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ACADEMIC PLAGIARISM: IMPACT OF ACADEMIC INTEGRITY ON THE QUALITY OF HIGHER PHARMACEUTICAL EDUCATION

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АКАДЕМІЧНИЙ ПЛАГІАТ: ВПЛИВ АКАДЕМІЧНОЇ ДОБРОЧЕСНОСТІ НА ЯКІСТЬ ВИЩОЇ ФАРМАЦЕВТИЧНОЇ ОСВІТИ

Abstract. The article adduces the ways to solve the main problems faced by faculty staff and students regarding academic plagiarism in higher pharmaceutical education. The development of information technologies, globalization processes in education, facilitating access to a large massive of data, research and publications updated the need for formulation and observance of moral and ethical principles regarding the use of information in the academic sphere.

The research is based on the study of materials obtained from open sources of information and authors' own experience. Program for checking the text for uniqueness: StrikePlagiarism.com – anti-plagiarized Internet system that automatically checks the originality of text. The system has a simple and user-friendly interface. Documents can be downloaded into the system in many popular formats (DOC, ODT, TXT, PDF), there are no restrictions on the size of the document. The text is compared with Internet resources and database system.

The concept of academic integrity in a civilized world is not mythical by any means, it is rather an effective instrument for ensuring and enhancing the quality of higher education. Myths are born only in heads of individual weak-minded people who are deliberately unwilling to notice the urgency of problem, and even have some benefits to it. That is why the Ukrainian high school shall cease to live with myths in time, and move on to effective actions, implementing fundamental ethical values not by word but by deed. I. Horbachevsky Ternopil State Medical University of the Ministry of Health of Ukraine developed an Internal Code of Honour. The University seeks to create an environment conducive to learning, work, innovation, knowledge sharing, intellectual development of students and employees, support of a special academic culture of relationships. Each member of a university community, following the rules of this Code, directly contributes its invaluable contribution to the development of the entire university. The purpose of the Code is to create favourable conditions for the effective performance by members of university community of their duties, based on the principles of high social morality and culture; formation of a conscious moral and legal position of interactions of participants in the educational process; growth and strengthening of positive image of the University as a scientific and educational organization of innovative direction. The priority task of the University is to form a responsible person capable of creative thinking and self-solving of philosophical and professional tasks, to be ready for life and activities in the modern multicultural environment. In my opinion, starting from the next academic year, to the curriculum for the preparation of students of the specialty 226 "Pharmacy, Industrial Pharmacy" it is expedient to add the subject "Fundamentals of Academic Integrity", with consideration of essence and principles of academic integrity, as well as general approaches to writing and defence of various types of scientific student works in compliance with the requirements concerning testing for plagiarism. This subject should become the basis of the block of subjects for carrying out scientific researches (taking into account educational and qualification level, professional orientation, academic mobility, etc.). At the same time, it is appropriate to develop the Code of Academic Integrity, based on its own traditions and many years of university experience, high standards in higher education. The key to implementing the Code will be the signing of declarations of academic integrity by lecturers and students.

To prepare the students, integrating the laws and methods of many sciences, plays an important role in adding of Fundamentals of Academic Integrity, with consideration of essence and principles of academic integrity, as well as general approaches to writing and defence of various types of scientific student works in compliance with the requirements concerning testing for plagiarism. This subject should become the basis of the block of subjects for carrying out scientific researches (taking into account educational and qualification level, professional orientation, academic mobility, etc.). The observance of certain ethical principles and values will contribute to ensuring the high quality of higher education, the training of highly qualified masters of pharmacy, which will be competitive in the labour market not only in Ukraine but also abroad.

Key words: academic integrity; academic plagiarism; pharmaceutical education.

Анотація. У статті висвітлено шляхи вирішення основних проблем, з якими стикаються викладачі та студенти щодо академічного плагіату у вищій фармацевтичній освіті. Розвиток інформаційних технологій, глобалізаційні процеси в освіті, полегшення доступу до значного масиву даних, науково-дослідницьких робіт і публікацій актуалізували необхідність формулювання

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і дотримання морально-етичних принципів щодо порядку використання інформації в академічній сфері.

Концепція академічної доброчесності в цивілізованому світі жодною мірою не є міфічною, це радше дієвий інструмент забезпечення і посилення якості вищої освіти. Тернопільський державний медичний університет імені І. Я. Горбачевського МОЗ України розробив внутрішній кодекс честі. Університет прагне створити середовище, яке сприяє навчанню, роботі, впровадженню інновацій, обміну знаннями, інтелектуальному розвитку студентів і працівників, підтримці особливої академічної культури взаємовідносин. Кожен член університетської громади, дотримуючись норм даного Кодексу, робить безпосередньо свій безцінний внесок у розвиток всього університету. Завданням Кодексу є створення сприятливих умов для забезпечення ефективного виконання членами університетської спільноти своїх обов'язків, що ґрунтуються на принципах високої суспільної моралі та культури; формування свідомої морально-правової позиції взаємостосунків учасників освітнього процесу; зростання та зміцнення позитивного іміджу Університету як науково-освітньої організації інноваційного спрямування. Пріоритетним завданням Університету є формування відповідальної особистості, здатної творчо мислити та самостійно вирішувати світоглядні і професійні завдання, бути готовою до життя і діяльності у сучасному полікультурному середовищі. Починаючи з наступного навчального року, до навчальних планів підготовки студентів спеціальності 226 «Фармація, промислова фармація» доцільно включити дисципліну «Основи академічної доброчесності», з розглядом сутності та принципів академічної доброчесності, а також загальних підходів до написання та захисту різних видів наукових студентських робіт з дотриманням вимог щодо перевірки на плагіат. Зазначена дисципліна має стати основою блоку дисциплін щодо проведення наукових досліджень (з урахуванням ОКР, фахової спрямованості, академічної мобільності тощо). Водночас доречно розробити Кодекс академічної доброчесності, що спиратиметься на власні традиції та багаторічний досвід університету, високі стандарти у сфері вищої освіти. Запорукою реалізації Кодексу стане підписання декларацій академічної доброчесності викладачами і студентами.

У підготовці студентів, інтегруючи закони та методи багатьох наук, відіграє важливу роль дисципліна «Основи академічної доброчесності». Цей предмет повинен стати основою блоку предметів для проведення наукових досліджень (з урахуванням освітньо-кваліфікаційного рівня, професійної орієнтації, академічної мобільності тощо). Дотримання певних етичних принципів та цінностей сприятиме забезпеченню високої якості вищої освіти, підготовці висококваліфікованих магістрів фармації, які будуть конкурентоспроможними на ринку праці не лише в Україні, а й за її межами.

Ключові слова: академічна доброчесність; академічний плагіат; фармацевтична освіта.

Introduction. The world community has paid a special attention to the issue of academic integrity in recent years. The development of information technologies, globalization processes in education, facilitating access to a large massive of data, research and publications updated the need for formulation and observance of moral and ethical principles regarding the use of information in the academic sphere. Thus, the Declaration concerning Ethical Values and Principles for Higher Education in the Europe Region was adopted at the conference in Bucharest under the auspices of UNESCO-CEPES (the European Center of UNESCO for Higher Education) in September 2004. The “Values and Principles” section of the Declaration defines academic integrity in teaching and learning processes, the main components of which are: honesty – prevention of any form of deception, lies, fraud, theft or other forms of dishonest behavior that adversely affect the quality of obtained academic degrees; trust – basis of relationships, which facilitates the free exchange of ideas, knowledge, achievements and experience and personality development; fairness – based on legitimate, transparent, predictable, consistent and objective criteria for teaching, assessing academic achievement of students, conducting research, career advancement of staff, obtaining any awards, honors, degrees; respect – compliance by all members of academic community, regardless of their status in the educational and scientific hierarchy, proper relation to their colleagues; responsibility – provision of free expression of views,

taking into account the requirements of current moral and ethical and legal rules and regulations; accountability – responsibility for research results to members of academic community and public. Separately, the Declaration highlights researches that are based on academic integrity and social responsibility, with the emphasis on the fact that researchers are responsible not only for research processes but also for research results [2, 6]. In Ukraine, since July 2014, with the promulgation of the Law of Ukraine “On Higher Education” has begun a large-scale struggle against poor academic research work – plagiarism and other forms of academic insecurity. The Ministry acknowledged that the problem is systemic and not punishable, it is necessary to promote other norms and values in the academic environment. A serious step towards the fight against academic plagiarism was the implementation of the Order of the Ministry of Education and Science of Ukraine dated July 14, 2015, No. 758 “On Promulgation of Theses and Reviews of Official Opponents”. Mandatory placement of the full text of theses on official sites of higher educational institutions is aimed at providing an opportunity to get acquainted with the results of research and embodies the observance of the basic values of academic integrity, in particular honesty, responsibility and accountability.

The aim – to find ways to solve the main problems faced by faculty staff and students regarding academic plagiarism in higher pharmaceutical education. The development of information technologies, globaliza-

tion processes in education, facilitating access to a large massive of data, research and publications updated the need for formulation and observance of moral and ethical principles regarding the use of information in the academic sphere.

The research is based on the study of materials obtained from open sources of information and authors' own experience.

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Theoretical framework. Academic integrity – a set of ethical principles and statutory rules that should guide the participants of educational process in learning, teaching and conducting scientific (creative) activities in order to ensure trust in learning outcomes and/or scientific (creative) achievements.

Observance of academic integrity by pedagogical, scientific and pedagogical and scientific workers includes:

- references to sources of information in case of use of ideas, statements, information;
- compliance with copyright law;
- providing reliable information on the results of research and own pedagogical (scientific and pedagogical, creative) activities;
- control over adherence to academic integrity by the applicants of education.

Adherence to academic integrity by the applicants of education implies:

- self-fulfillment of educational tasks, tasks of current and final control of learning outcomes (for persons with special educational needs this requirement is applied taking into account their individual needs and possibilities);

references to sources of information in case of use of ideas, statements, information;

- compliance with copyright law;
- providing reliable information on the results of own educational (scientific, creative) activities.

Violation of academic integrity is:

- academic plagiarism – disclosure (partially or completely) of scientific (creative) results obtained by other persons as the results of their own research (creation) and/or reproduction of published texts (published works of art) by other authors without

specifying authorship; form of academic plagiarism is self-plagiarism, which aims in reproduction without reference to the source of information of own previously published texts;

fabrication – falsification of results of researches, references, or any other data relating to the educational process;

fraud – provision of knowingly false information regarding own educational (scientific, creative) activity or organization of educational process;

copying – use without appropriate permission of external sources of information when assessing the results of training;

bribery – provision (receipt) by the participant of educational process or proposal for the provision (receipt) of funds, property or services of tangible or intangible nature in order to obtain unlawful benefits in the educational process.

For the violation of *academic integrity, pedagogical, scientific and educational and scientific workers* of educational institutions can be attracted to the following academic responsibility:

- refusal to award a scientific degree or to award a title;
- deprivation of awarded scientific degree or awarded academic title;
- deprivation of the right to participate in the work of statutory bodies or to occupy statutory positions.

For *violations of academic integrity, applicants of education* may be attracted to such academic responsibility:

- repeated passing of assessment (control paper, exam, credit, etc.);
- repeated training;
- deductions from the educational institution (except for those persons who acquire general secondary education).

Positively evaluating the requirement to publicize the results of scientific researches, we believe that it is necessary to start work in the direction of educating academic integrity much earlier. In order to form the latest social generation, on February 24, 2016 at the press conference of the Ministry of Education and Science of Ukraine, with the support of the US Embassy in Ukraine was announced the project “Promotion of Academic Integrity in Ukraine”, aimed at reforming the domestic education system from January 1, 2016 to December 31, 2019. Each of the project participants – the Ministry of Education and Science of Ukraine, higher educational institutions, libraries, employers, parents – performs a responsible mission and important tasks aimed at ensuring high quality of higher education [1, 5].

On the website of the Ministry of Education and Science on October 25, 2018, there are reports on obtaining by higher education institutions of the Guidelines on Academic Integrity, as well as an expanded glossary of terms and concepts of academic integrity. Relevant materials were developed within the framework of the Strengthening Academic Integrity in Ukraine Project – SAIUP with the support of the US Embassy, as well as sent letter by the Ministry of Education and Science to all universities. “We should admit that now we are experiencing a certain crisis of academic integrity. And there are several reasons for this. One of them – lack of the profound understanding at universities of what academic integrity is, and the procedures to ensure this integrity. And we are sincerely grateful to the Strengthening Academic Integrity in Ukraine Project – SAIUP, which helped us to prepare detailed and substantive recommendations on this subject for higher education institutions. A separate glossary of terms and concepts is created. We hope that these materials will be a significant contribution to higher education on their way to ensuring academic integrity”, – said Deputy Minister of Education and Science of Ukraine Yurii Rashkevych. The main authors of recommendations are Professor Volodymyr Bakhrushyn and Associate Professor Yevhen Nikolaiev. Materials consist of 6 separate blocks.

The first section – “Acquisition by students of competences on academic integrity and academic writing skills”. It discusses what competencies to maintain academic integrity should have a teacher, which the student should master, and also tells about the methods of teaching students the proper academic writing.

The second section provides recommendations for working with the teaching staff. In particular, it is about how to motivate teachers, what are the requirements for them and how to create the atmosphere of academic integrity in the institution.

The third section is devoted to issues of sanctions that can be applied to lecturers and students for violating academic integrity.

“Application of academic responsibility measures makes sense if the participants in the educational process understand the content of the current norms, grounds and procedures for bringing to academic responsibility. Therefore, under other equal conditions, sanctions for the same violations for junior students should be milder than for senior students and, moreover, for pedagogical, scientific and pedagogical

and scientific workers. The institution of higher education should provide training for all participants in the educational process, first and foremost, applicants of higher education in terms of ensuring academic integrity”, – the document states.

In order to improve internal integrity procedures, the fourth section of the Ministry of Education and Science, together with experts, contains recommendations on the creation of a Code of Academic Ethics and Ethics Committee of a Higher Educational Institution.

The fifth section provides guidance for institutions on the requirements for writing, which will help ensure academic integrity. Also, this part of the recommendation provides tips on how to protect written works.

The last, the sixth section of recommendations is devoted to the peculiarities of verification concerning academic plagiarism of thesis works.

As discussions on academic integrity were held concerning specific definitions for a long time, along with recommendations, the Ministry of Education also sent an Extended Glossary of Terms and Concepts of Academic Integrity. To develop a coherent and effective system of academic integrity in Ukrainian higher education, it is expedient to implement the following measures:

- to introduce into the current educational legislation of Ukraine of clearly defined and strict standards of responsibility for students, lecturers, and scientists for plagiarism; in the case of failure of management bodies of higher educational institutions to take appropriate measures to respond to certain academic misdemeanors or not imposing sanctions for plagiarism, to provide for the removal of such persons from the position;

- to oblige higher education institutions to implement own policies for ensuring academic integrity through the development of codes of honor for students and ethical codes for lecturers and administration, creation of independent, with the involvement of experts and the public, ethics committees that oversee ethical standards and resolve disputes in case of violation of such;

- to establish a national system for collecting statistical data and monitoring information on cases of academic dishonesty in universities and publishing on their basis of periodic open reports;

- to complete the creation and launch the national repository of academic texts for students, educators and scientists and foresee at the operational level, as the basis of its work, the principles of openness and transparency, as well as the use of specialized software to detect signs of plagiarism;

– to provide, as a criterion for the accreditation of educational programs of higher educational institutions, the availability of appropriate procedures and policies to combat plagiarism and abusive literacy, as well as academic modules on academic integrity;

– to establish the national institution of independent arbitration in the field of academic integrity in order to resolve disputes and respond to unjust practices involving punishment for plagiarism and copying;

– by the Ministry of Education and Science of Ukraine to initiate a nationwide program to popularize the culture of combating plagiarism and copying, including through training of students of academic writing, launching of grant research projects in this field, etc.

Consequently, the concept of academic integrity in a civilized world is not mythical by any means, it is rather an effective instrument for ensuring and enhancing the quality of higher education. Myths are born only in heads of individual weak-minded people who are deliberately unwilling to notice the urgency of problem, and even have some benefits to it. That is why the Ukrainian high school shall cease to live with myths in time, and move on to effective actions, implementing fundamental ethical values not by word but by deed!

I. Horbachevsky Ternopil State Medical University of the Ministry of Health of Ukraine developed an Internal Code of Honour. The University seeks to create an environment conducive to learning, work, innovation, knowledge sharing, intellectual development of students and employees, support of a special academic culture of relationships. Each member of a university community, following the rules of this Code, directly contributes its invaluable contribution to the development of the entire university. The purpose of the Code is to create favourable conditions for the effective performance by members of university community of their duties, based on the principles of high social morality and culture; formation of a conscious moral and legal position of interactions of participants in the educational process; growth and strengthening of positive image of the University as a scientific and educational organization of innovative direction. The priority task of the University is to form a responsible person capable of creative thinking and self-solving of philosophical and professional tasks, to be ready for life and activities in the modern multicultural environment.

Therefore, the basic moral principles that should be guided by members of university community are:

1. Principle of legality. In their activities, members of university community strictly adhere to the Constitution, the provisions of laws of Ukraine and other existing normative documents regulating scientific and pedagogical activities, and also encourage others to respect the Law and impose its requirements impartially.

2. Principle of mutual trust. Trust in the university environment encourages the free exchange of ideas and information, promotes collaboration and free production of new ideas, relieves fears that results of activities can be stolen, career can be spoiled, and reputation can be undermined. The participants in the educational process should not disclose the personal information received during communication or provision of educational services, access to personal affairs, and use it for their own purposes without the consent of their interlocutor.

3. Principle of honesty and decency. In the field of teaching, in scientific researches, in practical work, etc., representatives of the university community are required to act honestly, to be frank and in no case to deliberately falsify statements and not to spread gossips, to avoid bribery in interactions, to counteract any form of corruption .

4. Principle of fairness and objectivity. In the relationship between members of the university community, an unbiased attitude to each other, a correct and objective evaluation of results of academic, research and labour activity is important. The ability to consider the subject matter of the discussion is discarded, regardless of personal preferences or benefits.

5. Principle of competence and professionalism. Members of the university community are required to maintain the highest level of competence in work and education. It is necessary to constantly increase their educational and scientific level as a form of implementation of the principle “from education throughout life – to education throughout life”.

6. Principle of responsibility. Students and university staff should be responsible for the results of their own activities and not avoid commitments they have undertaken. To be responsible – it is to confront shameful acts, negative influence of others and serve as an example for others, awareness and willingness to act rationally for the good of society.

7. Principle of partnership and mutual assistance. In order to improve the quality of academic and research results, representatives of the university community are

guided by partner interaction, collective work, parity and educational activities.

8. Principle of mutual respect. Respect in the university environment should be mutual and requires identification of it both to oneself and to others, regardless of age, sex, status. It is imperative to avoid situations of intimidation, threats, humiliation and degradation of the honor of members of the university community, bullying, physical and mental violence, obscene language, manifestations of any discrimination. It is worth respecting and appreciating diverse, and sometimes opposing, thoughts and ideas. The person, who is studying, is treated as an independent personality and partner, and not just as a subject of teaching activity.

9. Principle of academic integrity. In own teaching activities, in scientific researches, in practical work, etc., representatives of the university community are required to act decently, honestly. Academic integrity is a set of ethical principles and statutory rules that should guide the participants of the educational process during teaching, training and conducting scientific (creative) activities in order to ensure trust in learning outcomes and/or scientific (creative) achievements. Violation of the principle of academic integrity not only undermines the reputation of the university, but also diminishes the value of educational and scientific degrees that are acquired at the university.

10. Principle of transparency. In order to avoid abuse of office by elected or appointed representatives of the university community, it is necessary that all procedures, relating to educational, research, economic and financial activities, should be transparent and simple, and, at the request of members of the university community, they should be provided with any information on the activities of university, except for that access to which is limited by the legislation of Ukraine.

11. Principle of safety and well-being. Students and university staff should take care of safety and well-being of community members. Any activity of students and university staff should not endanger life, harm the health and property of anyone in general and members of the university community in particular.

12. Principle of personal example. The assertion of academic integrity, humanistic values, ideal in interpersonal relations is possible only in terms of personal example. A personal example – the best method of educating and improving the system of social relations. Lecturers, researchers and students,

who aspire to academic integrity, not only become models for imitation, but also raise the standards of educational and scientific activity in general.

13. Principle of tolerance. Members of the university community should be gentle, polite, friendly and tolerant of each other's views, thoughts, beliefs, and the like.

14. Principle of courage. The experience of active steps towards the implementation of values and ideas of academic integrity testifies that their transfer from words into action requires dedication, determination and courage, willingness to withstand the pressure of those who are not happy to meet these progressive changes in the education system. Courage is not the lack of fear, but the ability to act according to own beliefs, despite fear.

15. Principle of academic freedom. A member of the university community is free to choose objects and methods of research, can express and distribute any ideas and views, criticize ideas, views and activities of others. Limitation of academic freedom is the current legislation and professional ethics. Discrimination and getting even in connection with critical or controversial statements are not acceptable.

16. Principle of respect. Members of the university community should honour the history of University and those who have made a significant contribution to its development.

In order to monitor the observance by members of the university community of ethical and legal norms of this Code at the University is established the Commission on Ethics and Academic Integrity (hereinafter – the Commission). The Commission is entitled to receive and consider applications for violation of the Code of Honour and to submit proposals to the University (faculties and institutes) for imposing appropriate sanctions. The Commission in its work is guided by the Constitution of Ukraine, the Law of Ukraine “On Higher Education”, “On Protection of Public Morality”, “On Principles of Prevention and Counteraction to Corruption”, other current normative legal acts, Articles of Association of the University, this Code and the Regulation on the Commission on Ethics and Academic Integrity, which is approved by the Academic Council. The composition of the Commission is approved by the Conference of labour staff of the University at the request of the University's Academic Council for the term of 1 year. A member of the community, who has witnessed or has a serious reason to believe that

violation of this Code has occurred, has to inform the Commission on Ethics and Academic Integrity of the University. It is unacceptable to submit (support submission) groundless complaints or complaints without signature. If a student or employee has doubts or uncertainty that his/her actions or inaction may violate the Code of Honor, he/she may seek advice from the Commission. The moral responsibility of a lecturer is confrontation at practice of unethical and incompetent activity of colleagues and discussion of this issue by the Commission. Any member of the university community has the right to address the Commission with a view to make suggestions and additions to this Code.

In my opinion, starting from the next academic year, to the curriculum for the preparation of students [3, 4] of the specialty 226 “Pharmacy, Industrial Pharmacy” it is expedient to add the subject “Fundamentals of Academic Integrity”, with consideration of essence and principles of academic integrity, as well as general approaches to writing and defence of various types of scientific student works in compliance with the requirements concerning testing for plagiarism. This subject should become the basis of the block of subjects for carrying out scientific researches (taking into account

educational and qualification level, professional orientation, academic mobility, etc.). At the same time, it is appropriate to develop the Code of Academic Integrity, based on its own traditions and many years of university experience, high standards in higher education. The key to implementing the Code will be the signing of declarations of academic integrity by lecturers and students.

Conclusions and Prospects for Research. To prepare the students, integrating the laws and methods of many sciences, plays an important role in adding of Fundamentals of Academic Integrity, with consideration of essence and principles of academic integrity, as well as general approaches to writing and defence of various types of scientific student works in compliance with the requirements concerning testing for plagiarism. This subject should become the basis of the block of subjects for carrying out scientific researches (taking into account educational and qualification level, professional orientation, academic mobility, etc.). The observance of certain ethical principles and values will contribute to ensuring the high quality of higher education, the training of highly qualified masters of pharmacy, which will be competitive in the labour market not only in Ukraine but also abroad.

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