communication and ethical aspects of deontological education in the content of obligatory courses in the specialty 222 Medicine. The paper provides a detailed description of traditional and digital learning tools of deontological education through communication training. Performed research proves the effectiveness of the interdisciplinary anticipatory approach to deontological education resulting in the deontological competence of medical students, which includes the development of moral, ethical, and professional qualities, communication and interpersonal communication skills, and fluency in native and foreign languages for professional purposes. The application of digital learning tools, i.e., digital storytelling, has been determined as an effective communicative instrument of deontological education at medical universities.*

**Keywords:** *deontological education; interdisciplinarity; digitalization; communication; communication ethics; student; medical university.*

## **INTRODUCTION, PROBLEM STATEMENT**

The problem of medical education attracts scientific attention globally. Training physicians to accomplish their future professional activities and duties qualitatively is a vitally significant educational task. The contemporary interdisciplinary approach aimed at maintaining and improving the effectiveness of medical education primarily involves competency-based learning. The main role of the competency-based approach in medical education is to develop a range of competencies in future physicians required for successful professional performance, which primarily include patient care, professionalism, and communication competency. A patient-centered academic approach necessitates the development of sufficient moral qualities and values, enabling positive physical and mental healthcare outcomes. Satisfaction of patients resulting from interaction with their healthcare providers influences future health concerns, willingness to start and continue treatment, and return for further medical advice.

The following challenges highlight the requirement for organized deontological education in future physicians, incorporating an anticipatory interdisciplinary approach, and integrating the development of crucially important medical competencies, namely patient care, professionalism, and communication. As the branch of moral education, deontological education significantly influences the professional career of physicians. It involves the development of moral and ethical values enabling self-growth, social responsibility, and the proper attitude to work and professional duties.

In the present system of higher medical education deontological education is integrated into courses directed mainly at developing professionalism and communication skills. Developed communication skills and speaking foreign languages provides the possibility to communicate globally, aiding the internationalization strategy of Ukraine. Moreover, communication skills, as well as leadership skills, critical thinking, time management, creativity, emotional intellect, and digital literacy, are defined by Forbes as the most in-demand skills for the coming decade (Forbes, 2024).

Responding to contemporary academic medical requirements should involve anticipatory interdisciplinary approaches and combined methods to develop professionalism, communication competency, and digital skills directed at deontological education of physician and digitalization of higher medical education (Gutor et al., 2023; LNMU imeni Danyla Halytskoho, 2024).

Deontological education and its components are researched by Ukrainian and foreign scientists. The role of deontological principles is highlighted in the papers of N. Nychkalo (2012; 2014), L. Lukianova (2016), P. Sodomora et al. (2021), and L. Hutor (2023a). The notion of deontological education was defined by M. Vasylieva (2011). The peculiarities of

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deontological and moral education of future physicians are researched by T. Gutor, O. Kovalska & M. Sluzhynska (2023), A. Leukhina (2022), O. Kovalova, N. Safarhalina-Kornilova, & M. Herasymchuk (2018).

The analysis of normative documents defining the structure and content of deontological education involved several higher medical universities, namely Danylo Halytsky Lviv National Medical University (LNMU imeni Danyla Halytskoho, 2024); Bohomolets National Medical University (BNMU, 2024), Kharkiv national medical University (KhNMU, 2024b), Horbachevsky Ternopil National Medical University (TNMU imeni I. Ya. Horbachevskoho, 2024) and Bukovinian State Medical University (BDMU, 2024). The institutional documents and academic materials provide sufficient information on traditional learning tools aimed at developing deontological competency.

Digital tools of deontological education are described in the papers of P. Sodomora et al. (2021), R. Berk (2009), L. Maniuk (2016), M. Rehman (2019).

The importance of communication skills in deontological education is determined in the research of J. Carey (2009), N. Chomsky (2002).

Storytelling as a tool of deontological education through developing speaking skills has been researched by A. Akgun, H. Keskin, H. Ayar, & E. Erdogan (2015), and I. Rezeki (2017). Comparing to other methods of teaching foreign languages the researched one is aimed at conversation skills development (Sutton, 2015; Chomsky, 2002; Stables, 2018). Use of student storytelling as a tool of English communication skills has been researched by Yu. Makovetska-Hudz (2017) and I. Rezeki (2017) who prove the ability of this method to adapt to nearly all possible topics (Gottschall, 2013) and even to reporting medical cases (Sandars et al., 2008).

The literature analysis confirms that medical training encompasses a variety of traditional and digital tools, i.e. information and communication technologies (ICT), computer-based technologies, e-learning tools, simulated technologies, and virtual patients. However, the application of these tools for deontological education requires further analysis.

The research aims to define traditional and digital learning tools applied in higher medical education with the purpose of deontological education and developing moral values through communication training.

## **METHODOLOGY**

The study of the problem involved the application of several theoretical research methods, namely: information search; literature review and data analysis; terminological analysis; identification, generalization, and interpretation of scientific evidence; structuring and systematization of researched information; data analysis of Ukrainian scientific evidence related to the problem deontological education and communication skills development by traditional and digital tools, as well as application of digital storytelling (DST) to enhance moral values and communication skills in physicians. The performed research reviews and complements previously collected and analyzed data related to the studied problem.

## **RESULTS AND DISCUSSION**

### **The Notion of Deontological Education**

Deontology as a branch of ethics focuses on theoretical and practical solutions to behavioral and moral problems. It studies the issues of morality, duties, rules and obligations as a social requirement. Medical deontology is an interdisciplinary science adjacent to ethics and medicine. Its specificity involves the doctrine of moral obligation, ethical obligations, and ethical norms of behavior in healthcare. The synergy of these aspects ensures optimal quality and effectiveness of prevention and treatment. The key concept of medical deontology is professional medical behavior in society, particularly with patients. Medical deontology de-

finest the rights and obligations of doctors, defends their right to professional dignity and honor, and forms normative principles of moral and ethical behavior of doctors (Hutor, 2023b; Vasilieva, 2011).

Deontological education involves a set of moral and legal norms that regulate the performance of specific duties and responsibility for their violation, as well as decision-making in non-standard situations of practical professional activity in accordance with the target, content, and procedural characteristics of education. Deontological training is defined as a purposeful, controlled process that ensures the development of deontological competence, including personally significant qualities necessary for the implementation of normative professional behavior.

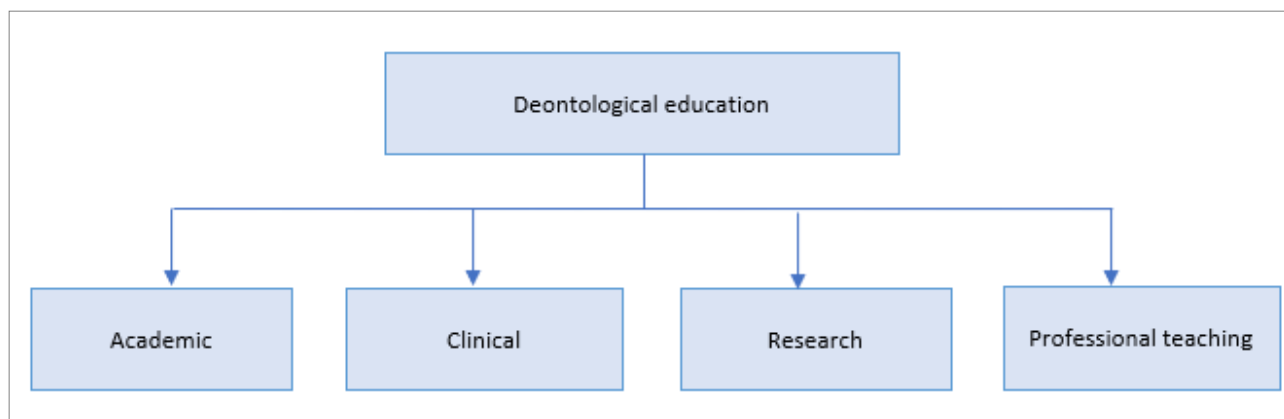
### **Traditional Methods of Deontological Education among Medical Students**

Moral values are primary targets of deontological training in higher medical education. The system of deontological training at medical universities is a component of a core medical curriculum. It functions as a subsystem of knowledge, abilities, and skills, as well as professional, cultural, and social qualities of future specialists, which is determined by the state demands and requirements, taking into account the prospects and opportunities for the development of society, science, technology, culture, and art.

The scientific and methodological support of deontological training is regulated by a set of normative documents, formal, semi-formal, and informal learning technologies, educational and methodological guides to obligatory and elective subjects, as well as clinical clerkships (LNMU imeni Danyla Halytskoho, 2024; KhNMU, 2024).

Ukrainian medical universities integrate deontological education by providing normative support for the academic process. The review of available online documents at Danylo Halytskyi Lviv National Medical University (2024) revealed the following: Student Code of Ethics, Internal Labor Regulations, Procedure for Responding to Proven Cases of Bullying, Rules of Conduct for Students at Higher Medical Education Institutions, Methodical Recommendations for Supporting the Principles of Academic Integrity, Sample of Study Contract (LNMU imeni Danyla Halytskoho, 2024). The listed documents contain information on the normative behavior of medical students during their studies at the university and form the academic component of deontological training (behavior during their studies) (Figure 1). In addition to the academic component, the deontological training of doctors involves: clinical (behavior at the workplace, research (behavioral rules of scientific research), professional and teaching (behavior of teaching staff at health care higher education institutions).

The content of deontological training at the second (master's) level of higher education is set by the number of disciplines focused on the development of deontological competence or its individual components. The analysis of the Standard of Higher Medical Education and the core curriculum at the second educational level in the specialty 222 Medicine revealed that



**Figure 1. Structure of deontological education**

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the deontological training of future doctors is performed throughout all years of study as a component of professional training of all disciplines without exception. In the competency matrix, deontological training is highlighted as “Communication” and “Responsibility and Autonomy”.

The need for deontological training is determined in the general competencies (GC) of the Core Curriculum in 222 Medicine (Ministerstva osvity i nauky Ukrainy, 2021), namely: GC 5. The ability to adapt and act in a new situation; GC 7. The ability to work in a team, GC 8. The ability for interpersonal interaction; GC 12. Determination and perseverance concerning tasks and taking responsibilities; GC 13. Awareness of equal opportunities and gender issues, GC 14; The ability to realize one’s rights and responsibilities as a member of society, to be aware of the values of (free democratic) society and the need for its sustainable development, the rule of law, human rights and freedoms and a citizen in Ukraine; GC 15. The ability to preserve and multiply moral, cultural, scientific values and achievements of society based on the understanding of the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society, and in the development of society, technology, and technologies, to use different types and forms motor activity for active recreation and leading a healthy lifestyle.

The professional competencies (PC) validating deontological competency include the following:

PC 21. Clearly and unambiguously convey one’s knowledge, conclusions, and arguments on health care problems and related issues to specialists and non-specialists, in particular to people who are studying;

PC 21. Clearly and unambiguously convey one’s knowledge, conclusions, and argumentation on health care problems and related issues to specialists and non-specialists, in particular students;

PC 24. Adherence to ethical principles when working with patients, laboratory animals;

PC 25. Adherence to professional and academic integrity, to be responsible for the reliability of the obtained scientific results.

Learning outcomes that regulate deontological training in accordance with core curriculum in 222 Medicine include the following:

LO 25. Clearly and unambiguously convey one’s knowledge, conclusions, and arguments on health care problems and related issues to specialists and non-specialists;

LO 26. Manage work processes in the field of health care, which are complex, unpredictable and require new strategic approaches, organize work and professional development of personnel taking into account the acquired skills of effective teamwork, leadership positions, adequate quality, accessibility, and fairness, ensuring the provision of integrated medical care.

The analysis of the obligatory disciplines by the keywords “deontology”, “behavior”, “duty”, “ethics”, “responsibility”, and “communication” has not revealed disciplines focused on targeted deontological training. However, the analysis of the list of elective courses revealed the following elective educational components focused on the development of deontological competence:

- Communication of a doctor;
- Basics of Christian ethics and morality;
- Basics of psychology;
- Academic communication of a physician;
- Academic integrity in the academic process;
- Ethical problems in medicine;
- Communication skills of the doctor;

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- Medical aspects of bioethics and biosafety;
  - Anti-corruption policy and academic integrity;
  - Bioethics;
  - Deontology in medicine;
  - Psychology of communication;
  - Speech culture and medical etiquette;
  - Medicine and artistic culture (LNMU imeni Danyla Halytskoho, 2024).

Further analysis of the content of the deontological training of future physicians involved the analysis of syllabi of the above-mentioned academic disciplines. They focused on the development of deontological competence by deepening and improving knowledge of the norms and rules of behavior of medical workers. They focus on the theoretical and practical study of the key principles of deontology; ethical and legal aspects of a doctor's professional activity, the role, place, and significance of medical deontology in the structure of modern medical disciplines; application of moral and deontological principles in specific professional situations.

Development of deontological values involves interactive teaching methods i.e., clinical tasks, the case method, the method of clinical games, brainstorming, etc. As part of extracurricular training, students use research methods. Scientific clubs that function at the departments implement interdisciplinary projects within the framework of their scientific and research activities. Students receive the possibility to publish their research results and to report at scientific and practical conferences of various levels (LNMU imeni Danyla Halytskoho, 2024).

### **Storytelling as a Tool of Deontological Training**

The process of deontological training primarily emphasizes the development of essential qualities necessary for normative behavior within higher education settings. This includes fostering responsible relationships among students, faculty, administration, and other university staff, as well as with healthcare professionals, patients, and their families.

Conversely, the pedagogical technologies employed in deontological training involve the application of fundamental didactic principles and educational approaches that prioritize creativity, adaptability, and the controllability of educational materials (Sodomora et al., 2020). The continual development and refinement of teaching methods play a vital role in enhancing the quality of deontological training. A notable example of a modern and effective learning method is storytelling, which has emerged as a significant trend in marketing and is regarded as a crucial business skill for the coming decade.

Storytelling, defined as the art of crafting and interpreting narratives (Reseki, 2017), has historical roots dating back to antiquity. Throughout time, various stories and myths have proven to be effective means of communication. Currently, storytelling is experiencing a global resurgence (Simmons, 2006, p. 15). Research by American literary scholar J. Gottschall (2013) characterizes humans as "storytelling animals", inherently inclined to share stories. He emphasizes the potential of narratives to "change the world for the better", including the enhancement of moral qualities, communication skills, and proficiency in foreign languages (p. 184).

### **Digital Storytelling to Fulfill Contemporary Safety Requirements of Deontological Training**

Since the onset of quarantine, many institutions have recognized the need to explore new methods for teaching and fostering moral values, communication skills, and both creative and critical thinking in an online environment. One proposed approach involves the use of digital storytelling (DST) and its various forms, such as natural monologues, facilitated discussions, debates, and open dialogues.

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Digital storytelling is increasingly regarded as an essential skill in the context of the Fourth Industrial Revolution, or Industry 4.0. This revolution has significantly impacted the healthcare sector, giving rise to Healthcare 4.0, which focuses on the digitization of healthcare enterprises and services through the application of technologies such as the Internet of Things (IoT), Internet of Services, artificial intelligence, and robotics. The application of digital storytelling spans a range from routine practices to highly specialized professional contexts, demonstrating its potential to enhance, promote, and disseminate diverse products and knowledge. The future of the global economy and healthcare growth depend on sufficient level of mentioned features (Sodomora et al., 2021).

The study by Lacey & Craighead (2021) demonstrates the effectiveness of digital storytelling (DST) in promoting health among the adult population in the United States. The research involved 59 participants with both well-managed and poorly controlled hypertension, who shared their success stories over a 16-month period. The findings indicate that DST not only reduced the number of unplanned medical visits but also serves as a preventive measure for hypertension management.

Research on DST in medical education remains in its nascent stages, with a limited body of empirical literature on the subject. This raises several critical questions, including the purpose, definition, application, and contexts of DST in health education; its impact on the development of clinical knowledge and healthcare practices; and the key ethical considerations surrounding its use. Katherine A. Moreau et al. (2018) conducted a systematic review examining the contexts and purposes for which digital storytelling has been utilized in medical education, as well as its effects on the learning and behavior of health professionals. The review suggests that DST can be an effective tool for developing communication skills. By interpreting patients' stories and replacing colloquial language with more professional terminology, future physicians can enhance their professionalism.

Patients' stories are a common practice in healthcare. However, physicians specialists often have structured hours for patient encounters and limited time for extended conversations. Incorporating traditional or digital storytelling in group settings that utilize patient stories can teach future physicians how to listen effectively, demonstrating empathy, openness, and respect for diverse cultures, races, genders, and beliefs, as well as understanding when and how to interject during a patient's narrative. Furthermore, through digital storytelling, medical students can deepen and reinforce their clinical knowledge (Sodomora et al., 2021).

DST can be viewed as a novel form of computer-based patient simulations or virtual patients, both of which are widely recognized and effective methods for training future physicians. D.M. D'Alessandro et al. have developed and assessed a DST system specifically designed for future pediatricians. Their research includes several recommendations for students, such as encouraging them to present patients' stories in their own words, emphasizing problems over diseases, and utilizing straightforward case examples. The authors created a DST template that consists of multiple components: the patient's narrative, followed by an evaluation, a clinical course, a problem-based approach, and a discussion of the disease trajectory. The primary emphasis should be on reflecting the patient's account as expressed in their own words. By analyzing and organizing patients' stories alongside the progression of diseases, physicians enhance their knowledge and experience. This method also aids in information retention for students during their studies. Engaging with real situations and narratives about actual cases enhances practical care, ultimately contributing to increased professionalism, deontological competence, and communication skills among doctors.

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## **Deontological Training at the Department of Latin and Foreign Languages**

At the Department of Latin and Foreign Languages at LNMU, deontological education is integrated as a key element of English-language communicative training. To facilitate this, the department actively employs a virtual learning environment utilizing Moodle and other platforms for both synchronous and asynchronous remote learning. The onset of the pandemic in 2020 led to an intensified application of information and communication technologies (ICT) within the educational framework. This integration progressed gradually, achieving a more refined quality by late 2020. Following the commencement of Russia's full-scale invasion, the department successfully implemented 100% ICT support for all mandatory and elective courses. However, the use of electronic resources faced challenges due to widespread bombings affecting Ukraine's energy infrastructure, resulting in prolonged power outages and limited access to remote classes and digital educational materials. Consequently, in January 2023, in-person instruction was reinstated, and the Department of Latin and Foreign Languages developed and incorporated electronic educational classes into the curriculum, primarily aimed at compensating for sessions missed or canceled due to security concerns, such as air raids and bombings.

To address contemporary academic challenges, the department has integrated the technique of Digital Storytelling (DST) to uphold the quality of deontological education and communication training. The pilot study outlined in Sodomora et al. (2021) demonstrates the effectiveness of the DST method for these objectives. The findings indicate that DST serves as a powerful tool for conveying information to audiences while allowing them to create their own narratives, utilizing their active vocabulary. This method enhances professionalism, communication skills, and proficiency in the English language, while also activating passive vocabulary-words that students recognize but do not typically use in conversation. Additionally, DST facilitates dialogue between students and professors by encouraging students to share their own real or imagined stories, which helps alleviate their fears and insecurities about speaking.

Initially, it was believed that only in-person courses could foster active, collaborative, and engaged learning during class time. However, the method of online student storytelling imposes specific requirements on both educators and learners (Sodomora et al., 2021). Nonetheless, it leads to a deeper understanding of deontological education, the development of oral moral values, enhanced communication skills, and improved English language competence through appropriate sentence construction and vocabulary use.

## **CONCLUSIONS**

The research has defined traditional and digital learning tools applied in higher medical education with the purpose of deontological education and developing moral values through communication training.

Deontological education of physicians is characterized as anticipatory interdisciplinary approach that ensures the development of deontological competence, including personally significant qualities and moral values, required for professional behavior based on morality principles, duties, and obligations. Deontological education is implemented in higher medical education as a component of obligatory and elective courses. The traditional learning tools of deontological education involve competency-based learning, clinical tasks, case studies, the method of clinical games, brainstorming, projects, etc. The digital tools include ICTs, e-learning technologies, and digital storytelling, which proved its effectiveness as an integrated technique for the development of deontological competency, professionalism, and communication skills. The results of the performed research confirm that the application of DST in the academic process promotes understanding of the issues of deontological education and the development of oral moral values and communication skills. The anticipatory approach to

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the development of deontological competence involving interdisciplinarity, digitalization and internationalization of deontological education, enables improved quality of Ukrainian medical education, academic mobility of medical students, and global competitiveness of healthcare providers.

The research results can be further studied and implemented to improve the quality of deontological education and communication training in the Ukrainian system of higher medical education. The analysis of foreign experience of deontological education can aid in its actualization which is another direction of future research of the problem.

## REFERENCES

- Akgun, A., Keskin, H., Ayar, H., & Erdogan, E. (2015). The influence of storytelling approach. *Procedia – Social and Behavioral Sciences*, 207, 577-586. <https://www.sciencedirect.com/science/article/pii/S1877042815052623>
- BDMU. (2024). *General information about BSMU*. <https://www.bsmu.edu.ua/en/general-information/about-bsmu/>
- Berk, R. (2009). Teaching strategies for the net generation. *Transformative Dialogues: Teaching & Learning Journal*, 3(2), 1-23.
- Bitaiiev, V.A. (2003). *Estetychne vykhovannia i humanizatsiia osoby*. DAKKKiM.
- Carey, J. (2009). *Communication as culture: Essays on media and society* (Revised ed.). Routledge.
- Chomsky, N. (2002). *On nature and language*. Cambridge University Press.
- Forbes. (2024). *The top 10 most in-demand skills for the next 10 years*. <https://www.forbes.com/>
- Gottschall, J. (2013). *The storytelling animal: How stories make us human*. New York.
- Gutor, T., Kovalska, O., & Sluzhynska, M. (2023). *Normative and legal provision of ethical and deontological principles in medicine: Students' guide*. LNMU.
- Hutor, L. (2023a). Deontological basics of educating Ph. D. students. In *Contemporary education of Ph.D. students: Exchange of experience and best practices* (pp. 53–55). Ternopil.
- Hutor, L. (2023b). Pedagogichna pidhotovka doktoriv filosofii na zasadakh deontolohii. U *Materialy naukovo-metodychnoi konferentsii z mizhnarodnoiu uchastiu: Pidhotovka doktoriv filosofii na suchasnomu etapi: obmin dosvidom ta krashchi praktyky* (s. 53–55). TNMU.
- KhNMU. (2021). *Deontolohiia v medytsyni: metodychni vkazivky dlia samostiinoi roboty studentiv*. <https://repo.knmu.edu.ua/bitstream/123456789/29978/1/Ashcheulova%20Deontolohiia%20v%20medytsyni%20Ch.1%20N%21-34155.pdf>
- KhNMU. (2024). *Pro nash universytet*. <https://knmu.edu.ua>
- Kovalova, O.M., Safarhalina-Kornilova, N.A., & Herasymchuk, N.M. (2018). *Deontolohiia v medytsyni: pidruchnyk*. VSV "Medytsyna".
- Lacey, S., & Craighead, D. (2021). Using digital storytelling to reduce unplanned health care encounters: A feasibility study. *Journal of Nursing Care Quality*, 36(3), 269–273.
- Leukhina, A. (2022). *Liudianist ta empatiia v okhoroni zdorovia*. Master Knyh.
- LNMU imeni Danyla Halytskoho. (2024). *Deontolohiia v medytsyni: sylabus*. [https://new.meduniv.lviv.ua/uploads/repository/kaf/kaf\\_propaedeutic\\_1/04.%20Sylabusy/09.%20Pediatr\\_Deontolohija\\_v\\_medycyni\\_sylabus\\_%20t%20a%20.pdf.pdf.pdf](https://new.meduniv.lviv.ua/uploads/repository/kaf/kaf_propaedeutic_1/04.%20Sylabusy/09.%20Pediatr_Deontolohija_v_medycyni_sylabus_%20t%20a%20.pdf.pdf.pdf)
- Lukianova, L. (2016). Motivation factors of adult learning. *The New Educational Review*, 44, 223–229. <https://tner.polsl.pl/e44/a18.pdf>
- Makovetska-Hudz, Yu. (2017). Storitelinh u pedagogichnii praktytsi. In *Zbiór artykułów naukowych Konferencji Międzynarodowej Naukowo-Praktycznej "Pedagogika. Teoretyczne i praktyczne aspekty rozwoju współczesnej nauki"* (s. 9–13). Diamond trading tour.
- Maniuk, L.V. (2016). Social media in the process of professional and communicative skills training of future physicians. *Information Technologies and Learning Tools*, 53(3), 88–97. <https://doi.org/10.33407/itlt.v53i3.1425>
- Ministerstva osvity i nauky Ukrainy. (2021). *Standart vyshchoi osvity. 222 Medytsyna*. Nakaz MON Ukrainy № 1197 vid 08 lystopada 2021 r. <https://mon.gov.ua/static-objects/mon/sites/1/vishcha-osvita/zatverdzeni%20standarty/2021/11/09/222-Medytsyna.mahistr.09.11.pdf>
- Moreau, K.A., Eady, K., Sikora, L., & Horsley, T. (2018). Digital storytelling in health professions education: A systematic review. *BMC Medical Education*, 18, 208. <https://doi.org/10.1186/s12909-018-1320-1>
- NMU im. O.O. Bohomoltsia. (2024). *Bilshе pro NMU*. <https://nmuofficial.com>

- 
- Nychkalo, N.H. (2012). Pedahohichna estetyka i etyka v diialnosti NAPN Ukrainy: sohodennia i pohliad u maibutnie. *Estetyka i etyka pedahohichnoi dii*, (3), 7–19. <https://lib.iitta.gov.ua/id/eprint/711088/1/17.pdf>
- Nychkalo, N.H. (2014). *Rozvytok osvity v umovakh hlobalizatsiinykh ta intebratsiinykh protsesiv: monohrafiia*. Vydavnytstvo NPU im. M. P. Drahomanova.
- Rehman, M., Andargoli, M., & Pousti, H. (2019). Healthcare 4.0: Trends, challenges, and benefits. In *Australasian Conference on Information Systems* (pp. 556–564). Perth, Western Australia. [https://www.researchgate.net/publication/342981091\\_Healthcare\\_40\\_Trends\\_Challenges\\_and\\_Benefits](https://www.researchgate.net/publication/342981091_Healthcare_40_Trends_Challenges_and_Benefits)
- Rezeki, I. (2017). *Using storytelling technique to improve speaking ability at Insan Qur'ani Boarding School Aceh Besar*. Fakultas Tarbiyah dan Keguruan, Pendidikan Bahasa Inggris. <https://core.ac.uk/download/pdf/293467043.pdf>
- Sandars, J., Murray, C., & Pellow, A. (2008). Twelve tips for using digital storytelling to promote reflective learning by medical students. *Medical Teacher*, 30(8), 774–777. <https://doi.org/10.1080/01421590801987370>
- Simmons, A. (2006). *The story factor: Inspiration, influence, and persuasion through the art of storytelling*. Perseus.
- Sodomora, P.A., Gutor, L.V., Tryndiuk, V.A., & Lobanova, S.I. (2021). Student storytelling for communication skill development online (In the time of COVID-19 quarantine). *New Educational Review*, 63, 149–160. <https://czasopisma.marszalek.com.pl/images/pliki/tner/202101/tner6312.pdf>
- Stables, A. (2018). *Semiotic theory of learning: New perspective in the philosophy of education*. Routledge.
- Sutton, J. (2015). Remembering as public practice: Wittgenstein, memory, and distributed cognitive ecologies. In Moyal-Sharrock, D., Munz, R., & Coliva, A. (Eds.), *Wittgenstein and the philosophy of mind* (pp. 409–443). Cambridge University Press.
- TNMU imeni I.Ya. Horbachevskoho. (2024). *Pro TNMU*. <https://www.tdmu.edu.ua/en/>
- Vasylieva, M.P. (2011). Deontolohichniy komponent pidhotovky suchasnoho pedahoha v umovakh vyshchoho navchalnoho zakladu. *Visnyk Dnipropetrovskoho universytetu imeni Alfreda Nobelia. Seriya "Pedahohika i psykhohiia"*, 2(2), 14–20. <https://pedpsy.duan.edu.ua/images/PDF/2011/2/4.pdf>