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CORRUPTION RISKS IN THE SYSTEM OF MEDICAL EDUCATION IN UKRAINE

2019

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Corruption Risks in the System of Medical Education in Ukraine /I. Kohut, V. Bizyayev, T. Brick et al. USAID Project “Health Reform Support” Kyiv, 2019

This report was prepared with the support of the US Agency for International Development (USAID), provided on behalf of the US people, and the UK Government's “Good Governance Fund” program, provided on behalf of the UK people. The content of this document does not necessarily reflect the views of USAID, the US Government, UKaid, or the UK Government. Only Deloitte Consulting bears responsibility for it, under contract number 72012118C00001.

Abbreviations

ATO	Anti-terrorist Operation
CPD	Continuous Professional Development
HSEE of Ukraine “BSMU”	Higher State Educational Establishment of Ukraine “Bukovinian State Medical University”
HEE	Higher Educational Establishment
VNMU	National Pirogov Memorial Medical University, Vinnytsia
HSEE “IFNMU”	State Higher Education Establishment “Ivano-Frankivsk National Medical University”
HSEE “TSMU”	I. Horbachevsky Ternopil State Medical University of the Ministry of Health of Ukraine”
SI “DMA” MoH	State Institution “Dnipropetrovsk Medical Academy of the Ministry of Health of Ukraine”
SI “ZMAPE”	State Institution “Zaporizhzhya Medical Academy of Postgraduate Education of the Ministry of Health of Ukraine”
SI “LSMU”	State Institution “Luhansk State Medical University”
DNMU	Donetsk National Medical University
UEDBE	Unified State Electronic Database on Education
USQE	Unified State Qualification Examination
IHE	Institution of Higher Education
ZSMU	Zaporizhzhya State Medical University
Mass media	Mass communication media
SET	Standardized External Testing
LNMU	Danylo Halytsky Lviv National Medical University
MoH	Ministry of Health (of Ukraine)
MoES	Ministry of Education and Science (of Ukraine)
NACP	National Agency on Corruption Prevention
NMAPE	Shupyk National Medical Academy of Postgraduate Education
NMU	Bogomolets National Medical University
NMU	National Medical University
NUoPh	National University of Pharmacy
RSA	Regional State Administration
ONMU	Odessa National Medical University
SumSU MI	Medical Institute of the Sumy State University
UMAD	Ukrainian Medical Academy of Dentistry
UzhNU	Uzhhorod National University
FGDs	Focus Group Discussions
KhMAPE	Kharkiv Medical Academy of Postgraduate Education
KhNMU	Kharkiv National Medical University
KhNU	V. N. Karazin Kharkiv National University
PMBSNU	Petro Mohyla Black Sea National University, Medical Institute
EBRD	European Bank for Reconstruction and Development

Acknowledgments

The study “Corruption Risks in the System of Medical Education in Ukraine” was conducted during the spring to summer 2019 by researchers and consultants of the Kyiv School of Economics (KSE), on the initiative and with technical and grant assistance from the United States Agency for International Development (USAID) project “Health Reform Support”.

The main contribution to the development of this report was from Iryna Kohut, Tymofii Brik, Vadym Bizyayev, and Yehen Nikolaiev, all from the Kyiv School of Economics, as well as Oleksandr Zvinchuk, Yaroslavs Strelchenoks, and Alisher Latypov, all from the USAID project “Health Reform Support”.

The USAID project “Health Reform Support” and KSE express their gratitude to USAID for the financial support provided for this study.

The authors of the report would also like to express their gratitude to Professor Lyudmyla Sokurianska, Vice-President of the Sociological Association of Ukraine, for organizing and conducting a complex of sociological works. These include: focus group discussions, expert interviews, and preparation of analytical reports based on the results of each stage of sociological research.

In addition, the authors would like to mention the contribution of Inna Sovsun, namely for consultations on the objectives and methods of the study in preparation for the project.

Finally, the USAID project “Health Reform Support” and the authors of this report are grateful for all the people who contributed to this study—those involved in focus groups, students, teachers, representatives of administrations of educational institutions, health departments, and other experts, all of whom provided their detailed comments on the situation in the field of medical education in Ukraine.

Content

Executive Summary	7
1. Introduction	10
2. Literature review	11
Resume	11
2.1. Understanding corruption, its causes, mechanisms, and consequences	11
2.2. Overview and perception of corruption	11
2.3. Corruption in higher education	14
2.4. Summary and recommendations for future studies	16
3. Study methodology	18
4. System of medical education as the formation of the value chain	20
4.1. Institutions of higher medical education in Ukraine	20
4.2. Training of junior professionals (nursing personnel)	20
4.3. Training of health care professionals at the level of the bachelor's/master's degree	21
4.4. Financing of medical education	22
4.5. Quality of medical education	24
5. Description of the system functioning and risks of corruption and hypotheses regarding acts of corruption at the levels and stages of the educational process	29
5.1. Colleges	29
5.2. Universities	32
5.2.2.1. Why students pay for marks	36
5.3. Internships	42
5.4. Continuous professional development	44
6. Conceptualizing corruption	47
6.1. Students	47
6.2. Interns	49
6.3. Teachers and administration of IHEs	49
6.4. Teachers and administration of colleges	49
7. Corruption as a mutual benefit	51
7.1. Students	51
7.2. Interns	52
7.3. Teachers and administration of IHEs	52
7.4. Teachers and administration of colleges	52
7.5. Representatives of the CPD system	52
7.6. The role of intermediaries in acts of corruption	53
8. Factors that provoke acts of corruption and enable their existence	56
8.1. Admission	56
8.2. Educational and scientific processes	57
8.3. Control	57
8.4. Administrative processes	58
8.5. Schemes	59
9. Coverage of the issue of corruption in the mass media	60
9.1. Methodology of evaluation	60
9.2. Conclusion	60
10. Analysis of anti-corruption policies and programs of institutions	61
11. Index of resistance to corruption of higher medical education	65
11.1. Method of calculation	65
11.2. Statistical measures	65

11.3. Indicators and points based on the online questionnaire survey about corruption risks in medical education	66
11.4. Questionnaire survey	68
11.5. Sub-index “Transparency and Anti-corruption Policy of Educational Institutions”	68
12. Recommendations	70
12.1. The role of intermediaries	71
12.2. Practical content of classes	71
12.3. Social norms and cheap corruption	72
12.4. Proposed steps	72
Appendices:	74
Appendix 1. Table of Available Empirical Literature on the Issue of Corruption in Medical Education	75
Appendix 2. List of references	80
Appendix 3. Methodology of the online survey	82
Appendix 4. Table on the Sections Included in the Anti-corruption Programs of Institutions Where the Study Was Conducted	85
Appendix 5. Comparison of the Content of Anti-corruption Programs of the Institutions Under Study	87
Appendix 6. Corruption Risks Identified and Specified in Reports on the Assessment of Corruption Risks	88
Appendix 7. Integrity of the System of Medical Education	91
Appendix 8. Corruption Schemes: Factors and Participants	97
Appendix 9. Content analysis	119

Executive Summary

Corruption is a destructive phenomenon in all spheres of public life, but education and health care are the sectors in which corruption is both very widespread and causes the most harm to the community. In the sphere of public health, corruption reduces the quality of health services and, therefore, the duration and quality of life. In the sphere of education, it reduces the quality of specialists' training and lays the foundation for reproducing unethical and illegal behavior in future professional life. At the intersection of these spheres—specifically with regard to medical education—corruption causes twice the damage.

The mitigation of corruption risks in the field of medical education is an integral part of health care reform in Ukraine. However, to effectively combat systemic corruption, it is first necessary to learn about how it functions, why it is advantageous for participants of acts of corruption to be involved in them, and how corruption is integrated into the existing regulatory and institutional framework of medical education institutions. Thus, this study aimed to examine these facets.

The study of corruption risks in the system of medical education in Ukraine was conducted from April to September 2019 by the Kyiv School of Economics within the framework of the USAID project “Health Reform Support”. The objective of this study was to examine the motivation of each participant in the educational process to be engaged in corrupt practices. We also wanted to explore the characteristics of the system of medical education that pushes for or enables corruption. Thus, we attempted to establish the fundamental causes of the problem rather than determine the prevalence of certain corrupt actions. A deep understanding of corruption processes, as well as the role of each person involved in corrupt practices and their motivation, make it possible to identify the subjects most likely to be corrupted by the system of medical education. This knowledge also offers effective tools to mitigate the risks.

This report includes: an introduction (objectives of the study and its methodology), a literature review (academic articles and reports on studying corruption, including corruption in higher education and medicine), a description of the system of medical education (an overview of quantitative indicators and the quality of medical education in the eyes of stakeholders), a description of corruption risks at all stages of the educational process, conceptualization of corruption (its definition, types, and stakeholders' evaluation), and an analysis of the characteristics of the systems of medical education that enable and provoke corruption, as well as recommendations on the mitigation of corruption risks.

There are almost no studies on corruption in the medical education system, although there are studies on corruption in either the health care system or higher education. However, medical education is quite specific in terms of its content. The structure of educational programs, with regard to teaching staff and risks for corruption in the health sector, is the reason why it is worth evaluating corruption in medical education in depth.

In accordance with the sensitivity of the topic and set tasks, the study included a variety of methods for data collection, including a literature review, study of legislation, focus group interviews, in-depth interviews, expert interviews, and online surveys. All levels of medical education—colleges, universities, internships, continuous professional development, and research activities—were included in this evaluation.

The study found that corruption risks are present at all stages of the educational process (the admission, study, and internal and external control) and at all levels of medical education, including training of junior specialists, masters, interns, postgraduate students and doctoral students, and continuous professional development. However, the seriousness of those risks, and, accordingly, the prevalence of corrupt practices, is different.

The parts of the medical education system that are most subjected to corruption are:

- Admission to colleges and universities after college;
- Internal control with regard to the educational process in colleges and universities (bribes for exams and pass-fail exams);
- Admission to internships

The common features for these stages of the medical education system are opacity, a lack of clear rules and algorithms and an effective system of feedback, and evaluation of quality. The participants in the educational process consider corruption to be a way to circumvent the system or obtain other benefits. While the latter is definitely condemned, the first is a “gray zone”, where the definition of the acts of corruption begins to blur or can be mixed with “gratitude”, “making life easier”, etc.

The more inefficient, opaque, and unfriendly the system of medical education seems to be to the respondents, the less they are inclined to condemn violations of rules that appear to be corruption from an outsider’s point of view. In the case of a non-working system, corruption ceases to be a hindrance and becomes a “crutch” that helps to cross the crooked step. Therefore, it is impossible to overcome corruption without the elimination of systemic problems related to the organization of the educational process, the content and the structure of educational programs, as well as any problems relating to personnel policies.

The most common types of corruption are actions that many respondents do not actually qualify as acts of corruption. These deeds are not direct bribes, but they are violations of the code of ethics; cheating, gifts, and false check-ins of class attendance are some examples. In these cases, there is no condemnation among respondents, a fact that causes the formation of a specific culture where corruption is prevalent and/or justified.

Mediation is an important structural feature of corruption. Anti-corruption measures are usually created because a certain individual benefits from corruption (a student, a teacher, or administration officials). However, our research shows that an important role is played by third parties who often drop out of sight of researchers and fighters against corruption, including parents, course leaders, and colleagues—all of whom are not personally involved but create a specific culture of justification and organization of corrupt actions.

Impractical and obsolete classes encourage corruption. Thus, the reduction of such classes in the schedule can automatically narrow the field for acts of corruption.

Based on the analysis of the information received, we identified some characteristics of the system of medical education that provoke corruption and enable it for different participants. The most common instigating factors of corruption are: the desire to obtain money or services, administrative pressure, and the lack of time allotted for performing duties (learning or teaching) due to an overload of work. As far as education is concerned, a low level of qualification and knowledge, the irrelevant content of some educational programs, and a non-optimal combination of study modes all encourage corruption.

Corruption becomes possible due to an inefficient system for determining staffing needs in public health, non-transparent personnel policies in health care, and an ineffective fight against corruption outside the system of medical education. Within the system, there is an inefficient system for evaluating students' knowledge, a lack of definitions for the acts of corruption in the system of medical education, and weak anti-corruption policies in educational institutions.

Notably, at various stages and levels of medical education, other factors are more impactful. An example of this is during internship enrollment, where the significant difference between the institutional capacities of health care facilities incites acts of corruption, and a non-transparent system of enrollment enables these acts. For every act—or group of corrupt actions—there is a unique set of factors. However, those listed above occur most frequently and should therefore be considered when developing policies aimed at reducing corruption risks in the system of medical education.

At this time, most medical education institutions have anti-corruption programs and plans in place, but the analysis of these instruments revealed their imperfections. These programs vary very little from the prescribed, typical programs. More importantly, the measures that are currently being utilized to assess their efficacy do not contain clear indicators of fulfillment. Internal anti-corruption audits do not adequately define the available corruption risks.

The study participants believe that the most effective means of combating corruption is taking a more severe and unavoidable responsibility for it, as well as improved educational programs and increasing teacher salaries.

Experts insist that it is currently unrealistic to hope to overcome corruption from the outside, particularly by law enforcement and judicial authorities. Therefore, it is necessary to change the system of medical education from the inside. In their opinion, it is important to make the rules more transparent and give financial autonomy to the affected institutions.

Another important result of the study was the development of a methodology for the index of resistance to corruption in medical education. This index may become the basis for measuring changes in the perception of corruption within medical education. We propose to hold a series of qualitative interviews in order to get an idea of the specific items that would improve the methodology for calculating the index.

Based on the results of the study and consultation with stakeholders, we developed proposals for minimizing corruption risks at the level of (1) educational institutions, (2) the Ministry of Education and Science of Ukraine, and (3) the Ministry of Health of Ukraine.

Educational institutions should improve education programs. In particular, we recommend: increasing the practical component and decreasing the share of self-directed learning of students, both of which will create a system for evaluating teachers' work and further develop the definition of unacceptable behavior. These actions might be achieved within the Code of Ethics and by persistently conducting awareness campaigns both among students and teaching staff, as well as administration and parents. We also recommend improving anti-corruption policies, particularly by establishing measurable indicators for each of anti-corruption measures and involving outside observers and experts in assessing risks and conducting audits of educational institutions.

The Ministry of Education and Science of Ukraine must apply reforms to the process of enrollment for colleges and universities after college by making it more transparent: for example, using standard examination testing results, changing the system of financing for higher educational institutions, and introducing funding based on their performance. These changes will eliminate the binding ratio of teachers to the number of students, and, in general, provide higher education institutions with greater financial autonomy. It is also necessary to increase the amount of funding per individual student.

The Ministry of Health of Ukraine must create a system for determining the needs of personnel in public health and create an open database of vacancies in health care institutions, including internships. They must also reconsider the role of the health departments of regional state administrations in the training of specialists, replace the model of funding for post-graduate education with a model of financing services, and change the procedure of external control (the KROK exam) to improve the safety of the information system at the Center for Testing at the Ministry of Health. These endeavors may be accomplished by using tests from a closed base and preparing professional proctors. It is also necessary to increase the share of capital expenditures for medical education institutions and stimulate the development of clinical bases at these institutions.

1. Introduction

The transformation of the public health system in Ukraine is impossible without a new generation of medical personnel who can provide the highest quality of medical services. Therefore, the reform of medical education is a top priority. However, the most innovative ideas and carefully developed measures—those aimed at improving the quality of medical education—cannot be implemented if the system of medical education is not holistic and virtuous. When beginning this study, we proceeded from the hypothesis that medical education in Ukraine suffers from systemic acts of corruption. The goal was to find ways to overcome this systemic corruption.

Corruption is a sensitive issue; it is difficult to study because participants of corruption can feel the growing external threat to themselves, or they might be interested in illegal and unethical actions. In addition, corruption in education is intertwined with the violation of academic integrity and unethical actions. Participants of the educational process are not always aware that things they do are unethical or even illegal. Thus, recommendations for reducing the risk of and fighting corruption should be based on understanding the place occupied by acts of corruption in the system of medical education. Above all, there must be a profound understanding of the principles that function within this system. We need to understand why participants of the educational process and the civil servants who manage the system resort to acts of corruption, are interested in them, and why the system is unable to independently regulate them. This task reaches beyond legislation, business processes, and procurement: It also concerns motivations and values.

The tasks of this study were:

- To classify the types of corruption in the system of medical education;
- To describe the course of corrupt processes in the system of medical education at all of its levels;
- To define the participants involved in corruption and describe how they understand corruption and explain it for themselves;
- To define the motivation of participants involved in acts of corruption;
- To identify characteristics of the system of medical education that enables and encourages acts of corruption.

2. Literature review

Resume

There is a significant shortage of scientific and political studies about corruption in medical universities (i.e. at the intersection of the health care and education sectors). Published surveys show that corruption in education mainly occurs during exams, especially when students are overloaded with their curriculums, have to earn a living, and/or feel pressure brought on by social obligations to succeed academically. This phenomenon indicates that corruption occurs in response to specific adverse effects of social context (the overloaded curriculum or pressure from peers or from a specific culture of achieving a certain status). However, corruption in medical education arises in the context of exams and other conditions due to various factors and circumstances. In general, there is an urgent demand for a study focused on corruption in medical education.

2.1. Understanding corruption, its causes, mechanisms, and consequences

Corruption was recorded as one of the key issues in the impediment of the economic and social development of Ukraine (Swain et al., 2008). Corruption impeded a successful post-communist transition in Ukraine by contributing significantly to the formation of its image of an “unreformed” country (Boycko et al., 1995), a country with “partial reforms” (Hellman et al., 2003), and a “captured state” (Havrylyshyn, 2006).

Corruption is harmful to economic growth due to the unequal distribution of goods and incomes. It also erodes people's faith in elected leaders and government systems, as well as their trust in the social and democratic institutions. A comparative study of post-communist states shows that subjective feelings about corruption play a stronger role when a person makes the decision to support the government rather than their own personal economic situation (EBRD, 2016; Guriev, 2018). In addition, corruption is a major reason why the Ukrainian people continue to demand reforms.

While Transparency International defines corruption as the abuse of delegated powers for obtaining private gain (Transparency International, n.d.), researchers and policy makers usually tend to have a more nuanced approach to this phenomenon. In the post-communist context (e.g. Swain et al., 2008), corruption is studied as:

- A variable for predicting comparative economic performance;
- A strategy or a practice for survival of people who experience economic difficulties;
- A necessary phase of the transition to capitalism;
- An indicator of anxiety and growing inequality in the community.

It is within this framework that we define our review of the literature. We will focus on the relationship of corruption in medical education in Ukraine, other forms of corruption, and a wide range of social institutions, individual beliefs, and practices.

2.2. Overview and perception of corruption

2.2.1. Corruption in the world

According to the Transparency International survey “Corruption Perceptions Index-2018”, Ukraine ranked 120 among 180 countries surveyed (with 32 points; Transparency International, n.d.). The scores range from “0” to “100” points, where “0” corresponds to “highly corrupt” governments and “100” correspond to “very clear” governments, based on information collected from multiple sources. Although the situation in Ukraine has improved somewhat from 2017 to 2018, most of the other post-socialist countries occupied higher positions (Poland – 60 points, Slovakia – 50 points, Romania – 47 points, Hungary – 46 points, Belarus – 44 points, and Moldova – 33 points). The only post-communist society that ranked lower than Ukraine was the Russian Federation (28 points, position 138).

Corruption Perceptions Index (CPI):

- It is based on 13 surveys and experts' assessments;
- Only the public sector in 180 countries is measured;
- Only perception is measured.

The CPI is a popular index that has some limitations. It is based on surveys built from the perception of corruption in the public sector. As far as we know, there have been no systematic attempts to track a specific index of corruption in the sphere of medical education in Ukraine. Most available surveys are based on the general aspects of corruption, such as how many respondents paid bribes or which sector is more corrupt, based on the respondents' experience. For example, one of the most comprehensive reports of the European Association for Research analyzed corruption in Ukraine in 2007, 2008, 2009, and 2011 (ERA, 2011). Unlike many comparative studies, this report focused on very specific details in the Ukrainian context. It covered the perception of corruption in many government institutions, courts, police, and budget-funded institutions (universities and hospitals). However, there were no data focused on evaluating medical universities.

Examples of studies and surveys that include questions about corruption, and thus may be used to assess general aspects of corruption in the world, are:

- The average index of corruption control of the World Bank is a composite that includes data from experts and surveys aimed to assess the extent to which state power is used for private gain. It covers both small and large forms of corruption, as well as the "capture" of a state by elites and private interests (WGI, 2019).
- The European social survey includes comparative data on people's attitudes toward corruption (ESS, 2019). The data cover 47,537 people from 26 European countries for the period of 2004 to 2006. This survey includes questions about how often people gave bribes.
- The Eurobarometer survey is a comparative survey that includes questions about corruption (i.e. support or antipathy, whether it is part of the business culture, how wide it is spread). According to these data, most Europeans believe corruption should not be allowed (European Commission, 2017).
- The Life in the Transition Period survey is organized by the EBRD. According to its data, less than a quarter of Europeans believe that is acceptable to render a service (22 %) or give a gift (21 %), in order to get something from the state administration or public service. Even fewer people (14 %) consider it acceptable to give money (EBRD, 2016).

2.2.2. Corruption in medical education

As mentioned above, there is a need for a special study to measure and monitor the levels of corruption in medical education. The number of available comparative studies of this subject is scarce, and they cover inconsistent geographical areas and time frames.

Most of these comparative studies are devoted to both academic and non-academic agents that promote corruption, such as values and disposition to students, as well as the institutional context that allows corruption (Heyneman et al., 2005; Paredes-Solís et al., 2011; Rumyantsev, 2005). Their findings indicate that:

- Corruption may be classified by areas (academic or administrative) and by the subjects involved in the exchange (student–teacher, student–administrator, and students' collective);
- Corruption is likely to occur in the presence of a monopoly on services, arbitrariness in application of rules, and when there is a low level of accountability;

- Non-academic institutions encourage corruption. Some companies offer to sell marks, fake diplomas and fake license for accreditation and certification;
- Not all sectors are equally corrupt: For example, economy, law, and medical sciences are the most corrupt in post-communist societies;
- Corruption in medical universities can have different manifestations, such as: performing checks to confirm the attendance of a fellow student who missed the class, plagiarism and fraud, the presence of specific access to materials of the class, and payment of bribes for passing exams. Transparent and strict rules in the admission system may help to fight corruption;
- Students around the world are reluctant to report abuse and corruption;
- There is a wide range of specific circumstances that influence corruption. For example, in Mexico, students are much more likely to bribe a teacher to pass an exam if they were subjected to sexual harassment or political pressure.

Although there are some scattered reports of corruption in medical education, there is no unified methodology to measure and monitor this issue. Thus, to develop the actual measurement, more quantitative and qualitative data is required.

2.2.3. General aspects of corruption

Previous studies have shown that corruption is a key issue for the private and public sectors in Ukraine. According to the research, representatives of the business sector have a higher readiness to pay bribes because they can more likely to benefit from corruption (Cabelkova & Hanousek, 2004). At the same time, when considering public services, most Ukrainians have reported the payment of bribes in health care institutions and secondary schools and to traffic police (CPLR, 2019).

Interesting facts:

- In the comparative study, Ukraine is mentioned as a country where people tend to overestimate the level of corruption (Birdsall et al., 2018).
- Women are more prone to giving bribes in order to be admitted to a university and to pass exams. A possible explanation is that women have less opportunities in the labor market (Shaw, 2005).
- Students who paid bribes for final exams in secondary education institutions are more likely to have paid bribes for admission into universities (Shaw, 2005).

According to the report of the Centre of Policy and Legal Reform (CPLR, 2019), in 2017, 49 % of respondents agreed that bribes are unacceptable. At the same time, 35 % of respondents agreed that corruption could be justified in some cases. Moreover, 9 % of respondents agreed that corruption is a useful and convenient strategy for solving problems.

Ukrainians have changed their attitude toward corruption over time (KIIS, 2015):

- The number of respondents who voluntarily gave bribes decreased from 40.5 % in 2011 to 35.6 % in 2015. At the same time, the number of respondents who were asked to give a bribe remained stable—57 % and 56%, respectively.
- The number of respondents who believe that ordinary people are responsible for fighting corruption has increased significantly over time (15.8 % in 2007, 18.0 % in 2011, and 24.0 % in 2015).
- According to the previously mentioned studies, in 2015, the majority of respondents agreed that corruption exists in most secondary schools (56 %) and health care institutions (32 %) and with traffic police (23 %).

2.3. Corruption in higher education

Comparative studies have shown that in Ukraine the level of corruption in higher education is greater compared to other post-communist societies (Heyneman et al., 2007).

Unfortunately, the number of studies about corruption in medical universities is negligible. One of them is a study of Mexican medical students, who considered corruption as a minor problem.

Although the method and period differ from our data about Ukraine, it is fair to say that Ukrainian students (at all levels) consider corruption to be a much more significant problem compared to Mexican students.

- Fifteen percent of Mexican medical students reported that they paid bribes to pass an exam in 2000 and 18 % in 2007 (Paredes-Solís et al., 2011);
- Sixty-one percent of the students surveyed reported that they gave bribes during exams in Ukraine (DIF, 2015).

The high level of corruption in Ukrainian universities is usually explained by four factors: general spreading of corruption in society (education is only a part of it), social norms that contribute to corruption, unfavorable economic conditions and/or lack of incentives, and mismanagement of the universities (Osipian, 2017; Osipian, 2018; Shaw, 2005).

2.3.1. Spreading of corruption in society

In 2017, most Ukrainian people were concerned about the issue of corruption (CPLR, 2019). Ninety percent of Ukrainian people agreed that corruption is very widespread in society. Most respondents indicated that corruption is very common in the courts (52 %), Verkhovna Rada (51 %), the Office of Public Prosecutor (45 %), government (43 %), customs service (39 %), and medical institutions (39 %), while the church, non-governmental organizations (NGOs), and mass media were perceived as the least corrupt. At the same time, 38 % of respondents said they paid bribes—most often in elementary and secondary schools (38 %), in health care institutions (33 %), to traffic police (33 %), and for professional education (31 %).

In general, education and health care are distinguished by the responses from the participants. On the one hand, the respondents acknowledge that these institutions are corrupt (perception). On the other hand, they continue performing acts of bribery with administration and/or providers of educational and medical services (practice).

2.3.2. Social norms.

According to surveys (DIF, 2015), most students tend to think of bribes as a gratitude to teachers (32 %). Even more students consider corruption to be a tool for getting some kind of benefit from teachers (37 %). Fewer students believe that corruption is a forced choice that is influenced by power (23 %). It should not come as a surprise that corruption often arises during examinations (as mentioned by 61 % of students).

Despite a high level of corruption in higher levels of education, some changes in attitude have recently been observed (DIF, 2015). In 2011, 47 % of surveyed students agreed that corruption was an effective tool for solving their problems, while in 2015, only 40 % said the same. Moreover, the share of students who believed that corruption in education is inevitable was 15 % in 2011, but this number dropped to 10 % in 2015.

One study showed certain differences in the perception of corruption by students and teachers. A survey of 375 teachers and 409 students in three big cities in Southern Ukraine (Kherson, Mykolaiv, and Odessa) revealed some significant differences in the perception of corruption among these groups (Table 2.3.2.1).

Table 2.3.2.1. Perception of Statements about Corruption by Students and Teachers

Statements	Proportion of persons who agreed with the statement (%)	
	Students	Teachers
Corruption spreads through moral decline	10.2	15.5
Student unions are responsible for fighting corruption	13.6	24.5
Local authorities are responsible for fighting corruption	9.0	0.9

Source: Rozhanska & Wolf, 2016.

As mentioned above, the Ukrainian students who paid bribes in secondary schools usually give bribes in universities (Shaw, 2005). Thus, it is important to understand the context of how this applies to secondary education.

In 2018, within the framework of the Strengthening Academic Integrity in Ukraine Project (SAIUP) project, the CEDOS think tank conducted a series of focus groups with teachers and parents (SAIUP, 2018). The study showed that:

- Parents and teachers do not adequately understand what academic integrity means and how it relates to study outcomes of their children;
- Parents mostly think that teachers rather than students are responsible for the behavior in an academic context. Teachers in secondary schools do not generally accept this notion and believe that academic integrity only applies to higher education;
- Both parents and teachers think that deception is the most common violation among students;
- Parents often do not trust teachers because they sometimes force students to attend extra lessons on a paid basis;
- In general, there is a strong social environment of parents and teachers who would not allow students to receive bribes. Academic integrity is not a fixed concept in Ukrainian schools.

A survey of 600 students in Ukraine supports these findings. Students who take bribes usually come from small towns and villages with an insufficient number of standards for secondary school (Denysova-Schmidt & Prytula, 2017). Moreover, a series of 115 in-depth interviews, as well as two focus groups with faculty teachers, showed that Ukrainians share certain gender stereotypes about corruption. For example, women are perceived as more likely to misuse personal relations, while it is recognized that men are more likely to extort money from others and take bribes (IAHR, 2011).

2.3.3. Unfavorable economic conditions, lack of incentives, and mismanagement of the university

Most students reported that they did not have enough time to study because of the need to earn money. In 2011, only 13.4 % of students said that an overload caused by a curriculum with unnecessary subjects was the reason for giving bribes; in 2015, this justification increased to 32.4 % of students (DIF, 2015). This finding indicates that the overload factor has become more significant over time.

A series of interviews with 600 students in Lviv (Denysova-Schmidt & Prytula, 2017) showed that:

- 47.8% of students have experience in bribery;
- 94.5% of students admit they cheat during exams and tests;
- 92.8% write documents by copying and pasting fragments without referencing their sources;
- 64.2% download documents from the Internet and represent them as their own;
- 40.4 % pay third-parties to write the documents for them;

- 37.5 % ask teachers about preferential care.

Students are encouraged to behave in an unfair way because good marks are also a factor for obtaining state scholarships. Students who live in dormitories spend more time solving everyday problems, such as shopping, cooking, and cleaning, compared to students who live with their parents. Therefore, they have less time to study and can solve their problems faster through the use of bribery.

Researchers say that higher education in Ukraine “remains in the Catch-22 situation” (Osipian, 2017). Ukrainian universities need autonomy to become better organizations with stronger management and potential. They cannot achieve this goal without independence. Thus, the Ukrainian universities remain in oblivion.

Recently, several significant attempts have been made to improve the structure and methods of management in medical universities. The Rector of the Odessa State Medical University was dismissed by the Acting Minister of Health of Ukraine. Kateryna Amosova, the Rector of the Bogomolets National Medical University, was also dismissed. The researchers note that the role of the Ministry of Health (MoH) of Ukraine, student organizations, student activists (especially foreign ones), and some public institutions (such as the Ukrainian State Center of International Education and the Center for Testing at the MoH) are crucial for increasing transparency and creating incentives for combating corruption.

2.3.4. Assessment of the situation based on statistics

The number of studies on corruption in medical universities is very limited. However, a recent statistical analysis of 197 state tests (KROK) from 2009 to 2018 demonstrated the so-called cease of distribution. In crude terms, this phenomenon indicates a pattern where the score of most marks falls on the threshold of the passing value (VoxUkraine, 2019). According to study authors, this finding indicates that those students who failed to pass or appeared to be on the verge of most likely received a slight increase in scores in order to meet the minimum passing requirements. However, representatives of the MoH of Ukraine have not agreed with this interpretation.

2.4. Summary and recommendations for future studies

Most available studies of corruption are related to economic issues and the national policy; there are very few studies on corruption in medical universities. There is no specific methodology or index for measuring and monitoring corruption in medical universities. At the same time, qualitative and quantitative surveys show that corruption is associated with:

- Culture—by specific social norms that accept or at least do not fight against corruption;
- A system of incentives and factors that make corruption possible (such as economic conditions, overloading of courses, etc.);
- Internal policies regulating the risks of corruption;
- A poor structure of management and failing practices of the management of universities.

Appendix 1 contains a summary table with an overview of available empirical literature on the subject. We grouped studies in blocks that are given in the sequence from the most general studies to the most specific:

- 1) literature on the post-communist transition;
- 2) corruption in education;
- 3) corruption in education in Ukraine;
- 4) corruption in medical education;
- 5) surveys and presentations on the topic of corruption in Ukraine.

Despite the relatively large number of processed sources, our overview confirmed the existence of significant gaps in knowledge about corruption in medical education. First, the data covers specific years, regions, and social contexts. Second, the conceptions are based on different methods: sometimes they are qualitative and sometimes quantitative. Finally, corruption in medical education is a very narrow research subject. The available studies mostly cover broader issues. Thus, it is impossible to easily generalize these findings for Ukraine, especially considering the

differences in the timing and context. Moreover, there is a demand for a new study that can use both qualitative and quantitative methods. Thus, the study of corruption in health care universities is scarce.

Surveys show that many Ukrainians do not believe that corruption is a completely bad phenomenon; sometimes they consider corruption to be a convenient strategy for solving problems. Students feel that they can use bribery as a tool to obtain favor from teachers, especially during examination periods.

Corruption in education occurs during exams, especially when students who are overloaded by the curriculum have to work in order to earn a living and feel pressured by social liabilities. This finding indicates that in some cases corruption emerges in response to specific unfavorable effects of the social context (the overloaded curriculum, pressure from peers, and/or a specific culture of achieving status). Therefore, there is a need for a specific study dedicated to corruption in medical education. Based on our review of the literature, qualitative analysis of the following aspects may be of special interest:

- Analysis of the state exam (KROK): Qualitative research will help shed new light on the organization of these exams and thereby generate hypotheses for future quantitative estimates.
- Most students said that corruption does not occur due to pressure from the authorities. Instead, they responded that corruption is a tool that is used to influence teachers. They often mention an important role for peer pressure (*"Everybody do[es] this"*). This finding indicates that there is a specific culture that renders corruption a normal phenomenon and encourages it. A qualitative study will help develop further understanding of these issues.
- Quantitative studies show that the people's perception of corruption, and the attitude toward it, may vary over time. However, little is known about the causes of such changes (for example, changes in economic welfare or culture).
- Students and teachers often have mixed feelings about corruption: They disagree on the issue of who bears responsibility for combating corruption. This uncertainty requires clarification.

3. Study methodology

In response to the tasks described above, we decided to use different research methods to understand corrupt practices in medical education as fully and deeply as possible. We used a combination of a desk study, as well as qualitative and quantitative methods.

The **desk study** involved the analysis of scientific papers and reports of Ukrainian and international (English) editions in three areas: methods for studying corruption, corruption in higher education (including in medical education), and corruption in the health care sector. We analyzed data on the network of educational institutions, which conducted training in the health care field in 2018. This part of the study also included an analysis of legislation in the sphere of higher education, including: the laws of Ukraine in the field of higher education, laws on the state budget of Ukraine from 2015 to 2019, regulations of the Ministry of Education and Science (MoES) and MoH of Ukraine, and internal documents from institutions of higher medical education. These sources include estimates, anti-corruption policies, and regulations on the organization of the educational process.

The **qualitative methods** of the study included expertise interviews, in-depth interviews, and focus group discussions (FGDs). The FGDs with Ukrainian and foreign students of medical higher education establishments (HEEs) and colleges, teachers of HEEs and colleges, representatives from the administration of HEEs and colleges, as well as interns and representatives of a system of continuous professional development were held with the intention to explore the understanding of the participants on the educational process and institutions of medical education, as well as the acts of corruption, persons involved in them, and the reasons why they resorted to them. In total, 42 moderated focus group interviews were held in 11 institutions of medical education. The participants were selected based on criteria about regional representation, size (number of students), and the proportion of students who obtain education or training on a contractual basis:

- Foreign students (3 groups);
- Administration of universities and colleges (5+5 groups);
- Teachers of universities and colleges (5+5 groups);
- Students of universities and colleges (5+5 groups);
- Teachers and students of postgraduate education institutions (2+2 groups);
- Interns (5 groups).

The discussions were held with the participation of: 108 teachers (including 42 from colleges, 56 from medical universities, and 10 from postgraduate education institutions), 88 administration officials (including 44 college administration representatives and 44 university administration representatives), 86 students (including 41 at medical universities and 45 at colleges), 22 foreign students, 43 interns, and 20 post-graduate education students.

The gender distribution of the focus groups were as follows: Among students, there were 53 women and 33 men; among teachers there were 69 women and 39 men; among foreign students, there were 8 women and 14 men; among interns, there were 14 women and 19 men; among the representatives of administration, there were 58 women and 30 men; and among students of post-graduate education, there were 17 women and 3 men.

In-depth interviews were conducted to obtain a deeper understanding of what corruption is and how it works. Due to a feeling of greater safety and confidence with the interviewer during one-on-one conversations, we used this method to learn more details about specific acts of corruption and create a step-by-step description of the most common delinquencies related to corruption in medical education. Twenty-seven interviews were held with students, interns, teachers, the administration of educational institutions, employers and representatives of recruitment agencies (who contact foreign students), the MoES and the MoH, as well as the regional health departments of regional state administrations (RSAs).

Expert interviews were conducted to deepen our understanding of corruption risks in legislation related to medical education. These issues included causes and consequences of corruption in institutions of medical

education, as well as the consequences of implementation by the MoH of Ukraine on the Strategy for Development of Medical Education in the context of fighting against corruption in this sphere. Thirty interviews were held with experts; they focused on the reform of medical education, public health, and higher education and academic integrity.

In order to study individual cases of corruption in the field of medical education and assess the public interest in the subject, we monitored mass media. The retrieved data included 12,000 sources (print and online publications at national and regional levels, television, and radio channels) from August 2018 to August 2019.

In order to cover more participants in the educational process, online surveys were given to medical students, interns, teachers, administration, and doctors with regard to corruption risks in medical education. The questionnaire included questions on understanding corruption, the prevalence of individual acts of corruption, the size of informal payments and/or bribes, as well as tools for reducing corruption risks. The questionnaire was distributed through social media using official pages of medical education institutions and the personal pages of Facebook users. The survey was not representative in terms of participants in the educational process. A total of 796 respondents participated. We obtained several independent sets of retrieved data: 48 % of them are students (mostly from universities) 26 % are health care workers, 11 % are interns, and 12% are teachers or administration representatives. Twenty-three percent of respondents were from Kyiv and the Kyiv region, 20 % were from Kharkiv and the Kharkiv region, and 10 % were from the Odessa and Odessa region.

4. System of medical education as the formation of the value chain

4.1. Institutions of higher medical education in Ukraine

In Ukraine, there are two levels of higher education for the training of health care specialists. The nursing personnel receive a junior specialist's degree (beginning in 2020, the degree of junior bachelor), which is provided by medical secondary schools, medical colleges, and some medical universities. Managers, professionals, and specialists of health care institutions must acquire a master's (specialist's) degree in medical universities and academies. Higher education at the level of the junior bachelor's degree or the junior specialist's degree is sufficient for some professional and specialist positions within the health care system.¹

4.2. Training of junior professionals (nursing personnel)

Nursing staff of the level of junior specialist's degree is trained by the following majors²:

- 221 "Dentistry" — Training of dental lab technicians;
- 223 "Nursing" — Training of paramedics, midwives, nurses;
- 224 "Technology of Medical Diagnostics and Treatment";
- 226 "Pharmacy, Industrial Pharmacy".

The number of institutions of higher education (IHEs) that provide training for these majors at the level of the junior specialist's degree and the number of pupils/students enrolled are presented in **Table 4.2.1**.

Table 4.2.1. Institutions of Higher Education that Train Junior Specialists by Medical Majors

Major	Number of IHEs that provide training	Number of pupils/students enrolled as of 1 April 2019, (persons)		
		Budget	Contract	Total
221 "Dentistry"	34	330	2563	2,893
223 "Nursing"	105	23,286	11,616	34,902
224 "Technology of Medical Diagnostics and Treatment"	12	678	204	882
226 "Pharmacy, Industrial Pharmacy"	45	1,278	7,698	8,976
Total number of pupils/students		25,572	22,081	47,653

Among the 105 IHEs that train junior specialists by Major 223 ("Nursing") there are:

- 80 colleges, including:
 - 63 municipal colleges subordinated to the regional council/RSA;
 - 4 municipal colleges subordinated to the Kyiv City State Administration;
 - 5 state colleges subordinated to the MoH of Ukraine;
 - 1 state college subordinated to the RSA;
 - 3 private institutions;

¹ Refer to [Order of the MoH of Ukraine No. 117, dated 29 March 2002](#) "On the Issue of the Handbook of Qualification Characteristics of Employees' Occupations. Issue 78 "Public Health"

²[Resolution of the Cabinet of Ministers of Ukraine No. 266, dated 29 April 2015](#) "On approval of the List of Disciplines and Majors for the Training of Students Seeking Higher Education"

- 4 branches of private institutions;
- 18 training schools, including:
 - 13 municipal training schools;
 - 1 state training school subordinated to the MoES of Ukraine;
 - 2 private institutions;
 - 2 branches of private institutions;
- 3 state universities subordinated to the MoH of Ukraine;
- 4 municipal academies/institutions subordinated to the regional council/RSA.

4.3. Training of health care professionals at the level of the bachelor's/master's degree

The number of IHEs that provide training for medical majors at the level of the master's (specialist's) degree and the number of students enrolled (including foreign students) are provided in **Table 4.3.1**.

Table 4.3.1. Institutions of Higher Education that Train Masters (Specialists) by Medical Majors

Major	Number of IHEs that provide training	Number of students enrolled as of 1 April 2019 (persons)		
		Budget	Contract	Total
221 "Dentistry"	30	287	9,112	9,399
222 "Medicine"	37	12,800	27,594	40,394
223 "Nursing"	6	51	179	230
224 "Technology of Medical Diagnostics and Treatment"	4	10	64	74
225 "Medical Psychology"	3	23	195	218
226 "Pharmacy, Industrial Pharmacy"	25	221	13,618	13,839
227 "Physical Therapy, Ergotherapy"	36	257	1,147	1,404
228 "Pediatrics"	10	603	163	766
Total of students		14,252	52,072	66,324

Among the 26 IHEs that train masters (specialists) by Major 222 "Medicine", there are:

- 13 universities/academies subordinated to the MoH of Ukraine;
- 6 universities subordinated to the MoES of Ukraine that train physicians at the medical faculty;
- 1 municipal academy subordinated to the Regional Council;
- 4 private institutions;
- 1 detached structural unit of a private institution;
- 1 private institution which does not carry out enrollment to Major "Medicine".

In total, there are 17 universities/academies subordinated to the MoH of Ukraine:

- 14 universities/academies that train specialists to the level of the master's degree (one of them—the National University of Pharmacy—does not provide training via Major 222 "Medicine");
- 3 academies of post-graduate education (physicians obtain post-graduate education in these institutions and at faculties of postgraduate education of other medical IHEs).
- By the middle of 2019, several IHEs received licenses granting them the right to train masters of medicine. In 2019, for the first time, four IHEs enrolled students to be trained by Major 222 "Medicine" to get the master's degree.

4.4. Financing of medical education

Public funding for the training of personnel by IHEs that are subordinated to the MoH of Ukraine amounted to 1.32 billion hryvnias in 2019 (see **Table 4.4.1**). Over the past 5 years, spending from the state budget for this item has increased by 77 %, but funding with allowances made for inflation increased by 15.6 %. Financing of IHEs of the MoH of Ukraine is distinguished by a very high share of the special funds in total revenues, and over the last 5 years it has grown even higher. In 2019, medical universities received only 25 % of its receipts from the state budget.

Table 4.4.1. Expenses of the General-Purpose Fund and Special-Purpose Fund under the Program “Training and Advanced Training of Medical and Pharmaceutical, Academic and Scientific Personnel of Higher Educational Institutions of Accreditation Levels III and IV”

Year	General-purpose Fund (hryvnias)	Special Fund (hryvnias)	Total (hryvnias)
2015	744,132.5	1,628,511.5	2,372,644.0
2016	802,957.1	2,198,315.3	3,001,272.4
2017	1,067,808.5	2,704,829.5	3,772,638.0
2018	1,193,968.8	3,314,829.4	4,508,798.2
2019	1,316,239.8	3,963,917.7	5,280,157.5

In medical IHEs, there is a relatively high share of development expenditures—10.3 % in 2019 (**Table 4.4.2**). However, the participants in the education process believe that these funds are insufficient to foster the conditions for proper education and research activities given the specificity of the industry (the need for sufficient equipment, training materials and supplies, and the high cost of studies in the field of public health).

Table 4.4.2. Share of Development Expenditure in Institutions of Higher Education Subordinated to the MoH of Ukraine

Year	Consumption Expenditures (hryvnias)	Development Expenditures (hryvnias)
2015	2,206,817.1	165,826.9
2016	2,642,921.4	358,351.0
2017	3,341,243.1	431,394.9
2018	4,051,682.0	457,116.2
2019	4,734,723.2	545,434.3

In 2019, expenditures on training of physicians and pharmacists (**Table 4.4.3**) amounted to 474 million hryvnias, which is double the index for 2015.

Table 4.4.3. Expenditure on Advanced Training in Institutions of Higher Education Subordinated to the MoH of Ukraine

Year	General-purpose Fund (hryvnias)	Special Fund (hryvnias)	Total (hryvnias)
2015	151,267.2	67,286.7	218,553.9
2016	160,574.2	75,784.1	236,358.3
2017	254,993.3	98,576.5	353,569.8
2018	292,436.9	140,301.2	432,738.1
2019	318,897.7	155,221.8	474,119.5

In 2019, expenditures on scientific activities in the sphere of health care (excluding expenditures on the activities of the National Academy of Medical Sciences) amounted to 158 million hryvnias, of which almost half of the expenditures were in the special-purpose fund (**Table 4.4.4**).

Table 4.4.4. Expenditures on Scientific Activities in the Sphere of Health Care in Institutions of Higher Education Subordinated to the MoH of Ukraine

Year	General-purpose Fund (hryvnias)	Special Fund (hryvnias)	Total (hryvnias)
2015	36,544.0	34,522.6	71,066.6
2016	42,218.7	43,297.0	85,515.7
2017	60,423.0	57,741.3	118,164.3
2018	67,073.5	80,276.3	147,349.8
2019	73,927.8	83,871.0	157,798.8

The analysis of estimates from 14 institutions of higher education subordinated to the MoH of Ukraine revealed that in six of them, the special-purpose fund equaled 80 % or more of the general-purpose budget for the institution (**Table 4.4.5**).

Table 4.4.5. Institutions of Higher Education Subordinated to the MoH of Ukraine, with the Largest Share of the Special-Purpose Fund in 2018

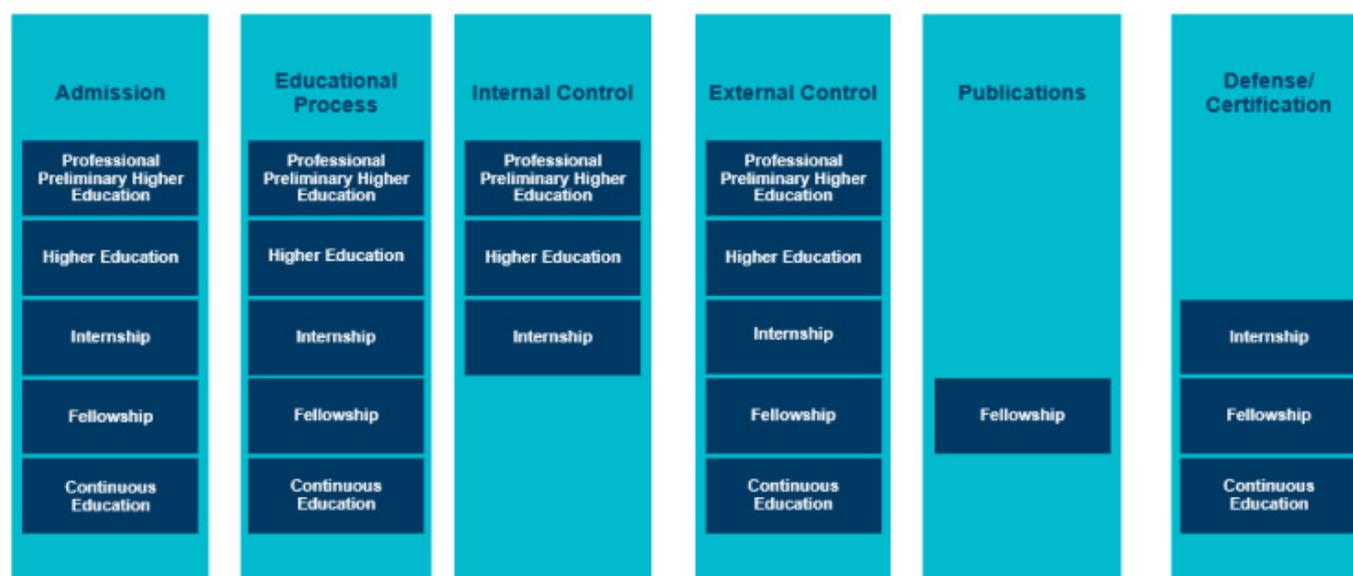
Institution	Share of the special-purpose fund in the institution's budget (%)
HSEE "TSMU"	85
HSEE "BSMU"	83
HSEE "IFNMU"	82
ZSMU	81
KhNMU	81
ONMU	80

Such a distribution, which is not typical for HEEs, has been determined by a large number of foreign students in medical HEEs. According to the Center for International Education of the MoES of Ukraine, among 10 Ukrainian institutions of higher education (where most of foreigners study), there are eight educational establishments that are categorized as medical and one educational institution that has a medical faculty.³ The fees charged to foreign students are significantly higher than those for Ukrainian students.

4.5. Quality of medical education

The medical education process has main stages at each level (Fig. 4.5.1). Each stage provides value and “added value”. These stages are the admission, educational (research) process, and internal and external control (certification/licensing/defense of a thesis).

Figure 4.5.1. Levels and stages of medical education in Ukraine



4.5.1. Students of IHEs

Students who study in Ukrainian medical IHEs and at medical faculties of Ukrainian IHEs rated the overall quality of higher medical education ranging from cautious, “satisfactory” and “medium” to pessimistic, “not good at all”, “not interested”, “rather bad”, or “inappropriate”. There were no definitively optimistic opinions.

The main objects of criticism are as follows:

- Education comes down to “drilling” for the KROK exams, and no attention is given to whether students gain the knowledge and skills needed for their work;
- Students are overloaded with theoretical courses (especially general education ones) that are not required for medical practice, particularly during the first three years;
- There are few practical classes and few chances to work with patients.

“Practice in the hospital is not very good. We walk around the classroom and do bugger all. We just watch doctors who show us how it is necessary [to do it]. We wish we could work with the patient.”

One of the comments on quality of education that is worth mentioning as potentially corruptogenic is the structure of the educational process: too many tests and too little explanation of the material. Students associate this phenomenon with a credit-modular system that comprises, as they say, 70 % independent work. Teachers

³ URL: <http://studyinukraine.gov.ua/zhittya-v-ukraini/inozemni-studenti-v-ukraini/>

expect that students master the course content independently, and in the classroom, they only check their knowledge.

“To be honest, this is similar to extra-mural tuition. You just come to the class, where they monitor your knowledge, which you have to master at home by the Medicine major.”

“Yes, we asked many teachers to give us explanations, give us some knowledge. The answer is always the same: a credit-modular system provides that you have to spend 70 % of your time for self-studying at home. Our task is to check you. We test you, nothing more.”

“As far as some disciplines are concerned... there are not even enough lectures. They just say to you, “Read the book!” And that's all. And how can this book help? You have read, you sit in the classroom and you cannot do anything.”

“I heard feedback from students of other universities. In fact, they said that they had to pay in order to make [teachers] explain the material in the classroom that they were obliged to explain.”

Teachers check attendance and then leave students to self-study, copy lecture notes, complete self-guided and extracurricular work, and prepare for tests.

Students also noted that teacher-practitioners are not motivated to spend time teaching students by pulling themselves away from patients because it does not bring them money and it holds lower priority than their clinical practice.

“He [teacher-clinician] understands that it [his medical practice] is the most important. There, the life of a human being [is being solved], and here his colleagues ask for help. Well, if he's here and there, the human being may die, and if he delays classes for two hours, then nothing happens to them, in crude words, students. Tomorrow he will be able to do this with them once again.”

Teaching for such professionals is a means to beef up their image and achieve status. Some respondents noted that the teacher is not interested in sharing practical information with students in order to prevent a growing number of potential competitors.

4.5.2. Students of colleges

Students of medical colleges and training schools generally reported more critically and pessimistically on medical education in Ukraine compared to IHE students. They highlighted outdated knowledge provided by the medical education—the mismatch in programs for training in medical colleges versus what they hear and see in the actions and words of the training practitioners. They also noted outdated materials, medicines, procedures, and differences from European protocols and practices. In addition, they mentioned the lack of logistics (including models, simulation materials, drugs), unnecessary general education courses, and the lack of practice and orientation of education on passing tests (“KROK”) but not obtaining knowledge that is necessary for further work. At this level, many respondents perceive education as a transitional stage to the study at university. According to them, after completing college, it is easier to enter it.

4.5.3. Interns

The uniqueness of and differences in assessments of medical education by interns creates a very different experience in obtaining professional knowledge and skills during the time as a student and intern, as well as in different educational institutions. However, the quality of professional education and state of medical institutions were generally assessed by the vast majority of interns participating in FGDs as “average”. They gave particular attention to faults, but among the major positive aspects of medical education they mentioned were the formation of clinical thinking and direct contact with patients. According to some FGD participants, this factor becomes a significant competitive advantage for Ukrainian doctors.

There were mixed reviews of the quality of teachers in medical HEEs. On the one hand, they were assessed by the FGD participants as skilled and experienced, but on the other hand, they pointed out an insufficient

integration of teachers into the global professional community, as well as a lack of practical skills. These deficits result in a certain lag in teaching behind the leading global trends and a significant overload of theoretical knowledge.

Both students and interns negatively assessed the reduction in the number of classroom hours and the increase in self-guided work, as well as an abundance of tests and that do not necessarily conform with the aim of forming clinical thinking and real practical activities. In addition, interns and students complained about an attitude of indifference from teachers:

“Well, we had almost no good lectures this year. Well, you know, nobody takes care of interns as it should be and it turns out that we [feel ourselves unwanted]... Of course, it is not required to pay there, but it is possible not to go there. You come there, you realize, that there is a complete crap [mess], and then you decide not to come there at all.”

According to the study participants, outdated materials and technical bases significantly compromise the quality of medical education. These deficits lead to an actual reduction in the ability of medical students to master practical skills because they have to learn while working directly on patients. This application is risky; moreover, the number of interns is much higher than the number of patients to which access is provided. In general, the lack of experience in patient interactions during an internship was defined by study participants as one of the key problems. It occurs primarily due to the patients’ refusal to use services provided by interns or to allow them to watch the treatment process. Several respondents noted that a major cause for this problem is the fact that medical education institutions do not have clinical sites and there are no hospitals for training interns.

“If we talk about the United States, a student works with a patient, but the student is protected by the student’s health insurance. If something happens to the patient, it [the insurance] covers. In our country, nobody wants to take responsibility. If the student does not know anything, who should be held responsible if he/she caused harm?”

Thus, the lack of quality sources of information—and its inadequacy to real clinical practice—were also mentioned among the factors that affect the quality of teaching and medical education in general.

According to the FGD participants, solving the problem of a lack of practice depends on several factors. First, it depends on the initiative of the subjects in medical education (doctors, teachers, interns, and medical students), but this initiative is not actively and consistently encouraged by the IHE and hospital administration. The interns present at the discussions criticized the situation but also offered solutions to the problem relating to the motivation of doctors. For example, they suggested separately financing the work done with interns or giving doctors continuous professional development (CPD) points for such work.

4.5.4. Teachers and administration of the HEEs

According to almost all teacher and administrator participants of the FGDs, the quality of domestic medical education is appropriate or even high. The arguments were usually as follows: a large number of graduates are increasingly going abroad and successfully obtaining employment as medical professionals; a large number of foreign students come to Ukraine, not because it is cheaper to study at medical universities than elsewhere, but because they get good knowledge; the availability of scientific schools that features publications in traditional specialized, professional journals; and Ukrainian medical specialists are published in foreign journals, included in the world’s leading scientometric database, etc. Notably, the teachers spoke about medical education in Ukraine more complementarily compared to the administrators.

The problems that were specified by teachers focused on material support of the educational process, such as: the lack of supplies, equipment for training and laboratories, an insufficient practical portion of training, primarily due to the lack of clinical facilities and patients’ refusal to deal with students, and the orientation of education in preparation for tests rather than toward practical activities. They also mentioned a low motivation of students to learn and the lack of direct communication of students with teachers.

Notably, the comments on the lack of the practical training was made by people who actually determine the education content. Since 2014 (all the restrictions were canceled completely starting in 2018), education programs have been approved by universities. Apparently, teachers and administration do not feel fully responsible for the formation of these programs or that they can change them.

When making specific propositions on how to improve the quality of modern medical education, the teacher participants drew attention to the urgent need to increase the number of clinical sites. Establishing closer contacts and deepening the cooperation between teachers of medical universities and doctors—and in particular with chief physicians of local hospitals—will allow for their views to be considered with regard to improving the quality of training of medical IHE graduates. They also urged improving the material base of medical universities, logistics of educational process (including the introduction of new technologies, especially diagnostic ones), and finally, what they believe is most important, increasing salaries for medical staff in general and teachers in institutions of medical education.

Administrators also provided very specific suggestions: reduce the number of students in the academic group, in order to reduce hours of the teaching load for teachers, and above all, increase the salaries of medical workers.

Teachers, with few exceptions, do not see the urgent need to reform in either medical education or medicine in general. Instead, they believe it would be sufficient to just spend more money on these areas. They also tend to believe that the source of problems with the quality of education are factors external to them, such as weak preliminary preparation of students, imperfect legislation, and insufficient funding.

Administrators who are better informed about the normative basis of all the changes consider changes to inevitable (“reforms are definitely needed”) but stable. In their opinion, reforms constantly accompany medical education and higher education in general. Like other teachers, they blame the government (or, to be more exact, governments) for the lack of continuity and consistency in the reforms.

Thus, we can conclude that even with such extremely important group of stakeholders like representatives in the administration of medical IHEs, communication on the reform of medical education is insufficient.

4.5.5. Teachers and administration of colleges

College teachers were more critical about the quality of medical education compared to university teachers. Among the main disadvantages of medical education, colleges medical university teachers mentioned the lack of practical training of middle-ranking health professionals, an unreasonably strong emphasis on testing, the lack of student motivation to learn, and the low level of financing for medical colleges and their poor material base. When discussing the shortcomings and problems in the sphere of medical education, none of the college teachers mentioned corruption.

Most of the problems in education were discussed with almost constant appeals to the ministry and the minister as the main subjects of problematization. In addition, a comparison to the “Soviet era” was always mentioned, and the collapse of the USSR was noted as the launch of emerging problems in medical education. Problems with the general decrease in the quality of education (both medical education and education in general) provoked the liveliest discussions. The ministerial management, public leadership in general, and the Minister of Health were accused of these issues.

When discussing the quality of medical education, administration officials expressed both positive and negative opinions. A lot of criticism toward the national education system in general and medical education in particular was expressed in the Kharkiv Medical College and Kyiv Medical College, while the administration of the Odessa Regional College expressed its own opinion about the quality of medical education, in terms of approval.

Representatives of the college administration also emphasized the problem with the shortage of practical training of students. This deficit was primarily due to a lack of resources for visual aids, such as models, training materials, etc. There was no spontaneous references to corruption in the context of the quality of medical

education, but participants mentioned the possibility for the involvement of corruption in the medical profession or education, specifically through the desire for increased profits and early incomes.

4.5.6. Representatives of the CPD system

The majority of post-graduate education students (cadets) who participated in the FGDs believe that the level of domestic professional medical training is quite high. They believe the quality of knowledge primarily depends on students, who have a significantly greater access to information today than in the past. A sufficient level of motivation in medical students allows them to obtain the necessary professional skills and medical knowledge, but in the absence of this motivation, their competence level is significantly reduced. However, they noted that some of the main problems within medical education are outdated and insufficient provision of logistics for IHEs. An equally acute problem is the lack of practical skills in the majority of students that is associated, on one hand, with the fact that teachers have to “work additionally” in hospital departments, and on the other hand, from the increase in self-guided student work. These factors result in reduced communication between the student and the teacher, a phenomenon that also complicates the transfer of practical knowledge and skills. There was also a discussion about the need to introduce compulsory courses aimed at increasing legal literacy and legal awareness in doctors. These skills have become necessary in modern medical practice. The participants provided a definitely higher mark to post-graduate medical education that, according to those present, has the edge over university education.

BPD system teachers unanimously rated the quality of medical education in Ukraine as very high. According to those present, the considerably high demand of domestic doctors around the world confirms the high quality of the medical education. However, they noted that despite the high level of training in Ukrainian medical IHEs, the general level of medical education is significantly declining due to poor logistics and the lack or obsolescence of laboratories, simulators, mannequins, etc.

According to the FGD participants, the need to retain contract students and the total number of students is connected to the need to preserve the volume of budgetary and extra budgetary funding, which also significantly decreases the average level of medical education in Ukraine. Therefore, there was discussion about the need to form a legal basis that would provide funding for IHEs, regardless of the quality of students and their quantity.

5. Description of the system functioning and risks of corruption and hypotheses regarding acts of corruption at the levels and stages of the educational process

In this study, a chain of values that a participant obtains (or has to obtain) in the course of study is linked to each educational level. In contrast to the integrity of the system of educational processes, we developed hypotheses of systemic corruption that occur at the appropriate stages. The schemes are provided in **Appendix 7**.

Below we will consider every level of education and factors of risks detected in the course of the study, at the appropriate stage of the educational process.

5.1. Colleges

5.1.1. Admission

Admission to medical colleges and school programs that train junior specialists⁴ is performed according to the rules of admission established by educational institutions, based on the Terms of Admission that are annually approved by the MoES of Ukraine.⁵ The Competition Commission is formed and operates in accordance with procedure approved by the IHE.

Admission to programs for training junior specialists is performed as follows:

- On the basis of basic secondary education (after Grade 9)—based on the results of admittance tests and interviews conducted by an educational institution;
- On the basis of complete secondary education (after Grade 11)—based on the results of the SET conducted by the Ukrainian Center for Education Quality Assessment, and in some cases, envisaged by the Terms of Admission (an enrollee has a disability, participated in an antiterrorist organization [ATO], lives in the occupied territory of Ukraine, etc.); based on the results of admittance tests and interviews conducted by an educational institution.

The Chairperson of the Admission Committee is appointed by the head of the educational institution.

Medical training schools and colleges have a specified number of State funded places for each program based on the budget; the number is usually determined, at a regional order, by a founder (local authorities).

Admission of enrollees takes place until August 1. This process can last until September 15 based on the results of additional session (study only on a contractual basis).

The participants of the FGDs and interviews confirmed the presence of the following acts of corruption at the admission stage:

- Bribes to members of the Admission Committee or the administration of an educational institution for the opportunity to enroll in places ordered at the public or regional level;
- Use of friendship or family ties to enroll in places ordered at the public or regional level.

First, bribes can occur for budget-financed places, especially for those used to study majors in institution that do not have many spots, such as “Dental Lab Technicians”. The respondents described this situation as, “They will take those who paid”. The desire to take the budget-funded spots is not only determined by economic benefits. It is also determined by the fact that, according to the study participants, it is easier for government-subsidized

⁴ Medical colleges can also provide training by major 223 “Nursing” and 226 “Pharmacy, Industrial Pharmacy”. Admission to such programs is performed according to the rules presented in the **Universities** category in this section.

⁵Order of the MoES of Ukraine No. 1082 dated 10 October 2018 “On Approval of the Terms of Admission to Study for Acquiring the Educational Qualification Level of the Junior Specialist in 2019”. URL:

<https://zakon.rada.gov.ua/laws/show/z1231-18>

students to receive a spot because they rarely receive low marks and are treated more leniently. Sometimes, according to respondents, a relative may “help” to enroll a person into a college. However, students did not reveal details about these practices. Notably, at the FGDs, parents were repeatedly mentioned among those who pay for the act of corruption. Thus, we can assume that students are unaware of the details of bribes or nepotism during the admission process because their parents were the participants in the process.

There were only 20 college students among the online survey participants. When they were asked to what extent, in their opinion, corrupt practices (bribes or use of acquaintance package) are widespread at the stage of college admissions, most of them chose the option “Difficult to answer”.

5.1.2. Educational process

Medical colleges and training schools make up the educational program based on the standards of education and standard education programs approved by the MoH of Ukraine. The existence and application of standard educational programs are not envisaged by the current legislation, but the process of their cancellation only began in 2018.⁶ The structure of standards for higher education, adopted before 2014, does not meet the requirements of the current legislation. Yet, because new standards have not been developed, medical training schools and colleges still use standards from 2011⁷. Today, the programs of various colleges and training schools (used for training medical workers-junior specialists) are actually identical in terms of the list of subjects; however, they may differ somewhat from each other by the distribution of training hours among disciplines.

The structure of programs for training of junior specialists by medical majors comprises:

- Program admission, which is performed after completion of grade 9 (during the first year of the study), students are offered to study for a shortened program during high school (grades 10 to 11);
- General educational disciplines not included in the high school program, such as: physical education, basic philosophy, Ukrainian and foreign languages, history of Ukraine, sociology, etc.;
- Medical disciplines;
- Educational and industrial practice.

The workload of teachers in colleges (as institutions of higher education) cannot exceed 600 hours per year.⁸ This limit is 720 hours per year for teachers of training schools (as institutions of professional preliminary higher education).⁹

The mandatory use of credit-modular system for organizing the educational process does not comply with the principle of academic autonomy established by the Ukrainian “On Higher Education” law; therefore, it was canceled by order of the MoES of Ukraine.¹⁰ However, the binding nature of the system for institutions in the area of management by the MoH of Ukraine has not been canceled.¹¹

Issues related to the form with which a teacher works with students, as well as forms for assessing students' knowledge that are beyond the limits of the credit-modular system, are the subject of academic autonomy in the

⁶ Orders of the MoH of Ukraine No. 1084, dated 8 June 2018, and No.1696, dated 18 September 2018 “On Recognition of some Orders of the MoH of Ukraine as Null and Void”

⁷ Order of the MoES of Ukraine No. 649, dated 24 June 2011 “On Approval and Introduction into Effect of Components of Industry Standards for Higher Education by Majors of Educational and Qualification Level of the Junior Specialist in Disciplines “Medicine” and “Pharmacy””; [Order of the MoH of Ukraine No. 401, dated 7 July 2011](#) “On Introduction into Effect of Components of Industry Standards for Higher Education by Majors of Educational and Qualification Level of the Junior Specialist in Disciplines “Medicine” and “Pharmacy””. URL: <https://zakon.rada.gov.ua/rada/show/v0401282-11>

⁸ Law of Ukraine No. 1556-VII, dated 1 July 2014 “On Higher Education”, Article 56, Part 2

⁹ Law of Ukraine No. 2745-VII, dated 6 June 2019 “On Professional Preliminary Higher Education”, Article 60, Part 2

¹⁰ Order of the MoES of Ukraine No. 1050, dated 17 September 2014 “On Recognition of Order of the Ministry of Education and Science of Ukraine No. 774, Dated 30 December 2005, as Invalid”. URL: <https://zakon.rada.gov.ua/rada/show/v1050729-14>

¹¹ Order of the MoH of Ukraine No. 152, dated 24 March 2004 “On Approval of Recommendations on Development of Curricula for Courses of Study”

IHE and are determined independently by the institution. IHEs must create a new system to ensure a quality of education that meet the standards and recommendations on quality assurance in the European Higher Education Area (ESG).¹² As of 2019, this work is still in its early stage.

The study participants described the following acts of corruption in the educational process:

- Payment for the possibility of not attending classes;
- Bribes for passing exams or pass-fail exams.

The study participants confirmed that class attendance is not always possible or appropriate for them. If a student works or is sick, or the study of the subject does not seem necessary for his/her future work (a non-core subject or study that is needed to compensate for an academic deficiency, namely when the student is transferred from another educational institution), it is possible to pay the teacher not to attend these classes. According to the study participants, it is unclear whether this payment covers obtaining a score for the exam/fail-pass exam. In any case, it is important to note that this kind of corruption exists and it is different from buying a better grade compared to a passing mark for an exam or pass-fail exam. Actually, the bribe for the exam is the most frequently mentioned type of corruption. It can involve a payment made at the teacher's request (a rare situation), or the payment can be made at the student's initiative in order to improve his/her mark. There is a separate bribe for the possibility of not being expelled, i.e. a bribe for a passing mark after a failed exam or in a situation where the student has no chance to successfully pass an exam. The respondents also mentioned the "purchase of the diploma"—the practice of paying for the whole process of studying in general, where the successful completion of the program, regardless of the actual educational achievements, is guaranteed to the student. The respondents who participated in the online survey argue that the payment for the exam may be 1,000–5,000 hryvnias. The cost of pass-fail exams is estimated within this range.

5.1.3. Work of an educational institution

A head of a medical college training school is appointed by a founder of the institution in accordance with the legislation. The current legislation does not establish a clear requirement for the head to be selected based on a competitive search. The teaching staff is appointed to the position in accordance with the current legislation and internal regulations of the educational institution. Heads of Cycle Commissions are appointed by the head of the institution to its educational, scientific, and pedagogical staff, who have more than 5 years of research and teaching experience.

5.1.4. External control

A mandatory component of the state for the final certification of obstetricians, paramedics, and nurses (not pharmacists), at the level of the junior specialist's degree, is the passing of the KROK-M certification exam, which is administered by the Center for Testing at the MoH of Ukraine. A passing grade requires achieving getting 55.5 % of the correct answers. A person who does not pass the KROK-M exam has the opportunity to take it again—but not more than once in a year, within a period of three years.

The vast majority of the FGD participants related that passing the KROK-M exam is free of corruption. Furthermore, the level of control over its integrity is very high. Among the participants of the online survey, some students specified that bribes related to the exam cost no less than 100 hryvnias, while a few people mentioned a cost of 10,000 to 20,000 and even above 100,000 hryvnias. Such differences in responses can be interpreted as an assumption, or as a very small number of cases involving corruption at this stage of the educational process.

¹² URL: http://www.britishcouncil.org.ua/sites/default/files/standards-and-guidelines_for_ga_in_the_ehea_2015.pdf; Law of Ukraine No. 1556-VII, dated 1 July 2014 "On Higher Education", Article 16

5.2. Universities

5.2.1. Admission

Admission of Ukrainian citizens to bachelors or masters programs based on completed secondary education utilizes the results of the SET, which is conducted by the Ukrainian Center for Education Quality Assessment. In some cases, admission is envisaged by the Terms of Admission (an enrollee has a disability, participated in an ATO, lives in the occupied territory of Ukraine, etc.)—based on the results of admittance tests and interviews conducted by an educational institution. The admission of persons seeking to obtain a medical education at the level of bachelor or master, based on the level of junior specialist, utilizes the results of competitive examinations conducted by the IHEs.

Since 2018, the compulsory state final certification, in the form of the SET (in 2018, on one subject; in 2019, on two subjects) was introduced for students who entered the junior specialist programs after grade 9. Accordingly, when applying for the medical major programs, graduate junior specialists will have to submit just one SET certificate in 2020 and two certificates in 2021. This change is quite hurried, especially when considering the results of the KROK-M licensing examination (which is mandatory for students of medical specialties at the junior specialist level) for admission to study at the next level of higher medical education.

The number of budgeted spots in programs for training of medical workers for bachelors and masters (admission that requires a completed secondary education) are provided to institutions of higher education based on the state order; the size is annually approved by the Government. The budgeted spots are allocated among IHEs according to the results of “wide competition” on enrollees based on SET scores. Since 2019, this system is common for IHEs that are under management of the MoES and MoH of Ukraine. Two displaced medical IHEs¹³ have a fixed size based on the governmental order that they receive, and they do not participate in the wide competition.

With regard to the government order for medical specialties, places are not provided for admission on the basis of the junior specialist level. Places in the government order are provided in small quantities by municipal IHEs.

Most students start to study on September 1, although some IHEs enroll a small portion of students during the calendar year. For example, many foreign students begin studying on October 1.

At present, there is no direct link between the number of students enrolled based on the government order and the share of public funding received by IHEs.

To enroll in Ukrainian IHEs, foreign citizens must receive:

- An invitation to study, which is issued by the IHE, registered with the MoES of Ukraine, and represented by the Ukrainian State Center for International Education;
- A long-term visa for study (type D) according to the general procedure.¹⁴ Citizens of countries with which Ukraine has signed treaties on a visa-free regime (the Russian Federation, Georgia, Moldova, Belarus, Armenia, Azerbaijan, and Uzbekistan) do not need a visa. However, they are obliged to present an invitation to study at the time of entrance to Ukraine.¹⁵ The visa is issued to citizens of 70 countries¹⁶ after holding a personal interview at the consulate, and in agreement with the competent authorities (with the Security Service of Ukraine).

¹³ Donetsk National Medical University and Luhansk State Medical University

¹⁴ Resolution of the Cabinet of Ministers of Ukraine No. 118, dated 1 March 2017 “On Approval of Rules for Issuing Visas for the Entry to Ukraine and Transit through its Territory”. URL: <https://zakon.rada.gov.ua/laws/show/118-2017-%D0%BF>

¹⁵ URL: <http://studyinukraine.gov.ua/yak-podati-zayavku/vizi/>

¹⁶ See the list of countries in Appendix 3 to the Order of the Ministry of Foreign Affairs of Ukraine, Ministry of Internal Affairs of Ukraine and Security Service of Ukraine No. 469/897/605, dated 30 October 2017 “On Approval of Rules for Issuing Visas for the Entry to Ukraine and Transit through its Territory”. URL: <https://zakon.rada.gov.ua/laws/show/z1432-17>

Since 2019, there is a quota (1,000 people per month) in place for the government order (for all specialties) for foreigners and stateless persons who arrive to study under international treaties of Ukraine¹⁷.

The study participants indicated that corruption is not widespread at the stage of admission to higher education institutions. However, they did describe the following acts of corruption:

- Bribery and fraud to obtain a higher score on the SET;
- Use of illegally obtained certificates that confirm a person belongs to a privileged category, which grants the right to pass entrance tests instead of the standardized external testing; there are also corresponding bribes to successfully pass these tests;
- Bribes for passing exams during admission to an IHE based on a junior specialist diploma (after college);
- Intermediary firms that are related to the administration or management of the IHE, and which sometimes do not fulfill the required obligations. This situation eventually leads to overpayment for or termination of the study due to circumstances outside the control of the foreign student.

The vast majority of study participants mentioned corruption during the SET as an exception rather than the norm. There were numerous allegations that this stage of medical education is not corrupt:

One student said, "All cases concerning payment for the place, mark, attendance of classes, etc. are constantly monitored by us. But due to the SET, all those who entered after Grade 11 have been admitted without bribes!"

Instead, entry to IHEs via bypassing the SET (i.e. based on examination results) provides opportunities to give bribes or use personal relations to enter a university.

In the case of "privileged" students, bribes can involve the purchase of certificates of disability or the status of an inhabitant of occupied territories.

As far as the admission to higher education institutions after college is concerned, the study participants confirmed the opportunity to offer a bribe during the entrance exams. According to them, higher education institutions can create conditions under which it is difficult or impossible to pass the entrance exam.

A student said, "Tests that are used to assess knowledge of entrants after the college, are prepared based on a year-long program of four subjects that are studied at the university. In other words, there are issues that were not discussed; they are not in a program of education in the college. That is, you come to the exam without knowing the basis of those subjects, because their study at the college is not envisaged."

The online survey results showed that most students neither encounter bribery situations very often nor benefit from family ties during admission. Most acts of corruption, according to students, occur during the schooling process. The share of students and physicians who said, "Almost everybody does this" or "Everybody does this" is presented in **Table 5.2.1.1**.

Notably, between two possible types of actions—to pay or use ties—the latter is more widespread. Focused interviews revealed that students often do not consider these personal ties to be corruption. Rather, they believe that corruption is the transfer of money (bribes). Thus, the social norm of disapproval and control of pulling strings is virtually absent, a factor that promotes a significant spread of this practice (compared to others).

For the purposes of this study, the students' answers were compared with the responses from adult health professionals. The responses of both groups were not significantly different, except with regard to payment for entry after school. Doctors believe this practice is more common than the students do. However, it is necessary to remember that the vast majority of students study in IHEs, so they may not be familiar with the features of the

¹⁷ Resolution of the Cabinet of Ministers of Ukraine No. 729, dated 12 September 2018 "Issues of Pursuing Higher Education by some Categories of Persons". URL: <https://zakon.rada.gov.ua/laws/show/729-2018-%D0%BF>

admission process to colleges. In addition, it has been already mentioned above that students may underestimate the level of bribes at the stage of admission because other people (parents) often transfer money or they agree to the service through intermediaries (instead of directly themselves).

Table 5.2.1.1. Share of respondents who said, “Almost everybody does this” or “Everybody does this”, %

Situation	Students (N = 395), %	Medical workers (N = 74), %
To pay unofficially for admission to an educational institution after school	8	20
To pay unofficially for admission to a university after college	11	20
To use family and friendship ties for admission to an educational institution	28	31

The answers to the question about the cost of corruption during admission (which were asked of students and health workers as well as teachers and interns) are presented in **Table 5.2.1.2**. Only 12 % of students think that the admission to a university can cost over 1,000 hryvnias. They believe that it is a fairly cheap form of corruption. The teachers agreed with them (there was no significant difference in their responses). However, a significantly higher percentage of medical workers and interns believe that the payment for the admission can exceed 1,000 hryvnias. This finding can be explained by the fact that the information they have is outdated or the students and teachers underestimate the role of mediators.

Table 5.2.1.2. Share of respondents who commented about the mentioned situation as “This costs more than 1,000 hryvnias”

Situation	Students (N = 395), %	Medical workers (N = 74), %	Interns (N = 89), %	Teachers (N = 204), %
Admission to a university	12%	27%	21%	17%

5.2.2. Educational process

As of September 2019, there are new standards of higher education for specialties and levels of education. They are:

- 221 “Dentistry”, master degree¹⁸;
- 223 “Nursing”, bachelor degree¹⁹;
- 224 “Technology of Medical Diagnostics and Treatment”, bachelor degree²⁰;
- 224 “Technology of Medical Diagnostics and Treatment”, master degree²¹;
- 227 “Physical Therapy, Ergotherapy”, bachelor degree²²;
- 229 “Public Health”, master degree.²³

¹⁸ Order of the MoES of Ukraine No. 879, dated 24 June 2019

¹⁹ Order of the MoES of Ukraine No. 1344, dated 5 December 2018

²⁰ Order of the MoES of Ukraine No. 1420, dated 19 December 2018

²¹ Order of the MoES of Ukraine No. 884, dated 25 June 2019

²² Order of the MoES of Ukraine No. 1419, dated 19 December 2018

²³ Order of the MoES of Ukraine No. 1383, dated 12 December 2018

Other aspects of the regulation of the educational process in medical universities is similar to those in colleges (see the text above).

The vast majority of acts of corruption mentioned by study participants occur during the educational process. The main acts of corruption are:

- Payment for the possibility of not attending classes;
- Payment for additional classes with the teacher;
- Non-monetary gifts or services for the academic department or teacher;
- Bribes for higher current and final grades.

Class attendance in medical education institutions is mandatory. Students who miss a class are obliged to bring a certificate indicating the reason for the absence (for example, illness) or pay a fee for the missed class. Students who fail to get such certificate, e.g. a short-term illness or missed classes because of work, can ask other students to check-in for them or agree with the teacher to “turn a blind eye” to their absence.

The participants argued that depending on the specific scenario, the initiators of such actions might be students or teachers. Notably, the participants mentioned the involvement of the administration of the educational institutions in these acts of corruption. Teachers who regularly received bribes transferred some of the money to those who occupied a higher position in the administration—to the head of the academic department, dean, and/or senior management of the institution. Thus, the participants described a “pyramid” of corruption.

One student said, “Almost all pay, as there isn’t anybody to whom it is possible to complain; everybody knows about it, and the flow goes to the top, up to the rector (he is a local lord).”

One student said, “Teachers take money from students ... and then all the money collected from the entire academic department go to “common cash fund” and distributed equally among all of the heads of the academic department.”

The respondents expressed various opinions on how widespread the practice is of taking payment in exchange for marks. Some respondents, especially teachers and administration officials, claimed that it happens very infrequently and they never encountered this personally in their educational institutions. However, many of the respondents said that the payment for marks is a very common practice in medical universities.

“That is at each academic department, you can pay as much as you want to. It can be done not at each department, in general, it is rare that somebody will demand money from you; but if you have an intention, you can always arrange for a positive mark.”

At the same time, the respondents highlighted that there is a proportion of principled teachers who are not involved in corruption.

“Well, there are some principled teachers, with whom it is impossible to make arrangements.”

The participants of the FGDs and in-depth interviews were rather unanimous (with some exceptions) that the practice of teachers extorting bribes from students is not widespread. However, if the initiative comes from students, some teachers are prone to agree with it and accept payments.

The collected data indicate significant differences in the behavior of teachers from theoretical and clinical departments. Thus, the most common form is the fee for marks evaluation during the first three years of the study, when students study mostly theoretical and non-medical disciplines. The situation changes after the third year, when most subjects are taught by teacher-clinicians who are practicing physicians and have other sources of income. At the same time, they are less involved in the teaching process, and they often do not provide opportunities to study the subject at the appropriate level.

It is important to emphasize that none of the respondents indicated that teacher-clinicians mostly earn their money unofficially (which would occur through corrupt practices). While corruption is condemned in medical universities, corruption in medical practice is considered the norm. This perception is a major obstacle in the fight

against corruption in medical education because students understand that they will be involved in acts of corruption in their future professional activities.

“There is nothing similar to what happens with doctors. If we talk about things similar to the gratitude received by the doctors, we don’t have anything like that for sure. Absolutely all treat this negatively and those who are engaged in it, try to hide it.”

5.2.2.1. Why students pay for marks

Among the main reasons indicated as causes for why students pay for marks, the participants mentioned a **lack of motivation** to learn and lack of understanding for what purpose a student came to study medicine.

“The feeling that you learn in order to understand something is missing. It is missing at all. You learn to get the mark, to have a stipend, not to be expelled from the university. They do not understand why they came there and what they learn.”

A lack of motivation among students is a common problem in all universities, but as former medical students say, studying in medical universities in their current form has additional demotivating factors. In particular, anatomy is studied in Latin, and there is **a lack of clear understanding on how what one studies in the initial courses contributes to the medical profession**. These factors further contribute to reducing the interest in learning, and as a result leads to more tolerant attitude towards corruption.

“The university is specific. I do not know, I have never studied in others, but people come just from school, and they [universities] really require a lot of them. You learn anatomy in Latin, while you still do not know Latin, and there are some other difficulties. That means that there are a lot of new subjects, and that’s all, they do not understand why they learn them.”

“The most corrupt academic departments are departments of the first three courses. These are non-clinical academic departments. Departments of Chemistry, Biology, well ... let us say, those connected with theoretical things. First. These are very complex subjects. Students do not understand [the] significance of them for their future practical activities. [It is] not always [that the student] understands why he/she needs chemistry when he/she is going to be and sees himself/herself as a surgeon.”

“A person... a truly educated person understands that his/her competence consists not only of knowledge... but also the ability to recognize the situation, to split it into components. And now all this expertise is formed not by simple memorization of books, it is formed by education and understanding causation, understanding of the body functioning, understanding of the interaction of processes. Sometimes it could be not two processes but three or four processes, and then it becomes clear that your action influences this process in one way and another process in another way, and what specific result may be achieved. That is why they [teachers] believe, for example, that [a student] goes then somewhere and learn in a year how to put a filling in a tooth, the teacher thinks that the most important thing for a dentist is to be able to insert a filling. So... I do not know ... He will work as an anesthesiologist and just push a tube into [a] throat, switch on gas, perform anesthesia in accordance with the manual, switch off gas in accordance with the manual... [...] like that. People who want to study money – they have the same attitude, that is, they believe they would be able to work with a closed system, and they will not need to understand the principles of the vehicle operation.”

“All students have passed exams; all students have been transferred to the extra-mural cycle. Again, a group of interns offers, “Maybe, we should cover the table for them, chip in together?” What does it mean? Why the hell? What do we have to chip in together for?”

“He says, ‘It is really a problem if they paid for three or four exams for the entire [time of study in at the] university. What’s wrong about that?’ This is what the dean says to me.”

“The higher level of student’s expertise, the less likely it is he/she would like to be involved in acts of corruption.”

“Here are three facts that we mentioned: The first one is the excessive number of students, the second one is their quality. These two factors—they lead to increased staff and greater susceptibility to corruption on the part of students. The third is the salary of the teacher.”

“Well, I think, if we consider it in a purely historic context that is the appearance of foreign students was a great incentive for corruption. Foreigners. At first, this may be not students who study on a contractual basis. In the first place, foreigners, who objectively cannot fulfill the program at all, without any additional incentives, and they are faced with a situation where either they are expelled or they have to make arrangements. This is one factor. The second factor, of course, refers to the historical situation of institutions. Availability of contractual [students], any of them, I do not talk about all the students—Ukrainian and foreign, just in general. They [heads of institutions] needed them because of financial reasons, and that is why, in general, there was an attitude that they support them, they would rather retain them than expel them.”

“Well we are, in principle, taking the worst students. In principle. If we compare ourselves with other countries. We have very non-specific entry requirements for students, so we can say that there are almost none.”

5.2.2.2. Mechanisms of corruption interaction between students and teachers

The respondents mentioned different mechanisms of corruption within interactions between students and teachers, particularly with regard to the transfer of bribes. Bribes can be transferred personally (directly to teachers) or through individual employees of the university:

“In different ways. Sometimes it is possible to make arrangements at the department with a laboratory assistant; assistant or well, in short, with someone. Sometimes, at the department, there is a person, through whom arrangement are made, well, an employee of the department. And there are some cases when you simply negotiate directly with the teacher, who takes an exam on the subject”.

“Typically, there are tandems of teachers. They lead the group and exchange teams in the exam. In addition, both of them do not teach groups, and both of them put exams to each other. And that's all. There were no modules on obstetrics at all.”

In the process of corrupt interactions between students and teachers, the group leader plays a separate role. The group leader is responsible for collecting funds from students and transferring them to teachers for marks.

“And they had such a thing that the group leader was to collect money (such a good group leader!), and then go and make arrangements for the entire group. How can a person be a group leader if he/she is not going to make arrangements?”

The “payment” form can take several forms. Although people often talk about the bribes in terms cash, there is also a payment by “services” for the university, including those of an economic nature.

“Once, there was a case in our group... Famous anatomist Volodymyr Betz, well, who was a star of the global anatomy in the 19th century is buried in the Vydobutsky monastery. Moreover, the group was sent to clean up his grave and all received positive marks for the pass-fail exam. They were so happy, well, it was easier for them to pull out weeds than to learn anatomy.”

A teacher said, “Yes, when there are no parents, you know that she is an orphan, has only a grandmother and a pension of 1,700. Therefore, we helped her together, so they did not put unsatisfactory marks. She is eager to be a doctor. She put so many efforts. You know, a psychological hunting just begins. Even not for finance.”

“He [it is about another intern] does not know where to put a phonendoscope. Can you imagine that? He says, ‘I do not know.’ Well, they say. ‘Vadym, put it somewhere.’ And he says... He is so shy, he just sits, he knows nothing, he is terribly embarrassed. He has flushed all over. ‘I do not know’ he says ‘Do not torment me.’

‘Well, anyway, we will not torment the child.’ Three did it [three students completed the exam, despite the lack of knowledge].”

“Then student activists stay to work at academic departments. It's, so to say, an expected career development. You are busy with transferring papers for six years, you receive your marks for doing nothing. Or representatives from the dean's office petition for you, and then they will take care to leave you and employ you to work in the university”

Speaking about the prevalence of corrupt practices during the study, as opposed to the admission process, a large number of respondents (in some cases up to two thirds of a particular group) believe that most people in their surroundings are involved in such practices (**Table 5.2.2.2.1**). Representatives of all the groups agree that students cheat on the exams, complete false check-ins of class attendance, give gifts, and pay for the missed classes. Teachers and interns highlighted the problem of cheating more often than students do. Generally, interns appeared to be more knowledgeable or cynical in their assessments of corruption during the study (compared with students). Perhaps current students really do not see corruption as often as former students did. In addition, interns may have more experience and have seen much more.

Table 5.2.2.2.3. Share of Respondents who Said “Almost everybody does this” or “Everybody does this”

Situation	Students (N = 395), %	Medical workers (N = 74), %	Interns (N = 89), %	Teachers (N = 204), %
To cheat on pass-fail exams, exams, and/or module tests	43	48	58	53
To check-in the missing people as those who were present in classes	66	60	49	
To pay for missed classes	26	28	30	22
To pay to pass an exam or pass-fail exam	19	25	27	
To pay unofficially to get a place in a dormitory	24	29		
To pay unofficially for transfer to another major	13	28	28	
To pay unofficially for transfer to another educational institution	12	22		
To give a gift for a better mark on an exam	41	32	28	
To pay for traineeships	27	25		9
To pay other students to complete written works	19	18	17	

Many students believe that corruption in the process of studying (and not in the process of admission—see **Table 5.2.1.2**) is more significant, and the related amounts often exceed 1,000 hryvnias. The students generally provided higher estimates in regards to probability of occurrence for such situations, with respect to an exam or pass-fail exam, compared to the other groups (**Table 5.2.2.2.2**).

Table 5.2.2.2.2. Share of respondents who commented the mentioned situation as “This costs more than 1,000 hryvnias”

Situation	Students (N = 395), %	Medical workers (N = 74), %	Interns (N = 89), %	Teachers (N = 204), %
Missed classes, truancy	1	1	0	0
Pass a module test or writing of a module test	20	12	17	18
Pass an exam or pass-fail exam	51	23	31	34
Get a better mark for an exam	33	18	16	16
Pass the KROK exams	26	12	20	18

With regard to extortion of bribes during studying, in their replies to open questions, the respondents often mentioned a situation where teachers deliberately put lower marks or create bad conditions for learning in order to make students turn to corruption.

The respondents quite often mentioned intermediaries (particularly parents) when talking about corruption during the admission stage.

Students described the following situations:

“At the university, I only paid for living in a dormitory. My parents came. They made arrangements in advance”.

“All cases concerning payment for the place, mark, attendance of classes, etc. are constantly monitored by us. But due to the SET, all those who entered after Grade 11 have been admitted without bribes!”

“Teachers, who, in order to obtain the material compensation, may give lower marks”

“Teacher marked down for the module. It happens sometimes that teachers deliberately create unbearable conditions, we do nothing in the classroom, while offering hints that it is possible to pay”

“If students are more unequivocal in their assessments (teachers are guilty), teachers often say that corruption can be initiated by both students and teachers”.

“The head of the academic department at the university takes up to 5 thousand hryvnias from students. Well, mostly not in cash, but in form of electronics. We personally chipped in for a laptop for the academic department.”

“[The] teacher marked down for the module (put 60 points of 100 as the maximum for the very good works of those who did not pay). When I accidentally walked into the office to sign include [working] albums of [students], the teacher simply crossed out all the works and put marks as a rough guess. There was a hint to the winter session by the gifts under the Christmas trees. All those who paid got the same score of 191 [points]. During the fail-pass exam, I answered all the questions, I had no desire to pay for things I know perfectly, and she just put me [down] 130 [points] wrongly. As a result I lost the right to scholarships for half a year.”

“Corruption without intermediaries is more often observed among administrative, teaching staff of the medium level with amounts of about 10 thousand hryvnias. Corruption without intermediaries takes place with the senior management of the institution, heads of academic departments, directors and their deputies, etc. with amounts exceeding 10 thousand hryvnias. The role of the “lining” can be performed by those mentioned in the first case or other close persons.”

Teachers described the following situations:

“A relative of the student who does not want/cannot learn well, appeals to a friend or teacher guidance IHEs, and they then put pressure on teachers to set appropriate assessment.”

"Parents of students offered to "resolve the issue" during exams."

"Parents and students go to the administration and pay certain sums."

"... sometimes undermining courses, student assessment is later amended."

"Students are willing to pay teachers, who are willing to solve the problem. The initiative may come from one of the two sides".

"In my opinion, the most common type is mutually beneficial actions on the part of students and teachers, is the one with the management."

"Students offer to make arrangements... Teachers write the sum on paper."

5.2.3. Work of an educational institution

In accordance with Section VII of the Law of Ukraine "On Higher Education",

- A Head of education institutions (a rector) is elected by scientific and pedagogical staff; he/she is a representative of the administrative staff and students for a period of five years and cannot hold office for more than two terms;
- Deputy heads (vice-rectors) are appointed by the Academic Council on the proposal of the IHE head;
- A dean can hold office for no more than two terms. The law does not establish the procedure for appointment or election to this post;
- A head of the academic department is elected by the Academic Council of the IHE for five years; he/she cannot hold office for more than two terms.

Research and teaching staff are traditionally elected to these posts based on a temporary five-year employment contract. Upon its expiration, the contact can be renewed for another term, or the IHE can announce a new search for the position according to the procedure approved by the institution. The current legislation contains no prohibition on the conclusion of tenured employment contracts with scientific and pedagogical staff, but at the stage of the study, it is known that IHEs do not enter into such agreements. The MoES of Ukraine has issued recommendations for the competitive selection of teaching staff.²⁴

The current criteria for competitive selection of academic and teaching staff is purely formal. They provide grounds for discretionary (non-transparent) decisions of the Competition Commissions, but they do not resolve problems in the selection of employees, in accordance with their professional attributes and based on the principles of openness, transparency, and accessibility.

The Cabinet of Ministers of Ukraine has established that 6 to 8.5 medical students should be assigned to one teacher in IHEs (the specific numbers depend on the medical major and level of higher education)²⁵.

The institution has to undergo two procedures: licensing (obtaining the right to conduct educational activities and accreditation) and establishing compliance with the education program to the current requirements and standards of education, which gives the right to issue state-recognized degree diplomas to graduates.

The FGD participants said very little about the personnel policy (and its management) of institutions of medical education. However, during the interview and anonymous survey, the respondents reported numerous

²⁴ Order of the MoES of Ukraine No. 1005 dated 5 October 2015 "On Approval of Recommendations on the Competitive Selection when Replacing Vacant Posts of Scientific and Teaching Staff and Concluding Employment Agreements (Contracts) with them" URL: <https://zakon.rada.gov.ua/rada/show/v1005729-15>

²⁵ Resolution of the Cabinet of Ministers of Ukraine No. 1134, dated 17 August 2002 "On Approval of Norms on the Number of Students (Cadets), Postgraduate Students (Adjuncts), Doctoral Students, Candidate for the Candidate of Science Degree, Attendees, Interns, Resident Physicians per Established Academic Teaching Position in Higher Educational Establishments of Accreditation Level III and IV and state-owned higher educational establishments of postgraduate education". URL: <https://zakon.rada.gov.ua/laws/show/1134-2002-%D0%BF>

cases of nepotism; employment of relatives by the institution, as well as the availability of informal relations between administrators of different levels and promotions along the career ladder, based on the criteria of personal loyalties to the management. Notably, in the context of the above systemic corruption and the effectiveness of anti-corruption policies:

“Professor at the academic departments have informal relations with the rector, and he turns a blind eye to all attempts of the students to complain about extortion of money for the pass-fail exam.”

5.2.4. External control

In 2018, the government adopted a resolution that “certification of students seeking the degree in higher education by major in the field of knowledge, 22 Public Health is performed in the form that unifies state qualification examination.”²⁶ The KROK examinations became one of the components of the Unified State Qualification Examination (USQE). Other USQE components introduced since 2019 include:

- The International Foundations of Medicine exam (IFOM) is to be passed by third-year students with the majors “Medicine” and “Pediatrics”²⁷;
- An exam in a foreign professionally oriented language is to be passed by third-year students with the majors “Dentistry”, “Medicine”, “Medical Psychology”, “Pharmacy, Industrial Pharmacy”, or “Pediatrics”.

This resolution also excludes students in their last year of study for the specialties “Dentistry”, “Medicine”, and “Pediatrics”, the KROK-2 exam, international exams of the fundamentals of medicine (clinical disciplines), and the practical (clinical) exam. As of 2019, this decision has not been implemented.

The KROK exams are conducted in the IHE in which the student study. The examinations are organized by the Center for Testing at the MoH of Ukraine, and each exam is conducted with the participation of a representative of the Center for Testing. Students are checked to ensure that they do not have any prohibited sources of information at the entrance to the classroom in which the exam is held, and the exam process is video recorded. Test tasks are prepared by the Center for Testing, with the involvement of IHE teachers. The test is offered in Ukrainian, Russian, and English, according to language the student uses during his or her study. The criterion used to determine “passed/failed to pass” is set at achieving 60.5 % of the correct answers.

There are several problems with regard to the organizing and conducting of the KROK tests, including:

- Some questions are insufficiently qualitative (the wrong answer is considered to be correct, the question relates to a canceled regulation, etc.);
- Repeats of test tasks from previous years;
- The test is completed with a pencil and not a pen; this factor may promote the possibility of changing the test results and thus creates a greater likelihood for the risk of corruption;
- The results are entered into the Unified State Electronic Database on Education (UEDBE) by the IHE and not the Center for Testing. Thus, there is the potential for issuing diplomas to students who failed to pass the KROK exam.

Most respondents indicated that corruption at the KROK exam stages is very rare, but it still exists. During the focus groups, students said that there are several opportunities to bypass the rules:

²⁶[Resolution of the Cabinet of Ministers of Ukraine No. 334, dated 28 March 2018](https://zakon.rada.gov.ua/laws/show/334-2018-n) “On Approval of the Procedure of the Unified State Qualification Examination for Students Seeking the Degree in Higher Education by Major in the Field of Knowledge “22 Public Health””. URL: <https://zakon.rada.gov.ua/laws/show/334-2018-n>

²⁷ In 2019, the IFOM examination, the developer of which is the National Board of Medical Education (NBME), was conducted. The conductance of the examination was accompanied by visible communication, organizational and legal difficulties, and some students deliberately refused to take it.

A student said, “There are two types of corruption related to the KROK exam. The first one refers to the case when somebody else passes it instead of you, this is the easiest. The second one refers to the case when examination questions are disclosed the day before [the exam].”

A student said, “Yes, such thing may be done [disclosure of examination questions]. Not for public access. Only for those who need it. And the third one—you come personally, you do tasks, but your results will be considered a pass in any case.”

During the interviews, various respondents noted that if one fails to pass the KROK exams on the first or second attempts, is possible to transfer a bribe to guarantee that he/she will pass the exam the third time, through the administration of an educational institution. Therefore, the above problems of organizing and holding the KROKS exams provide opportunities for corruption.

5.3. Internships

5.3.1. Admission

The current regulatory framework with regard to the admission of the doctor into an internship involves five actors:

1. Internship doctor;
2. IHE, where the theoretical training of the internship doctor is performed;
3. Health care institution, where the practical training of the internship doctor is performed;
4. Department of Health of the RSA;
5. MoH of Ukraine.

In practice, an internship doctor can work in other health institutions than those where such a doctor undergoes practical training. Therefore, a sixth actor can be added to the list:

6. Health institution, where the internship doctor worked.

The current regulatory framework comprises a list of functions that should be performed by each of the mentioned subjects in connection with the enrollment of the doctor into an internship. However, there are almost no clear criteria and procedures (algorithms) based on which decisions are made at different stages of the doctor’s enrollment into an internship. In particular, it is related to decisions such as:

- Determination of the size of the government order for training interns, and the maximum number of places for training people, at the expense of the individuals and legal entities;
- Distribution of internship places among different training specialties;
- Distribution of internship places among institutions of higher education and health care;
- Enrollment of a specific doctor to study a certain major or to study at a certain institution of higher education and health care.

In addition, there are no specific criteria for determining whether a given health care institution may be an internship site.

5.3.2. Educational process

The current regulatory framework dictates that training be provided in accordance with programs that are developed by the IHEs and approved by the MoES of Ukraine. The internship duration is established base on the specialty, as well as the number of months of theoretical and practical training. There are established forms of state certification for graduate-interns. Other aspects of the educational process in the internship are not centrally regulated.

During their studies and workplace training, interns face a problem with regard to patient access for the purpose of refining practical skills. During the focus groups, the interns explained that the problem for them is not

corruption; rather, it is the patients' refusal to deal with interns. However, during in-depth interviews, the respondents confirmed the existence of bribes for the purpose of accessing patients to perform practical training.

5.3.3. External control

Internship graduates must pass the KROK-3 exam. Its organization is similar to the KROK 2 exam (see the 5.2 **Universities** section). The criterion of "passed/failed to pass" is set at achieving 70.5% of the correct answers. Certification of graduates is performed through the approved procedure.²⁸

During the online interview, many interns reported that numerous people pay to join the internship for the opportunity to get a preferred specialty and for access to patients (**Table 5.3.3.1**).

Table 5.3.3.1. Share of Respondents who Said, "Almost everybody does this" or "Everybody does this"

Situation	Medical workers (N=74), %	Interns (N=89), %
To pay unofficially for internship employment	34	45
To pay unofficially for the possibility to learn a preferred specialty in an internship	43	46
To pay for access to patients during an internship	18	9
To use family or friendly relations for employment	-	61
To use family or friendly ties to enroll in an internship in the preferred specialty	-	56

In the open answers, the interns often mentioned that a typical problematic situation is the participation of chief physicians in the distribution of internship places.

"When looking for a place of internship ... by the preferred major, I have repeatedly faced with the proposal of chief doctors [to resolve the issue] for a bribe."

"Students of medical HEEs make arrangements with the chief doctor to get the preferred major and place in the hospital for money."

"Chief doctors write the amount for employment."

The survey respondents gave similar examples of such situations:

"The hospital sends information on the required number of interns per year, you come the next day, but they say "all positions are occupied"."

"She visited the regional [hospital] well in advance to check whether they have an established position. The chief physician confirmed that that have it. Then she went to the department [of public health], but the head said that they did not have it."

"If a student wants to take correspondence instruction and work in a hospital located in the areas where the students live, where the personnel department reported that there were no vacancies; after a productive 'conversation' with the chief doctor, jobs magically appear."

"The Department of Health has submitted a list of free places in Kyiv, but when you come to the hospital, they make you understand clearly that they already have "worthy" candidates, and it is not about knowledge, because they do not check it. They are rude to you and often do not let you to see the chief physician."

²⁸[The Procedure for Certification of Doctors](https://zakon.rada.gov.ua/laws/show/z0293-19) approved by Order of the MoH of Ukraine No. 446, dated 22 February 2019 "Some Issues of Continuous Professional Development of Physicians"; URL: <https://zakon.rada.gov.ua/laws/show/z0293-19>

With regard to the cost of a potential bribe, more than 50% of interns said that employment for internship might cost more than 1,000 hryvnias (Table 5.3.3.2). Thus, the lack of transparent procedures for internship enrollment—and the lack of public information about available vacancies for internship—contribute to an increased corruption risk at this stage.

Table 5.3.3.2. Share of Respondents who Commented on the Mentioned Situation, “This costs more than 1,000 hryvnias”

Situation	Interns (N = 89), %	Medical workers (N = 74), %	Students (N = 395), %	Teachers (N = 204), %
Transfer to another, more preferable major	27	22	11	15
Internship employment	54	30	31	15
Selection of specialization in an internship	36	28	24	19
Access to patients during an internship	11	11	10	5

5.4. Continuous professional development

The Ukrainian continuing education system has components that are obligatory for each doctor:

1. Studying under individuals who have received a medical degree at the master (specialist) level;
2. Certification with assigning the title of “doctor-specialist” for a particular medical specialty, to which anyone who completes an internship is subjected. Based on the results of this certification, the person receives the right to work as a doctor;
3. Certification for conferring the qualification category;
4. Certification for confirming the qualification category.

The official health system also has methods of continuing education that are optional for each physician:

- Post-graduate study, which furthers the career of the physician-investigator;
- A clinical residency (two years) that allows the doctor to obtain further qualifications;
- Study in a specialization cycle, which allows the physician to acquire a certain specialization, that was not provided in their residency.²⁹

Prior to 2019, the prerequisite for the certification of the assignment (confirmation) in the qualification category of the doctor was his or her field of study during the pre-certification cycle at faculties of post-graduate medical education, with a usual duration of up to one month.³⁰

²⁹ The nomenclature of medical majors in 2019 included 124 majors (Order of the MoH of Ukraine No. 446, dated 22 February 2019 “Some Issues of Continuous Professional Development of Physicians” (<https://zakon.rada.gov.ua/laws/show/z0293-19>). Internships prepare specialties from 34 majors of the so-called “primary specialization” of the doctor (Order of the MoH of Ukraine No. 81, dated 23 February 2005 “On Approval of the List of Majors and Terms of the Study in Internship of Graduates of Medical and Pharmaceutical Higher Educational Institutions, Medical Faculties of Universities”; URL: <https://zakon.rada.gov.ua/laws/show/z0291-05>)

³⁰ Refer to the Calendar Curriculum of the NMAPE for 2019 for an example; URL: https://nmapo.edu.ua/images/Docs/Rozklad/kalend_plan_2019.pdf.

In 2018, the Framework Regulations on the continuous development of professionals in health care was approved.³¹ In 2019, in order to implement these regulations, the procedure for continuous education of doctors after an internship was changed.³² Doctors are now obliged to participate in CPD events every year. They receive the opportunity to relatively freely choose such events; it is no longer obligatory to attend a refresher course in institutions (at faculties) of post-graduate medical education. Doctors can study:

- In formal education—on cycles of specialization, topical advanced training, exchange of information, and internship;
- In information education—by means of participation in professional conferences, seminars, scientific and practical conferences, symposia, congresses, exhibitions, simulation training, workshops, courses on mastering practical skills, internship in clinics in other countries and distance learning (including e-education through professional online resources);

The Law of Ukraine “On Higher Education” (paragraph 4, Part 3, Article 61) defines medical residency as a form of doctors’ training. The regulatory framework for the commencement of a medical residency has not been finalized. The medical residency in the future has the opportunity to replace the medical internship and training at the cycle of specialization for obtaining a specialty, training that is not provided in the internships.

Speaking about the prevalence of corruption practices in adult professionals who have completed their education and are engaged in professional career development, a large number of teachers said that most people use family ties and/or pay for a thesis defense as well as to obtain a position (**Table 5.4.1**).

Table 5.4.1. Share of Respondents who Said, “Almost everybody does this” or “Everybody does this”

Situation	Teachers, %
To use family or friendly relations for employment	42
Paid during defense of a thesis	42
Paid for obtaining a position	27
To pay for someone else to write a thesis	22
Students individually offered money or services for exams or fail-pass exams	20
To pay unofficially for the publication of articles in the Ukrainian media	19
Students (entire group) offered money for exams or fail/pass exams	14
To pay unofficially for the publication of articles in foreign media	11

The teachers and medical staff often said that paying for a thesis defense is the most corrupt act. The cost of placing it in a scientific journal can also exceed 1,000 hryvnias. In total, the defense process might cost more than the process of a job search and employment in administrative positions (**Table 5.4.2**).

³¹ Resolution of the Cabinet of Ministers of Ukraine No. 302, dated 28 March 2018 “On Approval of the Regulations on the System of Continuing Professional Development of Specialists in Public Health”. URL: <https://zakon.rada.gov.ua/laws/show/302-2018-%D0%BF>

³² Order of the MoH of Ukraine No. 446, dated 22 February 2019 “Some Issues of Continuous Professional Development of Physicians”. URL: <https://zakon.rada.gov.ua/laws/show/z0293-19>

Table 5.4.2. Share of Respondents who Commented on the Mentioned Situation, “This costs more than 1,000 hryvnias”

Situation	Teachers (N = 204), %	Medical workers (N = 74), %	Students (N = 395), %	Interns (N = 89), %
Employment to a teaching post in the educational institution	18	17	9	12
Employment to an administrative post in the educational institution	15	14	9	11
Placement of an article in a scientific journal	20	12	7	7
Thesis defense	50	21	10	19
Obtaining a voucher for the pre-certification cycle or other advance training activities for doctors	9	8	5	7
The possibility of not attending advance training activities for doctors by having received the scores or certificate on them	14	12	5	6
Certification of doctors	16	21	6	7

6. Conceptualizing corruption

A government representative defined corruption as follows:

"Corruption— this is a consequence, not the cause. Corruption is a symptom, not a disease. Corruption is a symptom of a sick system. Therefore, if we build a healthy system, in which it cannot arise, it will be absent."

A representative of an international project defined corruption as follows:

"Corruption is defined as actions that violate the rules of the system on which it is not working as intended and does not fulfill its task. Because cheating and plagiarism in exams are also corruption."

6.1. Students

Students of colleges and universities usually provided quite lengthy definitions of corruption, but their responses can be reduced to two categories.

1. Corruption as a means to make one's life easier, a way to circumvent the rules:

"Making a certain procedure easier through the use of a financial incentive."

"A person does not want to make the effort involved in development of their own career or solving of some problems. He/she believes that he/she can buy everything; decide everything using money."

"In my opinion, this is a way to achieve a certain goal or social status. Some services or something else, let's say so, for the material means of bypassing laws that are binding for all, but the achievement of such goal is not a legitimate success."

"This is a way to resolve any situation with money. Well, that is how I read it."

The most common example of such corruption is bribery to obtain a mark on an exam when a student does not want to or is not able to learn the material and confirm his/her knowledge ("is lazy", "can't manage", "do[es] not have enough time", etc.) or fees for missed classes or exams on "general education" subjects, which are considered by students as unnecessary barriers to the medical profession. They believe that disregarding these disciplines will not threaten their career or future patients.

A special case is the uncertainty and lack of knowledge about whether the so-called "gratitude"—money or a gift for goods or services—for something that has been done faster or at a higher qualitative level than they would usually do, is an act of corruption. The respondents focused on attempts to distinguish corruption from gratitude. In their opinion, the latter is a normal practice that is widespread, and unlike corruption, it should not be condemned. The line of demarcation for them is quite clear: If gratitude is for something legitimate, then it is normal; if something is illegal, then it is corruption. Such understanding is a mistake and can cause serious consequences in the event of continued use of so-called "gratitude".

"If this money [is] for something illegal, it is unequivocally corruption, not gratitude. And if it is something legal, but it is just implemented in a special way, it is gratitude."

According to respondents, the difference between a gratitude and an act of corruption depends on the amount of remuneration. They do not consider a small amount of money, stationery, sweets, or alcohol as a bribe; rather, they consider these items to be a "present" or "gift". It is crucial to distinguish the point of delivery for a gift of gratitude. The students almost unanimously voted that if presented to the decision maker (for the exam, credits, etc.) it is corruption. By contrast, if it is given after the decision can no longer be influenced, it is a present.

Misunderstanding the volume of "gratitude", and the time of its provision, is proof of the cultural dysfunction of both students and teachers. However, any awareness-raising activities aimed at forming a better understanding of corruption and combating corruption have not yet been developed and performed among students. Hence, a new generation of health professionals and future teachers will continue to mistakenly perceive "gratitude" as something acceptable, natural, and legitimate, and corruption can continue to thrive.

According to students, teachers are often open to “simplify” their lives because they do not see any threat for themselves in this situation. They will not be punished, and students with a low level of knowledge will not reach graduation because they will not pass the KROK exams.

“Regarding the topic who wins most of all. Why do so many teachers knowingly agree to take finance from students? Because they believe (I have heard of it from teachers many times) that, in their opinion, there is anything wrong about doing so, as the KROK exam will drop out all those who do not meet requirements. If the student will manage to pass the first KROK exam, it is for sure that he/she will [be] dropped out at the second KROK exam. Therefore, during the first three courses, especially teachers who teach during the first three years are eager to ‘help’ students.”

2. Corruption as a means of illicit enrichment: fees charged for something that would have to happen without any additional actions or funds:

“Opportunities for enrichment”.

“In my opinion, corruption is extortion. To solve a certain problem that can be solved easily in a legal way, a legal entity, or an official demand for money from you.”

“In fact, teachers use their status to fail the student, and then force the student to pay a certain sum.”

“This is the use of own opportunities for enrichment. However, it is not only about material enrichment. It may be a certain reciprocal service, which is for obtaining a certain benefit.”

In this sense, the most trivial examples of corruption provided by respondents are “to pay for an exam”, “to buy a diploma” (i.e. payment for all exams “in bulk”), and “to buy something for an academic department”. These acts combines all the deeds that they perform at the request of the party who receives the money or benefits. In other words, corruption refers to “additional fees”, “money”, “privileges”, “bribery”, “extortion of funds”, “illegal sale”, “payment of money”, “material gain”, “services”, “roundabout ways”, “reaching a goal”, and “for something that should have to happen naturally”.

“In my opinion, this is an illegal sale of services which should be provided free of charge.”

“This refers to payment of money, or not funds but a provision of a certain financial benefit, for something that should to provided free of charge.”

When distinguishing among these types of corruption, it is important to note that the respondents’ did not consider student-led initiatives as acts of corruption (a mistaken view). However, they believe that a teacher’s demand is definitely an act of corruption. In other words, corruption of the former type is defined as actions that are only unwanted or negative under certain conditions, with many precautions in place and is a subject for debates. However, the latter case represents extortion, when the student has no choice whether to resort to corruption, was unquestioned by respondents. However, such corrupt practices (according to the FGD participants), occur significantly less and are not systematic. The exceptions are at some stages of the educational process, first admission to colleges (especially the more popular) and the internship.

In summary, we can say that the acceptability of corruption, and the definition of acts of corruption, are associated with the understanding of whether the system of medical education works properly in general. If bribery and other acts of corruption are ways to circumvent the dysfunctional system (for example, not to waste time on learning useless subjects or to purchase training supplies at one’s expense), then the respondents do not condemn such actions. When corruption is a way to circumvent the working system, these actions are condemned unequivocally, and the students believe that violators will be punished—if not immediately, one day in the future. Finally, when corruption become routine in the functioning of the system (when money is extorted from students or when it is impossible to study without bribes), the respondents believe that this form is the most unacceptable and must result in punishment and changes in the existing system.

6.2. Interns

The majority of the FGD participants think that corruption is a negative phenomenon, the spread of which is not unique to the system of education or health care. The participants described how corrupt acts can be found in some form in almost all spheres of Ukrainian society and beyond, as well as resistance to it—the result of activity by state authorities.

As far as medical training is concerned, both interns and students emphasized that corruption is a consequence of the reluctance of students to study, and thus it represents an attempt to circumvent the system. Among the main corruption factors that they mentioned were the reluctance of people to resolve certain issues in a legitimate way or the availability of bureaucratic or legal obstacles. When most interns focused on obtaining material benefit, they estimated corruption to be illegal. The interns also consider “gratitude”, when doctors are given money, to be corruption. Some of them also believe that corruption must involve the exchange of money (and not just services). These responses again prove the ignorance of the respondents in understanding the issues of corruption and highlight the emergence of corruption risks and the need to combat corruption with regard to rendering health services.

6.3. Teachers and administration of IHEs

When defining corruption, teachers focused on obtaining undue benefits, and they expressed much less focus on corruption as a means to circumvent the rules and simplify their lives. For them, corruption is primarily a “violation of the law”, “crime”, “abuse of official duties”, and/or “practices for obtaining benefits for something that should be done free of charge”. The teachers much more clearly described corruption as a way of functioning throughout all systems—and not just the medical education system. Accordingly, in their opinion, it is necessary to immediately root out corruption everywhere. This endeavor requires beginning from the top, with the people in power. Therefore, it makes no sense to fight corruption only in medical education when the whole of society is steeped in corruption. With this thinking, the teachers and administration pass the burden of responsibility in their institution on external factors: They try to absolve themselves from responsibility and justify the corruption problems at their institutions.

When talking about the necessity to combat corruption, almost all the FDG participants expressed doubts about the ability to completely eliminate it—or even significantly minimize it. Most of our respondents attributed this outcome to the fact that corrupt practices are traditional for Ukrainian people, and that they are connected with the mentality. However, similar to the students, the teachers mentioned the practice of using “gratitude” on others (for example, doctors), but they did not consider such actions to corruption. Thus, they pass a misunderstanding of corruption onto medical students as future employees.

The main explanation by teachers with regard to the reasons of corruption (except for traditions and mentality) is low salaries. The options related to the definition of corruption provided by administrators, lacked distinction and were identical to those provided by the teachers.

In the course of this study, there was a trend toward a conflict of interest, where positions in administration are occupied by teachers who hold more than one office and then exercise control over themselves because they are part of the IHE administration. This conflict of interest promotes corruption practices and risks because even when a student wants to resist the teacher’s extortion and inform the administration, he/she cannot do this because the teacher is a representative of the very administration the student would report to.

6.4. Teachers and administration of CPD system

All the students in the CPD system who responded to the survey consider corruption to be a crime, as well as negative social phenomenon where an abuse of office or social status is made for the purpose of an illegal (criminal) solutions to personal or other people's problems (often for a fee). They described corruption as active measures aimed at creating a situation where the system does not work without corruption. Among the causes of

corruption, the mentality of the people, low wages, poverty, immorality of those in power, an imperfect legislature, and the lack of punishment for corruption were primarily mentioned. The respondents in this group also focused on the fact that corruption must be distinguished from gratitude or thanks.

The teachers usually think that corruption is one of the characteristics of the current state of the medical education and public health systems, but it is not a unique phenomenon for Ukrainian society, which is primarily associated with difficult socio-economic conditions (under which the vast majority of Ukrainian residents live). When defining corruption, most participants used such terms as “illicit enrichment” and “abuse of office for obtaining benefits”.

7. Corruption as a mutual benefit

7.1. Students

When answering the question as to the persons who benefit most from corruption, students most often answered that corruption is beneficial for both teachers and students, yet at the same time, it causes harm to both teachers and students.

"There is a student who does not want to pass an exam by himself/herself. He/she wants to find a way of circumventing. Therefore, he/she paid a teacher, and the teacher likes it. Moreover, it continues to happen. Then another student who has no resources to pay comes. However, there is no other choice. All the other students have already paid."

On the one hand, those who want to circumvent the rules and simplify their lives are considered violators, while students who study honestly perceive this situation as unfair:

"The winner is the one who learns and comes with gifts."

"Well, affected students who learn to be honest."

Statements that corruption is especially beneficial to those who receive money were not rare, but this version was less common and described in such terms as *"to those who extort"*, in other words, in cases where an act of corruption is initiated by a teacher or administrator.

Intermediaries also benefit from corruption:

"In higher educational establishments, as far as I know, not only in medical ones, there are certain "vertebrae" [intermediaries]. These are go-to people [persons who settle some issues in exchange for a certain benefit], you may call them as you like. These are certain students, who knows a certain category of teachers; who just collects [money] and brings such money to the teachers. Therefore, they settle all the issues. Thus, most teachers of other universities are interested in this. They never appear in person anywhere. Roughly speaking, it is difficult to catch them red-handed. Thus, such people really have a bigger benefit."

On the other hand, students who give bribes lose because they do not have knowledge and, therefore, it will be more difficult for them to find a job and they get used to obtaining everything for money. Teachers lose in this situation because taking of a bribe is humiliating and threatens them with liability.

"If it seems to me that I can have 5 points [the highest mark], but I do not want to make any efforts at this point, I believe that this is normal. Then, in the future, this may cause a serious problem. And you will be not able to understand that you did wrong in that moment."

According to the respondents, the patients also lose because they will be treated by non-qualified specialists.

Thus, corruption is perceived as a mistake for which an individual will have to pay in the future, or a deception that will lead to future punishment, but within the structure of higher education and one's professional life. However, if the offender is not punished immediately, it makes no sense to follow the rules. Therefore, corruption is considered acceptable.

Based on the summary of the respondents' opinions, the motives of corruption on the part of students seem to be the unwillingness or inability of some students to study or the impossibility of getting the desired things (e.g. marks) without using money or personal relations:

"In my opinion, it is either a desire to have an easier process, or an illusion that there is no other way of solving the problem without stimulating [corruption]."

This finding corresponds to two types of corruption that we managed to identify based on the respondents' answers: corruption as a way to circumvent the system and corruption as a way to make a dysfunctional system

work. In addition—it should be noted that the system does not have the necessary measures, and if they are available, then they are formal—it is nearly impossible to prevent corruption risks and respond to corruption.

7.2. Interns

The majority of interns who attended FGDs consider that nobody benefits from corruption. On the other hand, it was often said that both sides of corruption acts feel beneficial effects because they manage to get the desired things or solve problems. They expressed the opinion that the administration of institutions may benefit from corruption in the system of medical education and public health. Foreign students were also called the biggest groups of people who benefit from acts of corruption in domestic institutions of education and health care, given that payment for them would be relatively low and they may not study. Instead, they may just buy marks to receive their diploma.

When talking about those who lose because of corruption, the vast majority of participants indicated that society as a whole and most of its members are in a losing situation. When considering acts of corruption in medicine in general and certificates issued by hospitals in particular, most focused on the fact that patients (whom the attendees perceived as the main subjects of corruption) lose because of corruption.

7.3. Teachers and administration of IHEs

When answering questions concerning those who win and lose because of corruption, teachers of medical IHEs emphasized that society as a whole and all segments of the population may lose, whereas government officials at all levels of power, who are least affected by corrupt practices. They also expressed the idea that patients suffer from students who have gone through medical education by giving bribes. There is another risk caused by corruption, namely a tarnished reputation. A corrupt IHE that provides unqualified doctors loses its image; therefore, all employees, including those who took bribes, may be affected.

It is worth paying attention to a comment from one respondent about the fact that those students who receive their diplomas through corruption return to the IHE as teachers and begin to reproduce corrupt practices as a teacher. Due to the self-reproduction of corruption, the university loses. The institution administration allows this situation due to lack of procedures for selection of personnel based on the principles of openness, accessibility and publicity.

According to the majority of the IHE administration representations, both ordinary citizens and society as a whole lose because of corruption in the Ukrainian education system. According to the respondents, “higher-ups” benefit most from corruption, while common people suffer because of it. High officials are usually aware of the common problems in the sector, but sometimes they do not care to “patch the holes” to fix them. Therefore, corruption is especially beneficial to those who control and allow certain phenomena. When facing such evident impunity, society expects reactions from high officials, but they do not react.

7.4. Teachers and administration of colleges

According to respondents in this group, both the student and the teacher lose because of corrupt practices: First and foremost, the student loses, since he/she is usually the main subject of corruption in the system of IHE. It will be very difficult for the student who has a “purchased” diploma and/or does not have the required level of knowledge to get a job to develop a career (if in these cases, corrupt practices “fail to work”).

“As far as the student is concerned, the student loses in any case: the student does not get that, for which he/she actually pays money. In the case with the student, the student pays money but does not receive knowledge.”

7.5. Representatives of the CPD system

When defining corruption, most student participants talked primarily about getting illegal remuneration for any activity by identifying this phenomenon with illegal enrichment. FGD participants clearly distinguished

“gratitude” of patients from corruption at the level of direct communication with a doctor, namely by considering that such actions are signs of human gratitude, not corruption. However, it should be noted that this perception is not only distorted but wrong; in other words, one of the key indicators of corrupted actions is the size of illegal benefits and social and professional status of the recipient. The higher the benefit and the status position, the more corruption is present.

According to the FGD participants, one of the key factors in facilitating the spread of corruption is impunity of corrupt officials at the higher (and highest levels), which is a result of the spreading of corruption in Ukrainian society, particularly in the judicial system. As far as beneficiaries of corruption are concerned, most FGD participants believe that both sides benefit from such acts of corruption, but they also expressed the opinion that the individuals only win on a short-term basis. The participants agree that corruption affects all aspects of life: the public, social, personal levels. Ultimately, everybody loses because of corruption.

7.6. The role of intermediaries in acts of corruption

During the focus group and in-depth and expert interviews, the study participants confirmed that the following intermediaries might be involved in various types of corruption actions:

- Parents;
- Leaders of groups, representatives of student groups, or assistants of teachers;
- Teachers.

7.6.1. Parents

The role of parents is especially significant at the admission stage. According to the respondents, parents most often act as initiators and, indeed, are participants in acts of corruption at the stage of admission to colleges and universities. The involvement of parents in corruption aimed at gaining an internship and obtaining a place in a dormitory was also mentioned.

The study did not reveal how often parents are initiators of acts of corruption at stages of medical education. However, with regard to admission to colleges and universities, we suppose that their role is related to the organizing acts of corruption (the transfer of money, negotiations on rendering services, or interceding for relatives or friends) as well as the payment of bribes. In some cases, parents may decide to corrupt the Admission Committee or use personal relations to apply pressure on it to agree accept a bribe. The study participants also mentioned parents in the context of acts of corruption related to the risk of a student’s expulsion: Parents urged teachers and administration officials to change a failing grade by offering money or services.

A teacher said, “Relatives of a student who does not want/cannot learn well, contact a teacher known to them or a representative of the management of the IHE, and then they put pressure on a teacher in order to force him/her to put a required mark.”

We can assume that the role of parents is significant because, at the time of the admission stage, students are often dependent on their parents. Their impact on decision-making, including the choice of major and educational institutions, is significant.

It is important to recall what the study participants said about the role of “medical dynasties” with regard to students selecting majors and educational institutions. Almost all categories of respondents in one context or another relayed that among medical students there are students, parents, or other relatives who work in the public health sector. The respondents mostly defined this phenomenon as positive. Such students have a greater motivation to study and better preliminary training. However, references to “medical dynasties” in connection with corruption were not rare. This concept relates to a student’s admission into educational institutions and employment as well as internships, especially for popular majors, such as surgery or gynecology. They also mentioned that older relatives who work in the health care sector can put pressure on students in connection with

the choice of the major. When this occurs, the latter do not have the motivation to learn, but they still successfully receive a diploma because of the influence of their relatives, or the bribes paid by them.

As far as the admission to an internship is concerned, according to the study participants, bribes at this stage of medical education can reach several thousand dollars. Parents are the source of funding for this purpose. The study showed that sometimes initiators of corrupted actions expect that they will have to deal with parents but not with students or graduates of institutions of medical education:

An intern said, “[The] Head of the Department of Health ...answered: ‘Come with your father, we will discuss this issue’ by apparently referring to monetary rewards.”

Thus, the study revealed the lack of transparency and bias in the process of admission for students to the IHEs. This issue is a corruption risk because the opacity and lack of publicity in the process of enrollment, contribute to the entry into university in a corrupt way.

7.6.2. Group leads

The role of the group lead and other representatives of student groups, as well as assistants of teachers in acts of corruption, may include informing (1) students of the possibility of/need for a bribe or certain service(s) required for passing the exam (fail-pass exams, modules), or (2) teachers of the students’ intent to bribe and organizing any act of corruption (the collection and transfer of funds, compiling lists of students who gave money). Group leaders and teacher’s assistants are involved in performing certain administrative work, as well as transferring information from the management of the academic department, or dean, to the students. This situation particularly applies to the stage of knowledge control. According to the study participants, these group leaders may enjoy the trust of the teachers and administration by performing an important function as an intermediary in the educational process in general.

A student said, “What is the situation in our institution? The lead of the group is always a person who remain with a teacher to talk. The lead of the group is even a person (you may agree) that remains at the end of the cycle to grade the marks of the entire group.”

These participants in the educational process are an important component of perpetuating corrupted actions in the course of the educational process, in cases when there is an initiative to give bribes for the exam or a test that comes from the teacher, as well as when the student initiates the bribe.

A student said, “The lead of the group collected money and went to the teacher.”

A student said, “The teacher said through his assistant what was required to pass the tests related to the subject.”

It is also important to remember that the study participants repeatedly mentioned that they learned about acts of corruption from older students; these individuals referred to the possibility or even the need to bribe. Hence, the culture of corruption extends from older to younger students, and older students act as a kind of the intermediary by normalizing corruption.

7.6.3. Teachers

Teachers can be involved in acts of corruption as beneficiaries as well as intermediaries. In our opinion, the often-mentioned crosscutting nature of corruption in institutions of medical education is important. Teachers who receive money in a corrupt way may transfer some of them to the higher officials:

A student said, “Teachers take money from students ... and then all the money collected from the entire academic department go to “common cash fund” and distributed equally among all and the head of the academic department.”

A student said, “Professor of the academic departments have informal relationships with the rector.”

The study participants described situations when all administrative units were involved in the receipt of money. Such situations in the educational institution can be defined as systemic corruption. In this case, one can

assume that the efficacy of anti-corruption policies at the institution will be very low, and major efforts to reduce the risk of corruption should originate from the outside. Therefore, it is necessary to address issues of corruption as a systemic phenomenon through the re-appointment of the IHE management, as well as holding an open and transparent public contest for the vacant head position. There should also be a mechanism for responding to the head's failure to meet anti-corruption legislation and the failure to incorporate anti-corruption mechanisms into the structure and processes of the institution. These methods should provide for the termination, identification, and response to corrupt practices at all levels of its leadership.

8. Factors that provoke acts of corruption and enable their existence

Based on the results of the group discussions, in-depth and expert interviews, and online surveys, we formed a list of factors that enable acts of corruption and provoke participants in the educational process to be involved in such actions. In this study, the factors that enable corruption refer to characteristics of the system of medical education that represent high risks for inciting corruption. The characteristics of the system of medical education and outside it provoke the participants in the educational process to engaged in acts of corruption. We have identified such factors for each act of corruption mentioned by the study participants. Notably, provocative and enabling factors may be distinct for payers and beneficiaries. Therefore, participants in the educational process involved in corruption have been defined for every act of corruption.

Both the payer and the recipient of money or services can initiate an act of corruption. Depending on the source of the initiative, acts of corruption are evaluated and perceived by the study participants in different ways. However, this factor is not the key to understanding characteristics of the system of medical education related to corruption. The study suggested that the system of medical education should be resistant to corruption risks. To reduce corruption, the motivation and the ability of the payer to give money or provide services must be minimized. Further, the recipient of the money or services must be stopped.

8.1. Admission

If acts of corruption occur at the admission stage, the payers are students. The recipients are the administration of the institution, organizations, or institutions outside the system of medical education that are authorized to issue certificates confirming that a student is part of a privileged categories or conduct standardized, external testing. Teachers can also benefit from corruption during the admission process, but this phenomenon is a rather intermediate link from which they benefit.

It is necessary to distinguish the role of the Department of Health of the RSA and administrators of health facilities, who are recipients for employment of interns and enrollment of doctors to CPD activities.

In the study, there was no detailed description of actors outside the system of medical education and their motivation because it was somewhat beyond the scope of this study.

In the case of admission to institutions of medical education, students are motivated to resort to corruption due to a low level of knowledge. It is worth distinguishing foreign students, who often do not have sufficient information about the possibilities of entering the Ukrainian universities. Above all, the organizational and logistical support must be considered in the process of submitting documents, getting a visa, and moving to Ukraine.

At the stage of admission to an internship, the payer's motives are opacity of data, biased decision-making, and the lack of objective criteria for admission to internship in different health care institutions. It is worth distinguishing one factor that in combination with the above listed reasons increases corruption risks at the stage of enrollment to internship: the lack of places for preferred majors in respective hospitals. In addition, an internship represents the beginning of the professional path of doctors, so applicants acquire motivation for obtaining a material gain. An "investment", the size of which may be a few thousand dollars (the cost of enrollment in an internship, according to respondents), to the preferred internship and/or hospital, is repaid after graduation, since future doctors intend to receive informal payments from patients.

With regard to enrollment to professional development events, doctors who pay are provoked to acts of corruption by the lack of places at advance training events paid from the budget as well as the opaque procedure of providing such places. The lack of competitive opportunities to choose courses of training among IHEs and other public or private providers of such services is a non-flexible system for advanced training.

The motivation of those who receive payments or services is primarily their own enrichment. In cases when representatives of the administration are involved in the acts of corruption, the administrative pressure may also push for further corruption.

Among the factors that enable corruption at the admission stage, it is necessary to distinguish an opaque admission system (process) to IHEs after college. An inefficient and opaque system exists for determining the needs of staff (based on indexes of quantity, specialization, and the need for advance training), as well as the lack of publicly available information about the proposals for training interns and the activities for professional development of doctors. In addition, opportunities for acts of corruption are created by non-transparent personnel policies in the institutions of medical education and health care. These policies can facilitate administrative pressure on subordinates.

8.2. Educational and scientific processes

During the educational process, students, interns and graduate/doctoral students, and doctors who undergo advanced training are involved in acts of corruption as payers. The recipients of funds in the system of medical education are teachers and administration at institutions of medical education or outside of it, namely employees of the health departments of the RSAs and health care facilities.

At this stage, corruption is related to the need for acquiring the requisite knowledge and skills (additional classes with a teacher, purchase of supplies at one's own expenses that the education institution would have had to provide, practical classes, or access to patients during internship), and vice versa, to avoid unwanted phases in the educational process (the possibility of not attending practice or professional development activities).

Payers are motivated to be involved in acts of corruption by the non-optimal organization of the educational process and the irrelevant content of educational programs. Some of the issues that facilitate the corruption are: excessive self-guided work, the lack of feedback from teachers, insufficient practical training, and complicated or difficult access to patients and availability of courses (which are perceived by participants in the educational process as unnecessary, burdensome, or irrelevant).

The processes used to assess students are opaque; they rely on teacher subjectivity, decision-making autocracy, as well as the lack of control and response from the administration (and the head of the higher educational establishments) to illegal activities of the teachers.

At the level of advanced training, the motives for doctors to pay is the lack of quality competition, a non-flexible system of professional development activities (which requires leaving one's workplace and home for several weeks and does not provide the opportunity to select the form and content of advanced training), and a biased or opaque system and procedures for providing places for advanced training.

In the field of scientific work, acts of corruption (primarily regarding payments for publications without reviews and falsification of study results) performed by scientists may occur due the lack of resources (funds and equipment) for research, a low level of qualifications and knowledge, as well as a lack of integrity, which is widespread in academic culture. Other participants of acts of corruption—pharmaceutical companies that pay researchers for distorted study results, editorial staff of scientific journals—are motivated by the desire of monetary gain. These acts of corruption are possible under conditions of very scientific standards in Ukraine. There is a lack of development expenditures that would allow the state to adequately finance educational sciences, and importantly, the mechanism used to distribute funds is ineffective. Currently, funds for science are distributed by the MoH without an open competition and a lack of financial autonomy. The institutions in medical education have limited capabilities and motivations to receive extra-budgetary funding for research.

8.3. Control

At the stage of internal and external control (i.e. exams, the KROK exam, thesis defense, and certification of physicians), participants in acts of corruption include: students, interns, doctors, and graduate/doctoral students as payers, as well as teachers, the administration of educational institutions and representatives of institutions outside the system of medical education, such as health facilities, health departments of RSAs and Center for Testing at the MoH of Ukraine.

According to the study participants, these acts are primarily about one of the most common forms of corruption: bribes (or services) during exams. Students are pushed to acts of corruption by a low level of knowledge, the opacity and irrelevant content of educational programs, a non-optimal combination of program modes (too much self-guided work and insufficient practical training), and the lack of time for studying due to an overload with work. However, these corrupt motives are purely subjective. A lack of proper control over the educational process by the administration for the higher educational establishment, a lack of defined rules for evaluation of students, a lack of procedures to appeal marks or a lack of information about these procedures, as well as the intentional development of the timetable without providing the objective possibility for the student to implement it, etc. are all factors that put students in despair. Indeed, they realize that they lack objective conditions and time to prepare for the tasks and objectives of the subject. Consequently, they resort to solving the problem by committing illegal actions: the transfer of a bribe.

With regard to the defense of scientific works, degree-seeking students are also motivated to be involved in acts of corruption by a low level of qualification and knowledge, the lack of opportunities for professional development for teachers and researchers, and a poor academic culture.

As far as recipients of funds and services are concerned, especially the administration and teachers, they are pushed into involvement in acts of corruption by administrative pressure, lack of time due to the overload with work, low wages and the desire for material gain.

At the stage of control, acts of corruption become possible due to lack of systems for teacher evaluation (for example, at the end of each semester) and ineffective mechanisms for combating corruption in the educational institution (students can not complain about the poor quality of teaching and extortion because they do not know who to contact on such issues and are unsure that the reaction will be adequate and not work against them), the lack of a clear definition of corruption in medical education, perception of corruption and nepotism as a social norm, and a low level of protection against corruption outside the education system—institutional weakness in law enforcement and judicial authorities, as well as vulnerability to corruption risks at the Center for Testing at the MoH of Ukraine.

8.4. Administrative processes

In extracurricular activities, acts of corruption are related to the environment (living in a dormitory or property of the institution), as well as employment for teaching and administrative positions. In the case of such violations, the payers are students (when it comes to dormitories), teachers and administrators (when it is related to the purchase of positions or nepotism), and representatives of the business (including, in particular, representatives of the pharmaceutical industry) when it is related to the purchase, rental of property owned by the educational institutions, and administrative decisions.

In the case of students, we note the obvious problem of substandard living conditions or the lack of places to live. Buying positions is explained by a desire to receive material benefits or services, as well as the commitment to acquire a greater influence in decision-making.

Notably, with regard to employment to health care institutions, including an internship, purchasing positions in educational institutions violates the principle of the meritocratic approach (with regard to the selection of personnel and affects the quality of education). This phenomenon also leads to high risks of corruption. Given that the official salaries of teachers and administrators in educational institutions are quite low, buying a post already implies a tendency toward bribes to cover the cost of this purchase.

Such acts of corruption are possible due to an opaque staff policy of education and health care institutions, in particular: the lack of information about vacancies, the failure to conduct public contests for vacancies at any level, missing or formal anti-corruption policies (and measures aimed at reducing corruption risks), uncontrolled or poorly controlled use of the administrative resources at the higher educational establishment, and the lack of financial autonomy and inefficient funding of the IHE, which does not ensure the opportunity for establishing proper wages for teachers and leaders. Addressing the lack of collegiality and the failure to involve NGOs and students in

the management of educational institutions should enable effective re-distribution of material assets and funds (and curb their uncontrolled use).

It is worth noting a low level of awareness about conflict of interest. While members of the educational process agree that nepotism is a problem, they do not consider that its use should be subject to condemnation. This attitude favors corruption.

An important role in corrupt violations related to procurement (renting property, etc.) belongs to the capacity of the law enforcement and judicial systems, as well as bringing the internal documentation of the institution in line with regulations. At this stage, we face violations that are not specific to medical education or education in general. These issues represent the abuse of office in order to obtain personal gain, and these acts of corruption are universal in all public areas. Approved and periodic improvement by the institutions of higher education of the activities—aimed at reducing corruption risks—creates a mechanism to identify corruption, and the response to it should contribute to reducing corruption risks.

8.5. Schemes

Based on results of summarizing all phases of the educational process, the factors that are most frequently the cause and effect have been defined. It is obvious that this act is a purposeful work for them that may cause the greatest effect on reducing corruption risks in medical education.

In the study, the 32 most mentioned acts of corruption have been identified, and the provocative factors, as well as the role of participants related to each of them, defined. The detailed analysis of these actions is provided in the form of diagrams in **Appendix 8**.

9. Coverage of the issue of corruption in the mass media

Our envisaged hypothesis is that if corruption is indeed widespread in the education system, it would be possible to see a lot of actual references to it in mass media. However, we found the opposite situation. A preliminary analysis of the situation in the media space identified that there are few references to the topic of corruption in medical education; many messages only appear on Internet sites and in other mass media revolving around high-profile scandals, such as the situation with the dismissal of rectors from the Bogomolets National Medical University or the Odessa National Medical University.

9.1. Methodology of evaluation

To identify as many of these messages as possible, we used data from the largest database of statistical reports—12,000 media and 40,000 other information sources, from the period of August 2018 to August 2019. The list of media outlets includes: online publications, print media, reports from news agencies, as well as records of programs broadcast on major radio and TV channels.

To search for information, we categorized keywords by levels of education (medical, nursing, post-graduate education) and additional contextual binding words (“corruption”, “a bribe”, “extortion”, “abuse of office”, “unofficial payments”, “cheating”, “ordering of preparation of written works”, “use of personal relations”, “getting the job”, “employment to internship”). Based on such attributes, we found 1,367 references for the mentioned period. After their detailed processing, we identified only 277 relevant messages that contain information related to risks of corruption.

We also analyzed the number of references relevant to the general topic “Medical Education” at the media scene. In general, there were approximately 20,000 references within the mentioned period. Consequently, references to the risks of corruption were only present in the text of about 1.5 % (277) of them. Among all the selected references relevant to the subject of corruption risks, the most numerous were about medical education (137); there were 44 references about nursing education and 36 references about postgraduate education. Most of references from all three fields of education were neutral. If nursing education is considered separately, then half of references were negative. In addition, only medical education had any positive references.

Of the 100 top media sources, all the press and information agencies had virtually no references to nursing and post-graduate education. They were most often referred to on websites of regional and lesser-known media, while the number of references to medical education was nearly the same at all levels and in all types of media.

9.2. Conclusion

In general, the topic of risks/cases of corruption in medical education is rather narrow, and there are few references to it in the media scene of the country. This phenomenon may be due to several factors. First, acts of corruption in institutions of secondary and higher medical education rarely become the objects of attention for law enforcement agencies; even fewer investigations of such cases result in trials and convictions. This fact is confirmed by a very limited number of such cases entered in the Unified State Register of Judgments and the Unified State Register of Persons who Committed Corruption Offenses or Corruption-Related Offenses. Second, the subject may be not interesting to the media because it does not attract attention of the public and readers. This aspect might be due to the fact that everyone knows about the existence and types of corruption in the Ukrainian education system.

Perhaps the periodic analysis of the number and quality of references, which are close to the subject of this study, may allow one to evaluate whether the social opposition to corruption in educational institutions and combating corruption by various stakeholders increases. More of these references (journalistic investigations, reports from law enforcement authorities, public discussions, etc.) need to appear in the media at the beginning of an active struggle against corruption. A detailed description of media monitoring is provided in Appendix 9.

10. Analysis of anti-corruption policies and programs of institutions

The anti-corruption policy in IHEs is developed and implemented in accordance with the Law of Ukraine “On Preventing and Combating Corruption”. According to the law, mandatory actions of the management of institutions should be:

1. There should be regular assessments of corruption risks in their activities and appropriate anti-corruption measures should be ensured, in order to identify and address corruption risks in the activities of the legal entity; independent experts may be involved, including those for conducting audits.
2. The anti-corruption program of the legal entity must be approved in a mandatory manner.
3. The Plan of Measures for Prevention and Identification of Corruption must be approved.
4. A Commission on the Evaluation of Corruption Risks must be created.
5. A Person Authorized on preventing and combating corruption must be appointed.

All the anti-corruption instruments available on the official websites of all institutions of higher education, which train personnel in the field “Public Health”,³³ were analyzed as of July 1, 2019. The results related to the availability of approved anti-corruption documents in institutions are presented in Table 10.1.

Table 10.1. Availability of Approved Anti-corruption Documents in Institutions of Higher Medical and Postgraduate Education

No	Institution	Anti-Corruption Program	Commission on the Evaluation of Corruption Risks	Report on the Evaluation of Corruption Risks	Code of Ethics	Plan of Measures for Prevention and Identification of Corruption
1	NMU	+	-	-		-
2	ONMU	+	+	-		+
3	SI “DMA” of the MoH	+	+	+		-
4	DNMU	+	+	+		+
5	VNMU	+	+	+		+
6	LNMU	+	-	-		+
7	SI “LSMU”	-	-	-		+
8	HSEE “IFNMU”	-	+	-		+
9	HSEE “TSMU”	+	+	+	+ (of the student)	+
10	HSEE “BSMU”	-	-	-		-
11	NUoPh	+	+	+		-
12	ZSMU	+	+	+	+	+
13	UMAD	-	+	+		+

³³Links to anti-corruption documents of institutions of higher medical education as of 1 July 2019

14	KhNMU	+	-	-	+	-
15	NMAPE	+	+	-	+	+
16	SI "ZMAPE"	+	+	+		+
17	KhMAPE	+	+	-		-
18	UzhNU	-	-	-		-
19	SumSU MI	-	-	-		-
20	PMBSNU	-	-	-		-
21	KhNU	+	-	-		-

Only 14 of 21 IHEs that we studied had the approved anti-corruption program; 12 of them had the order of approval for the commission on assessment of corruption risks; 8 of them had the report on evaluation of corruption risks; 4 of them had the Code of Ethics; 11 of them had the plan of actions for preventing and identifying corruption.

The **typical anti-corruption program** of the legal entity should meet the approved structure according to the decision of the National Agency on Corruption Prevention No. 75, dated 2 March 2017.³⁴ Most of the institutions utilized the adopted program. However, the content does not meet the criteria of the law at every location.

A comparison of the content of **anti-corruption programs** from the IHEs is given in **Appendix 5**. Despite the apparent complete compliance with the typical structure of the anti-corruption program, sufficient attention is often not paid to the most risky corruption-related issues in IHE programs. These issues include the procedure of informing the authorized person of the corruption offense, rules for accepting gifts, measures to be undertaken by staff (in the case of obtaining undue proposal of illicit enrichment or gifts), ways to externally resolve conflicts of interest, procedures and rules for holding more than one post, and cooperation of the organization with law enforcement authorities.

The main source of information about the depth and quality of assessing corruption risks in IHEs, and about undertaking appropriate anti-corruption measures, is the **"Report on Assessment of Corruption Risks"**. The institution must prepare this report at least once a year. Only 8 of the 21 IHEs have this report; most of them publish an update annually. We analyzed the reports from 8 IHEs and the results of the evaluation of typical anti-corruption measures. A comparison of the reports on the assessment and identification of corruption risks in the institutions is provided in **Appendix 6**.

The National Agency on Corruption Prevention (NACP) had recommended the use of the developed "Methodology for Evaluating Corruption Risks in the Activities of Government Authorities" to assess corruption risks. The sources of information for identifying corruption risks, in accordance with the methodology, may be:

- Interviewing (survey questionnaire), questionnaire survey (including anonymous questionnaire survey) of government employees and members of the public who cooperated (continue to cooperate) with the government authority, including via the use of e-mail, Internet, telephone, etc.;
- Statutory instruments and organizational or executive instruments regulating the activities of the government body;
- Analysis of the measures aimed at eliminating corruption risks during the previous periods;

³⁴ Resolution of the NACP No. 75 dated 2 March 2017 URL: <https://zakon.rada.gov.ua/laws/show/z1718-16>

- Results of inspections and audits conducted by regulatory authorities, as well as results of internal audits and investigations in government authority;
- Publications in mass media and social media;
- Information from public registers;
- Applications filed by individuals and legal entities.

Based on the analysis of available reports from universities, we did not identify any reported case where all of these instruments—or even most of them—were utilized. Institutions mostly use their regulatory instruments to study the availability of risks. Moreover, the report usually does not describe which specific methods of study/evaluation are used for evaluating each risk. This fact makes it impossible to understand the full achievement of indicators. Unfortunately, there are almost no references to utilizing crucial anonymous surveys of students/staff.

Our comparison of reports for this year and the previous years (when such reports are available) allowed us to identify their expressed similarity, which may indicate that such reports are completed in a similar manner every year, as per the “template”. Only one institution has published a questionnaire that the institution allows employees and students to complete. However, the content of the questionnaire does not contain open questions where respondents can make their own reports about the possible corruption risks of which they are aware.

The tables of assessed corruption risks in the IHE contain mainly generic names of risks, all of which have a low or medium degree of priority/probability. Furthermore, except for a few universities, these tables do not mention such risk as “Getting the improper advantage in checking students’ knowledge.” Nevertheless, the probability of this risk in all of the IHEs where FGDs were held, is indeed very high.

The majority of the measures proposed based on the results of the identified corruption risks are aimed at “informing and explanatory work” among responsible persons. However, a description of the activities is brief. In particular, the quantitative characteristic of such measures is not provided (i.e. who and conducted/will conduct the explanatory work, how many student were/will be included, and the percentage of students/staff of the IHE who participated/will participate in such an event). Therefore, it is almost impossible to evaluate the effectiveness of these measures.

Almost all the IHEs report that they do not get any reports about the number of corruption offenses committed by their employees, from citizens, NGOs, or other structures. However, only a few anti-corruption programs (for example, that of the Vinnytsia National Medical University) contain references to the possibility of attracting the public to the work of the commission with regard to the assessment of corruption risks.

The reports often contain references to the presence and continuous monitoring of provisions on conflicts of interests. This inclusion is understandable because the control of this issue is additionally required by standards of the Law of Ukraine “On Civil Service”.

Overall, our main conclusions on the analysis of anti-corruption measures available in educational institutions are as follows.

- Not all the available tools for obtaining information are used.
- In most cases, internal regulations are assessed.
- There are few references to the anonymous survey of attendees (students) and staff.
- The reports are same each and every year and do not reflect a realistic assessment of corruption risks.
- The level of priority ranking for identified risks is mostly low or medium.
- There are few references to bribes for examinations/tests/missed classes.
- The description of the proposed measures is very general. In particular, the quantitative characteristic of such measures is not provided (i.e. who conducted/will conduct the explanatory work, how many student were/will be included, and the percentage of students/staff of the IHE who

participated/will participate in such an event). Therefore, it is almost impossible to evaluate the effectiveness of these proposed measures.

The involvement of the public in the work of the Commission on Assessment of Corruption Risks is either minimally addressed (only mentioned in some internal regulations) or completely absent.

11. Index of resistance to corruption of higher medical education

11.1. Method of calculation

The index of resistance to corruption in higher medical education (IRC) is an index that ranges from 0 to 100; it shows the level of resistance to corruption risks in the sphere of higher medical education in Ukraine. The “0” value corresponds to the minimum assessment of resistance to corruption risks (therefore, a higher susceptibility of the system to corruption relations), whereas “100” corresponds to the maximum assessment of resistance to corruption risks (hence a lower susceptibility of the system to corruption).

The IRC is calculated based on indicators identified by the expert method. The numerical value of each indicator is converted into a certain number of points, in accordance with the scheme specified in this methodology, when the maximum number of points for a certain indicator corresponds to the minimum level of corruption risks. Thus:

$$IRC = \frac{\text{the sum of points for all indicators}}{\text{the maximum possible sum of points for all the indicators}} \times 100.$$

The index for the system of medical education in general is provided. Considering that most indicators are only meaningful at the level of the entire institution of higher education, and less than 10 % of the total number of students who study medical majors in the IHEs are not subordinated to the MoH of Ukraine, most indicators will only be calculated based on data of institutions managed by the MoH.

Notably, an indicator with a maximum value of 5 is not more important than an indicator with a maximum value of 1. Rather, the actual value of any indicator that is less than the maximum value indicates the presence of a specific corruption risk; consequently, there is a gap with which it is necessary to work. Each indicator is provided based on the latest available data; the year to which the indicator refers is provided.

The IRC is calculated based on the following groups of indicators.

1. Statistical indicators;
2. Indicators and points based on the online questionnaire survey about corruption risks in medical education;
3. Results of surveying experts;
4. Calculations of the sub-index “Transparency and Anti-corruption Policy of Educational Institutions”.

The description of the calculation of each group is listed below.

11.2. Statistical measures

Table 6. Statistical Measures of the Index of Resistance to Corruption of Higher Medical Education

Indicator	Range of index values	Points corresponding to the value	Comment
Number of students per one paid position of teaching staff (persons)	Up to 5 inclusive	0	The Resolution of the Cabinet of Ministers of Ukraine No. 1134, dated 17 August 2002, establishes that there should be 6 students who study medical majors for one paid teacher position. An increased number of students per teacher may lead to the excessive load on the teacher and insufficient attention to each student. Correspondingly, there might be insufficient mastery of the material during the semester and increased risk of informal payments for examinations/tests. The decreased number of students leads to underfunding of the IHE and reduced wages of teachers, as well as the threat of dismissals due to downsizing.
	5–7	5	
	7 or more	0	

The average score of the SET certification on the second and third contest for subjects of the enrollees of the current year	Up to 150	0	When the level of student training decreases, the risk of inadequate training, and hence informal payments for marks, increases.
	150–165	1	
	165–180	3	
	180–200	5	
Change in the number of full-time posts of teaching staff as compared to the previous year	The number of posts increases or remains the same	5	A reduced number of positions indicates the risk of dismissal or decrease in salary (for example, the transfer from a fully paid position to a position paid by a coefficient of 0.75). Therefore, the risk of informal payments for avoiding the layoff/dismissal of the teacher occurs.
	The number of positions is reduced.	0	
Coefficient of variation (CoV) for costs of the state budget for training one student under the governmental order in various medical IHEs (%)	CoV ≤ 10 %	10	Expenditures of the state budget on training a student in a certain IHE are determined by dividing the volume of annual receipts of the general-purpose fund under the estimate of the IHE as per the code of the program classification of expenditures and crediting 2301070 by the number of government-subsidized students in this IHE as of 1 January of the relevant year. This indicator reflects the risk of opacity of distribution between IHEs financed by the government and involved in training of doctors. It is calculated based on data of 13 IHEs in the sphere of subordination of the MoH (Postgraduate Academy and the National University of Pharmacy are not excluded).
	10 % < CoV ≤ 20 %	7	
	20% < CoV ≤ 33%	3	
	CoV > 33 %	0	
Proportion of foreign students in the overall cohort of medical students (%)	Less than 15 %	10	A high proportion of foreign students in the cohort reflects the growing corruption risks specific to foreign students, including fees for exams, pressure on students caused by the administration that can refuse to provide the documents for visa extension, and a reduced education quality.
	15–25 %	7	
	25–35 %	5	
	35–50 %	3	
	More than 50 %	0	
The increase in recruitment of foreign students as a percentage compared to the previous year (%)	Less than 15 %	5	This indicator measured the growth of corruption risks specific to foreign students in dynamics.
	More than 15%	0	

11.3. Indicators and points based on the online questionnaire survey about corruption risks in medical education

The **index of perception of the spread of corruption practices** is calculated as the arithmetic mean of all the answers of respondents who answered the question “How common are the following practices in medical education, in your opinion?”, with the following numerical value of the answer related to each of practices:

- “Everybody or pretty much everybody does this” – 0 points;
- “Most of [the] people do this” – 5 points;
- “About half of all people does this” – 10 points;
- “This almost never happens or there are single cases” – 20 points;
- The answer “It is difficult to answer” is not included in the calculation of points.

Practices that are included in the calculation of this index:

- Paying for missed classes;
- Paying to pass an exam or pass-fail exam;
- Paying unofficially for getting a place in a dormitory;
- Giving a gift for a better mark on an exam;
- Paying to pass practical training;
- Paying unofficially for the admission to university after college;
- Using family and friendly relations during the admission to the University.

The Index of perception of actions as acts of corruption is calculated as the arithmetic mean of all responses of respondents who answered the question “Which of these actions are, in your opinion, acts of corruption? We are interested in your opinion”, with the numerical value of each answer about each practice:

- “It definitely cannot be called corruption” – 0 points;
- “It depends on [the] context” – 10 points;
- “This is for sure an example of corruption” – 20 points;
- “It is difficult to answer” – 10 points.

Practices that are included in the calculation of this index are:

- Cheating on pass-fail exams, exams, and module tests;
- Checking-in people who are absent in classes (making false check-ins);
- Paying for missed classes;
- Paying to passing an exam or pass-fail exam;
- Paying unofficially to get a place in a dormitory;
- Paying unofficially to change a place of study;
- Giving a gift for a better mark on an exam;
- Paying to passing practical training;
- Paying another person to complete written home work;
- Paying unofficially for admission to a medical university;
- Paying unofficially for admission to a medical college;
- Using family and friendly relations during the admission to the college;
- Paying unofficially for an internship;
- Paying unofficially for an internship in the desired major;
- Using family or friendly relations for employment;
- Using family or friendly relations to procure an internship in the preferred major;
- Paying for access to patients;
- Paying another to write a thesis;
- Paying unofficially for the defense of a thesis;
- Paying unofficially for the publication of articles in scientific journals;
- Paying to obtain a post;
- Using family and friendly relations for the purpose of obtaining a post;
- Paying to obtain the teaching curriculum;
- Using family and friendly relations during admission to an educational institution;
- Paying unofficially for the possibility to learn a preferred major during an internship;
- Paying unofficially for enrollment to preferred events that are aimed at continuing professional development;
- Paying for certification to be a practicing physician;
- Attending events aimed at continuous professional development that are paid for by pharmaceutical companies;

- Paying for not attending events aimed at continuous professional development and still receiving points for them.

11.4. Questionnaire survey

The questionnaire survey was conducted among experts and representatives of the IHEs to obtain information about the presence/absence of the following practices:

- The IHE conducts regular surveys of students about the conditions and quality of education, evaluation of teachers' work, relevance of certain elements of the curriculum, etc.
- Are there properly prepared subject syllabuses that define the scope of the teaching material in an understandable way available for students? *This indicator reflects the difference between the amount of materials that is taught during the semester and the amount of materials submitted for examination. This discrepancy creates the environment for informal payments related to the exam.*
- Are the employees in the IHE aware of the anti-corruption policy and the policy for preventing the conflict of interests within the institution?
- Is the payment policy for commercial incentives to employees in addition to their official salary has strict criteria set forth in the applicable collective labor agreement available on the IHE website?. *This factor would slightly increase the wages of employees.*
- Is there a policy about payment of bonuses to employees with clear criteria set forth in the applicable collective labor agreement available on the IHE website? Payment of bonuses is one of the only legitimate ways to significantly increase employee wages at budget institutions.

11.5. Sub-index "Transparency and Anti-corruption Policy of Educational Institutions"

This index has a maximum of 20 points for a single institution of higher education. The details are described below.

1. The availability on the IHE website of the current versions of documents envisaged by Article 79 of the Law of Ukraine "On Higher Education" (maximum 5 points):
 - 1.1. Charter of the IHE;
 - 1.2. Estimate of the IHE budget for the current year;
 - 1.3. Report on receipts and use of funds for the current year;
 - 1.4. Information on the conducting of tenure procedures;
 - 1.5. Staff schedule for the current year.

For each of the indicators (1.1 to 1.5), 1 point means that the document is available on the website, 0 points means that the document not available on the website or the available document is outdated (the available document is for the previous year). In addition, the institution gets 0 points for indicator 1.4 if information about the tenure procedures on the institution's website is limited by reference to the ProZorro service.

2. The availability on the IHE website of an approved³⁵ collective labor agreement (maximum of 3 points):
 - 2.1. The collective labor agreement is available (1 point) or absent (0 points);
 - 2.2. The collective labor agreement is valid for the current year (1 point) or it has expired (0 points);

³⁵ If only the draft collective agreement is published at the website of the IHE, then the institution gets 0 points for indicators 2.1 to 2.3.

- 2.3. The complete text of the collective labor agreement with all annexes thereto are published on the website (1 point) or the text of the collective labor agreement with some/ant annexes thereto is published on the website (0 points);
3. The availability on the IHE website of documents on the anti-corruption policy within the institution and their content (maximum of 12 points):
- 3.1. The anti-corruption program is available (1 point) or absent (0 points);
 - 3.2. Recent changes to the anti-corruption program of the institution were approved not more than 2 years ago (1 point) or more than 2 years ago (0 point);
 - 3.3. Students³⁶ are included in the Commission on the Prevention and Identification of Corruption within the institution: 2 or more persons (1 point), 1 student (0.5 points), or no students (0 points);
 - 3.4. The Report on Assessment of Corruption Risks is available (1 point) or unavailable on the website (0 points);
 - 3.5. The highest degree of probability/priority for ranking the corruption risks, identified in the report on assessment of corruption risks: low (0 points), medium (0.5 point), or high (1 point);
 - 3.6. In the reports on assessment of corruption risks, there are 0 or 1 (0 point), 2 or 3 (0.5 point), 4 or 5 (1 point), 6 or 7 (1.5 point), or 8 or more (2 points) identified risks of corruption from the list:
 - 3.6.1. Occurrence of conflicts of interest;
 - 3.6.2. Biased evaluation of an exam, including those that occurred due to cheating, in exchange for gifts, informal payments, or in reply to requests of colleagues or the administration of the institution;
 - 3.6.3. The risk associated with the provision of a place in a dormitory;
 - 3.6.4. The risks associated with the admission to study at the levels and programs of education and the selection of candidates for study, which is performed based on the results of internal tests at the educational institution;
 - 3.6.5. The risk associated with the appointment to teaching and administrative positions;
 - 3.6.6. The risk associated with the influence of pharmaceutical companies on the content of educational programs and/or research;
 - 3.6.7. Any corruption risk specific to foreign students;
 - 3.6.8. Any corruption risk specific to graduate and/or doctoral students and/or students seeking the degree;
 - 3.6.9. Any corruption risk specific to interns;
 - 3.6.10. Any corruption risks specific to participants in programs of continuing professional development and advanced training for doctors;
 - 3.6.11. Any external corruption risks.³⁷
 - 3.7. The Plan of Measures for the Prevention and Identification of Corruption is available for the current year (1 point) or is not available or is outdated (0 points);
 - 3.8. The Plan of Measures for Prevention and Identification of Corruption contains quantitative indicators, where one or other measures should meet (1 point), or it does not contain quantitative indicators (0 points);
 - 3.9. The Plan of Measures for Prevention and Identification of Corruption provides for conducting of surveys (questionnaire) among students and staff about corruption risks, once a year or more often (1 point), on a permanent base (0.5 point), or does not provide the conduction of such surveys (0 points);

³⁶ Interns for institutions of postgraduate education

³⁷ "External corruption risks are identified in the activities of business partners, including public authorities, local authorities, with which the legal entity maintains business relations" (standard anti-corruption program approved by the National Agency for Prevention of Corruption No. 75, dated 2 March 2017, para. 5, Part 2, Section III).

3.10. The external anti-corruption audit was conducted not more than 3 years ago (2 points), more than 3 years ago (1 point), or not conducted (0 points).

The methodical features of the indicators are described below.

- The indicators of the sub-index were chosen so that any IHE did not meet them mostly or entirely, as of 2019. This design provides IHEs with the opportunity to define directions for improvement, strengthen anti-corruption policies, and get comparable data on changes in transparency of the anti-corruption policy, during future annual assessments of the anti-corruption policy using this methodology.
- Certain criteria that are not clearly formulated are “embedded” in some individual indicators:
 - All the indicators of the index imply the availability of documents at the website of an educational institution;
 - Indicator 3.2 shows the intention of the institution to perform a regular update of documents with regard to the anti-corruption policy. In addition, recent updates to the content of the anti-corruption program in the educational institution means that it meets the standard anti-corruption program developed by the National Agency on Prevention of Corruption in 2017;
 - Indicator 3.4 (report on the assessment of risks) implies that, among risks, the available reports identify insufficient knowledge by employees with regard to anti-corruption legislation, insufficiently effective anti-corruption measures in the implementation of tenure procurement, improper execution of documents and reports on the anti-corruption policy, as well as late submission of the declaration on assets and incomes by persons, to whom such requirement is applicable. Given the above reasons, these measures are not specified in the list to indicator 3.6;
 - The list of corruption risks in indicator 3.6 is prepared based on the results of the study of corruption risks in the system of medical education within Ukraine conducted in 2019. The institutions should distinguish individual corruption risks that are specific to one or more important groups of participants in the educational process. This endeavor will help give concrete expression to the appropriate analysis.

12. Recommendations

All the study participants were asked questions about how the risks for corruption may be minimized, as well as how manifestations of corruption can be reduced. According to all groups of respondents, the most effective methods are:

- To introduce stricter criminal penalties for corruption;
- To make educational programs more modern and oriented toward practical education;
- To dismiss or expel those who initiate acts of corruption;
- To increase teachers' salaries.

The student FGD participants insisted on a more rigorous, and most importantly, inevitable punishment for corruption. They think that positive effects can also be reached through technologies that reduce voluntarism when making decisions and strengthen collegial decision-making. For example, they suggest using of computer tests as a form of control; implement electronic registration of received marks with no chances to change it; introduce system of electronic matching of students to available internship spots). By contrast, teachers and the administration focused on increasing the financing of institutions within medical education, particularly increased salaries, as well as raising the level of autonomy of educational institutions.

We considered the Ideas expressed by the FGD participants when developing the recommendations provided below. The study revealed the role of three risk factors that most support the sustainable existence of corruption: the presence of intermediaries, insufficient quantity and quality of practical knowledge, and a low level of social

norms, combined with a high tolerance for acts of corruption. The role of each of these factors and ways of their elimination are described below.

12.1. The role of intermediaries

The surveys indicated that there are some important nuances in the perception of corruption by different groups of process participants. These nuances complement the findings of the FGDs and interviews. The open questions demonstrated that all groups (students, interns, teachers, adults, and doctors) believe that corruption is a collective process, where an important role is played by the community and intermediaries. Corruption is not always the interaction of two people (student–teacher). Sometimes, it is the interaction of three or more people (student–teacher–intermediary). The position and status of intermediaries are almost never considered in the research and recommendations. The reviewed literature contains no references to intermediaries.

Why is this factor so important?

1. Anti-corruption measures are usually based on the fact that a certain individual will benefit from corruption (a student of a teacher). Accordingly, the recommendations are aimed at those persons and include increasing teachers' salaries or running a communication campaign among students. However, intermediaries remain covered, and thus they can influence the recovery of corruption. Any recommendations and practical actions should consider the status and position of intermediaries, who also receive benefits, albeit different from those obtained by the recipient (for example, uncensorious attitude of the teacher or "respect" of course mates).
2. The FGDs and interviews, as well as open questions of the online survey, revealed that social norms are an important factor in the development of corruption. Most of the respondents do not consider that informal relations or the conflicts of interest are corruption. Accordingly, the goal is to change the social norm and the position in the perception of individual elements of acts of corruption. For example, there should be a better idea of what a conflict of interest really means. Nevertheless, the social norm may change at the level of the entire group but not of individuals (a student or a teacher). Accordingly, any practical steps should cover the entire group because the ultimate goal is to change the generally accepted norms.

12.2. Practical content of classes

Representatives of different groups may have somewhat different views about actions that can minimize corruption. However, there are several common opinions among the groups: foremost, raising teachers' salaries, adding greater punitive measures for acts of corruption, practicability of disciplines, and minimization of the human factor in the formal control.

Why is this factor so important?

1. The fact that completely different groups expressed similar thoughts indicates that the medical community has a certain common vision of the problem. Accordingly, the government can successfully use it for their own communication of new anti-corruption measures, which will be more successful among all groups; provided that these four elements are excluded. In fact, these are unifying thesis for communication.
2. Teachers and students agree (and this fact is confirmed by FGDs and interviews) that there are impractical and obsolete classes that encourage corruption. Thus, the reduction of the share of such classes in the schedule can automatically narrow the field for acts of corruption.

12.3. Social norms and cheap corruption

The most common types of corruption are actions that many respondents do not qualify as corruption. These actions are not direct bribes; rather, they are violations of the code of ethics: cheating, gifts, or false check-ins in the attendance log. The FGDs and interviews confirmed this opinion. In addition, the majority of respondents agree that a significant proportion of acts of corruption are relatively cheap (less than 1,000 hryvnias). In other words, these actions are often small, and the participants usually turn a blind eye.

Why is this factor important?

1. The participants of the educational process in medical institutions have a narrow understanding of corruption as bribery. Accordingly, they have a tolerant attitude with regard to other manifestations of non-integrity.
2. The types of such corrupt acts can be very diverse and are usually not very expensive. Everybody turns a blind eye to these actions because they are not perceived as something exceedingly bad or expensive.
3. Accordingly, it is necessary to clarify that these mentioned actions are unacceptable—similar to other forms of corruption—and fight against them so that there are severe long-term consequences.

12.4. Proposed steps

12.4.1. Educational institutions

1. Educational programs should be modernized and have a practical orientation.
2. Students' parents should be targeted with information campaigns on combating corruption; parents should understand that neither students nor the administration may refer to them for help. Students have to know that it is not the norm to ask parents for intervention.
3. Develop recommendations for the code of ethics within the institution of medical education, in which principles of cooperation between the administration, teachers, students, or parents without intermediaries should be defined. All participants should sign this code, and, thereby, commit to not settle issues by means of illegal and unethical actions. Teachers, administration, and students should be informed of the aspects regulated by the code of ethics: what is allowed and what is prohibited by it.
4. Persons authorized to combat corruption should monitor the situation in the institution through regular surveys of students, respond to each report on a possible act of corruption, and, in addition to the transmission of information to law enforcement authorities, initiate an internal check (while further educating teachers and students about the results of it and the decisions made through justification for the latter).
5. Teachers should be regularly informed about the effects of corruption, even if some of them have a minimal opportunity to perform act of corruption.
6. Rules, procedures, and mechanisms for acceptance or rejection of gifts should be introduced. These rules, and the consequences to teachers, administration, and students if they violate them, should be explained. Educational activities should be conducted regularly to help define acts of corruption, their varieties, and the concept of the conflict of interests, etc.
7. Anti-corruption documents approved by the institution should be brought into compliance with legislation and updated at least once a year.
8. A code of ethics for all groups of stakeholders—students and staff—should be developed and put into effect. Its periodic discussion should be conducted in each of these groups to assist them with perceiving the code as developed by them.
9. An annual (at minimum) anonymous survey of students and teachers about unethical behavior, extortion of bribes, etc. should be developed and implemented. Each teacher and subject taught in the previous academic year should be evaluated.

10. The public, partners, and students should be involved in the assessment of risk and analysis of anonymous responses, control of allocation of budget funds, and implementation of procurement procedures by the IHE.
11. Indicators of performance should be established for each anti-corruption measure.
12. The liability for participating in acts of corruption should be increased, and teachers, students, and the administration should be informed that all involved persons in identified conflicts of interests and unethical behavior will inevitably be punished.

12.4.2. MoES of Ukraine

1. The admission to colleges based on the SER results should be introduced (according to plans of the MoH of Ukraine, within the next five years, final certification of basic secondary education will be converted into a format of independent testing).
2. The admission to universities based on college completion, which is based on the SET results, should be introduced.
3. The system for financing institutions of higher education should be changed by introducing funding based on performance, as well as eliminating the binding number of teachers to the number of students.
4. Universities should be given financial autonomy.
5. The amount of public funding per student should be increased.
6. The results of performance in institutions of higher medical education related to implementation and annual updating of anti-corruption measures, identification of acts of corruption committed by teachers and students, and the response to these actions by modifying the rating of assessment in such institutions of higher medical education should be available. The possibility of introducing material or financial incentives for the IHE base on the achieved indicators should be considered.
7. The possible mechanisms of disciplinary punishment for the head of the institution of higher education (up to his/her dismissal), in the case of obstructing effective implementation of internal anti-corruption measures, should be considered.

12.4.3. MoH of Ukraine

1. Communication about the reform of medical education should be intensified.
2. The development of clinical bases in institutions of medical education should be promoted.
3. Requirements for the share of capital expenditures with medical universities should be established.
4. The system of employment in an internship and the first place of work should be improved by ensuring openness, accessibility. Further, there should be increased transparency with regard to vacancies (for example, an open database of vacancies must be created in health care facilities).
5. The procedure of the distribution of internship places, as well as offered vouchers for advanced training, should be clarified by means of implementing this procedure based on the principle of openness, accessibility, and transparency. The distribution of places in internship and vouchers for advanced Training through the Department of Health of the RSA should be canceled.
6. The funding of post-graduate education funding should be substituted with a model for financing services.
7. A model for calculating the need for medical and nursing personnel should be created, and a volume of the government order for major "Public Health" should be formed (according to this need).
8. The procedure of external control (KROK exam) should be changed. The safety of the information system of the Center for Testing at the MoH should be improved by using tests with a closed base and preparing professional proctors (internal observer of the IHE).
9. Compulsoriness of the use of the credit-modular system should be discarded for organization of educational process in medical IHEs, namely via cancellation of the Order of the MoH of Ukraine No. 152, dated 24 March 2004 "On the Approval of Recommendations on Development of Curricula of Academic Disciplines".

Appendices:

Appendix 1. Table of Available Empirical Literature on the Issue of Corruption in Medical Education

Appendix 2. List of references

Appendix 3. Methodology of the online survey

Appendix 4. Table on the Sections Included in the Anti-corruption Programs of Institutions Where the Study Was Conducted

Appendix 5. Comparison of the content of anti-corruption programs of institutions under study

Appendix 6. Comparison of the Content of Anti-corruption Programs of the Institutions Under Study

Appendix 7. Integrity of the system of medical education

Appendix 8. Corruption Schemes: Factors and Participants

Appendix 9. Media Content Analysis

Appendix 1. Table of Available Empirical Literature on the Issue of Corruption in Medical Education

Study	Goals and objectives	Methodology	Limitations of methodology	Key findings and recommendations	Restriction of the analysis
Books, articles and reports on the economic development and post-communist transition period					
(1) Hellman et al., 2003. (2) Boycko et al., 1995 (3) Havrylyshyn, 2006	To provide a broad overview of post-communist communities	Meta-analysis of the available literature, comparative cross-national analysis of state statistical sources	No specific data or measurements of corruption in the sphere of medical education	Corruption has hindered the successful post-communist transformations of Ukraine; create the image of a country “without reforms” or with “partial reforms”, as well as of the “captured state”.	Corruption has not been a particular focus of these studies. They give a broader overview of economic development.
Guriev, 2018	Long-term comparative analysis of post-communist societies for their economic success and acceptance of reforms.	Comparative international analysis of studies (life during the transition period) and national statistics	1. Analysis of studies—No comparison of organizations or institutions. 2. No specific data or measurements of corruption in the sphere of medical education	(1) Subjective feelings about corruption play a more active role in supporting the governments when compared to the personal economic situation. (2) Corruption is one of the main reasons why Ukrainians continue to be dissatisfied with and require more reforms.	There are no clear guidelines on how to fight corruption. Corruption is considered to be an independent variable, while we are approaching it as a dependent variable.
Swain et al., 2008	To analyze the discourse on corruption among researchers and practitioners	Content analysis	This working document is focused on the ways an expert can approach and discuss the topic of corruption. The results cannot be generalized.	Experts expressly agree that corruption is one of the key problems that hinders socio-economic development of Ukraine. At the same time, influential groups can use the banner of the “fight against corruption” to pursue their own interests, both in favor of and against certain forms of economic development.	Some conclusions are outdated. For example, the relationship between corruption and gas trade in 2008 was more important than today.
Corruption in the sphere of education					
Heyneman et al., 2007	Interstate comparison of the perception of corruption in the world	Data were collected by the Gallup Organization for the Transparency International in 2005, more than 55,000 people in 69 countries were	Corruption in action and perception of corruption	Comparative studies show that Ukraine had a higher level of corruption in the sphere of higher education compared to other post-communist societies (early 2000s)	Outdated findings

Study	Goals and objectives	Methodology	Limitations of methodology	Key findings and recommendations	Restriction of the analysis
		interviewed face to face or by telephone			
Osipian, 2017	Analysis of the management of universities in Ukraine	Literature review, analysis of mass media	It is basically a qualitative analysis without any formal models.	Bad management of the university is a key explanation for the high level of corruption in Ukrainian universities. Even previously, Ukrainian universities struggled for autonomy, self-management, centralization, and decentralization. Any reform of the university management fails if the problem of corruption is not solved.	The chicken or the egg problem is addressed (corruption versus management). However, no formal model to address causality was proposed.
Rumyantseva, 2005	To build an algorithm for classification of corruption	Literature review	It is basically a qualitative analysis without any formal models.	Corruption can be classified by areas (academic or services), as well as by actors involved in the exchange (student–faculty, student–administrator, student–staff). Non-academic institutions encourage corruption. Some companies offer to sell ranks, fake degrees and false accreditation and licenses for certification.	Theoretical model; our data may show a different structure.
Corruption in education, specifically in Ukraine					
Shaw, 2005	To build a model that predicts the likelihood of corruption in Ukrainian HEEs	(1) 1,588 students who attend educational institutions throughout Ukraine (2) Regression models	Only 12 cities across Ukraine	56 % of students gave bribes to enter the institutions 22 % gave bribes to pass exams High school is very important because those who gave bribes for the final exams in high school are likely to give them to enter the next level of education. Women are more prone to giving bribes in order to be admitted to the educational institution and pass the exam. A possible explanation is that women have lower chances on the labor market. The student’s opinion about the act of bribery is a strong determinant of bribery. This finding suggests that the formation of the student’s perception of the act of bribery	Some claims are limited by the retrieval size and geography. The authors argue that students who live in small towns usually tend to have a higher probability of giving bribes than students who live in big cities. However, there are only 12 cities in the sample, and this number is not sufficient for such a comparison.

Study	Goals and objectives	Methodology	Limitations of methodology	Key findings and recommendations	Restriction of the analysis
				policies can be an effective policy for reducing corruption education.	
Denisova-Schmidt & Prytula, 2017	To study practices of corruption among Ukrainian students	The study of 600 students in Lviv	Context case study of one city	Students who cheat tend to come from small towns and villages with inadequate standards of secondary education. 47.8 % of students have experience with bribery; 94.5% of students admit they cheat during exams and tests; 92.8 % of students use fragments from other documents by copying and pasting them without mentioning their sources; 4.2 % download documents from the Internet and present them as their own; 40.4 % purchase work from ghostwriters; 37.5 % ask teachers for preferences.	Lack of contextual comparisons (only one city in the sample, from Western Ukraine)
Rozhanska & Wolf, 2016	To study the perception of corruption by students and teachers in Ukraine	A survey of 375 teachers and 409 students in the three major cities of Southern Ukraine (Kherson, Mykolayiv, and Odessa)	A descriptive analysis without modeling	Students and teachers have different views how institutions should combat corruption. 25 % of teachers and 14 % of students believe that students unions are obliged to fight against corruption. 1% of teachers and 9% of students believe that the local authorities are obliged to fight against corruption. 16 % of teachers and 10 % of students believe that corruption is widespread because of moral decay.	Lack of contextual comparisons (only three cities in the sample, all from Southern Ukraine)
Corruption in medical education					
Hrabak et al., 2004	To estimate the prevalence and attitude to and willingness to report of various forms of academic dishonesty among medical students in post-	An anonymous, self-governing questionnaire was distributed among medical students of in years 2 to 6 at medical school of the university in Zagreb; 827 people (70 %) returned	Only students from years 2 to 6; there is no comparison of different types of universities, students and trainees, teachers and the administration.	Most students (94 %) admitted cheating at least once during their education. The most common type of misconduct was "making the mark on the attendance of the class by a student who is not present" (89.1 %), while the least common type was "payment for passing the exam" (0.7 %).	The authors believe that the high level of corruption can be explained by social and cultural factors that are specific to a country under the terms of post-communist transition to market economy. At the same time, these

Study	Goals and objectives	Methodology	Limitations of methodology	Key findings and recommendations	Restriction of the analysis
	communist transition country	completed questionnaires, all of which were analyzed.		Cheating behavior can be divided into four groups based on self-assessment of cheating, prevalence of cheating, attitude to cheating, and willingness to report of fraud. Academic non-integrity is widespread among medical students in the largest medical school in Croatia, and its prevalence is higher than that in developed countries.	variables were not included in the analysis.
Paredes-Solís et al., 2011	To study the behavior of corruption among students of medical educational institutions in Mexico	The self-reported questionnaire was completed by medical students in 2000 and 2007 in the classroom without the presence of the teacher.	Small sample size and low response rate	6 % and 2 % of students said that they had paid unofficially in order to be enrolled in the medical school in 2000 and 2007, respectively (the indicators are lower than in Ukrainian universities). 15 % of Mexican medical students reported that they paid bribes to pass the exam in 2000, and 18 % did that in 2007. Corruption in medical universities may include a wide range of behaviors, such as signing the attendance list for an absent classmate, plagiarism and cheating, and obtaining access to some class materials by paying a bribe to pass an exam. The students were more inclined to bribe the teacher in order to pass the examination if they were subjected to sexual harassment or political pressure (i.e. were subjected to the effects of context-specific factors). Transparent and strict rules of the system for admission may help fight corruption.	The authors investigated factors associated with experience in corruption. At the same time, perception and other indicators were excluded.
Elzubeir & Daa, 2003	To describe self-reports on views and behavior of graduate students of medical institutions and interns regarding the educational integrity.	A self-reported questionnaire from the United Arab Emirates, Al Ain University; 88 participants.	Small sample size	82 (93.2 %) respondents consider that this education offense is wrong. 10 participants (11.4%) will engage in such activities.	The authors made a statement about the differences in the views of students and interns. At the same time, the sample size is very small, and thus statistical analysis is likely to negatively affected.
White papers, reports on the issue of policies, and surveys					

Study	Goals and objectives	Methodology	Limitations of methodology	Key findings and recommendations	Restriction of the analysis
IAHR, 2011 KIIS, 2015 CPLR, 2017 CPLR, 2019	Policy in the field of ad-hoc research to measure perception of corruption and attitude to corruption in Ukraine	Representative national surveys; depth interviews and focus groups	Temporary descriptive analysis, without static modeling or a deep theoretical analysis	115 in-depth interviews and two focus groups with faculty members demonstrated that women are perceived as those who tend to abuse personal relations, while they consider that men are those who extort bribes from other people and take bribes. According to KIIS, the number of respondents who voluntarily refused to take bribes was 40.5 % in 2011, and 35.6 % in 2015. The number of respondents who believe that people are responsible for fighting corruption increased considerably (15.8 % in 2007, 18.0 % in 2011, and 24.0 % in 2015). According to the CPLR, in 2017, 49 % of respondents agreed that bribes are unacceptable. At the same time, 35 % of respondents agreed that corruption could be justified in some cases (35 %). Moreover, 9 % of respondents agreed that corruption is a useful strategy for solving problems.	The attitude to corruption provides little information about the behavior and awareness.

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Appendix 3. Methodology of the online survey

The online survey was conducted by sending questionnaires through social networks (communities of students and physicians on Facebook). The retrieval was not random: Each respondent had the same chance complete the survey. These people actively use the Internet, pay special attention to Facebook, and engage in professional activism. The respondents who agreed to answer and complete the entire questionnaire represent a specific active group of medical workers. Their responses are not representative of all students and medical workers in Ukraine.

The survey results should not be taken as a statistical evaluation of the general population. Similar to the qualitative part of the study, these results represent a source of insights, a description of the context, and personal stories.

The survey was conducted from 15 July 2019 to 15 August 2019. In total, there were 785 respondents to the survey. Not all the respondents provided answers about their place of residence, gender, or age. Therefore, the sum of answers for each category in may be different from 785. The survey managed to include at least a few respondents from each region (**Table 1**). The largest numbers of respondents were from:

- Kyiv and the Kyiv Region (23 %);
- Kharkiv and the Kharkiv Region (21 %);
- Odessa and the Odessa Region (10 %).

Table A3.1. Number of respondents by regions

Region	Number of people	Share of the total number (%)
Kyiv and the Kyiv Region	176	23
Kharkiv and the Kharkiv Region	162	21
Odessa and the Odessa Region	74	10
Lviv and the Lviv Region	54	7
Dnipro and the Dnipropetrovsk Region	51	7
Uzhgorod and the Transcarpathia Region	32	4
Vinnitsia and the Vinnitsia Region	24	3
Zaporizhzhia and the Zaporizhzhia Region	23	3
Donetsk Region	18	2
Ivano-Frankivsk and the Ivano-Frankivsk Region	18	2
Sumy and the Sumy Region	15	2
Ternopil and the Ternopil Region	15	2
Cherkasy and the Cherkasy region	15	2
Chernivtsi and the Chernivtsi Region	14	2
Poltava and the Poltava Region	13	2
Zhytomyr and the Zhytomyr Region	11	1

Lugansk Region	10	1
Kropyvnytskyi and the Kirovohrad Region	9	1
Lutsk and the Volyn Region	9	1
Rivne and the Rivne Region	9	1
Kherson and the Kherson Region	8	1
Khmelnyskyi and Khmelnytskyi Region	8	1
Chernihiv and the Chernihiv Region	6	1
Mykolaiv and the Mykolaiv Region	4	1
Total	778	100

Among all the respondents, the largest group are students of medical universities (48 %), medical workers (26 %), and interns (11 %).

The least proportional representation of the retrieval is in Kharkiv and the Kharkiv Region. The majority of respondents from there are university students. Notably, not all of the other groups of participants were most represented in this region.

The best proportional representation of the retrieval is for Kyiv and the Kyiv Region. The respondents from this region include representatives of all the main groups: students, health professionals, interns, and teachers.

The age structure (**Table 2**) corresponds to the expected distribution of occupational groups:

- The largest portion of the retrieval are respondents aged under 40 years;
- Most respondents in each region are students aged from 18 to 23 years;
- There is another large group of interns and young medical workers aged under 30 years.

Table A3.2. Age of respondents in the main groups

Group of respondents	Numerical age (completed years)			
	Average	Median	Minimum	Maximum
All	27	23	17	65
By sex:				
Men	28	23	17	64
Women	30	23	17	65
By the main groups:				
Students (universities)	20	20	17	42
Medical workers	36	34	21	65
Interns	24	23	19	21
Teachers	41	40	21	62
Administration	42	41	31	60

By regions:				
Kharkiv and the Kharkiv Region	22	21	17	53
Kyiv and the Kyiv Region	30	26	17	57
Dnipro and the Dnipropetrovsk Region	25	22	19	57
Odessa and the Odessa Region	27	23	18	56
Other regions	29	24	17	65

Section of the typical anti-corruption program	Availability of measures in the anti-corruption program of the IHE												
	ONMU	SI "DMA" of the MoH	DonNMU	VNMU	LNMU	HSEE "TSMU"	NUoPh	ZSMU	KhNMU	SI "ZMAPE"	KhMAPE	NMU	KhNU
21) Procedure for accepting gifts	-	-	-	-	-	-	-	-	+	-	-	-	-
22) Rights and obligations of persons who study	-	-	-	-	-	-	-	-	-	+	-	-	-
23) Measures taken by staff in the case of receiving a proposal of illicit enrichment or a gift	-	-	-	-	-	-	-	-	-	-	+	-	-
24) Ways of external settlement of a conflict of interests	-	-	-	-	-	-	-	-	-	-	+	-	-
25) Cooperation with law enforcement authorities in combating corruption	-	-	-	-	-	-	-	-	-	-	+	-	-
26) Anti-corruption measures conducted by the institution in the cause of its economic activities	-	-	-	-	-	-	-	-	-	-	-	+	+

Appendix 5. Comparison of the Content of Anti-corruption Programs of the Institutions Under Study

No.	Program Section	ONMU	SI "DMA" of the MoH	DNMU	VNMU	LNMU	HSEE "TSMU"	NUoPh	ZSMU	KhNMU	SI "ZMAPE"	KhMAPE	NMU	KhNU
1.	Purpose of the anti-corruption program	+	-	-	-	+	-	+	-	-	+	+	+	+
2.	Procedure for the employees to inform the Authorized Person about a conflict of interests	+	-	-	-	+	-	+	+	+	-	-	+	+
3.	Principles of the anti-corruption program	-	-	-	-	+	-	-	-	-	-	-	+	+
4.	Procedure for accepting gifts	-	-	-	-	-	-	-	-	+	-	-	-	-
5.	Rights and obligations of persons who study	-	-	-	-	-	-	-	-	-	+	-	-	-
6.	Measures taken by staffs in the case of receiving a proposal of illicit enrichment or a gift	-	-	-	-	-	-	-	-	-	-	+	-	-
7.	Ways of external settlement of conflict of interests	-	-	-	-	-	-	-	-	-	-	+	-	-
8.	Cooperation with law enforcement authorities in combating corruption	-	-	-	-	-	-	-	-	-	-	+	-	-
9.	Anti-corruption measures conducted by the institution in the cause of its economic activities	-	-	-	-	-	-	-	-	-	-	-	+	+

Appendix 6. Corruption Risks Identified and Specified in Reports on the Assessment of Corruption Risks

No.	Risk	SI "DMA" of the MoH	DNU	VNU	HSEE "TSMU"	NUoPh	ZSMU	UMAD	SI "ZMAPE"
1.	Joint work of close persons	+	+						
2.	Likelihood of the occurrence of a conflict of interest	+	+	+	+			+	
3.	Low level of knowledge of anti-corruption legislation	+		+					
4.	Violation of financial control requirements	+	+			+			+
5.	Failure to notify the employee of a potential or real conflict of interest, breach of restrictions on the joint work of close persons	+				+			
6.	Inappropriate acceptance of gifts	+	+						
7.	Acceptance of an offer, promise, or receipt of wrongful benefits by an employee of the institution	+							
8.	Violation of requirements for holding of more than one office and combining it with other activities		+						
9.	Use of one's authority to obtain illegal benefits		+						
10.	Improper influence of third parties on the activities of the contest committee in order to assist in making decisions related to determination of winners of competitive selections		+		+				
11.	Improper influence of third parties in order to provide benefits with regard to contracts in favor of third parties		+						
12.	Violations in determining the value of the subject of a procurement process		+	+	+	+	+		
13.	Risks associated with providing incentive payments to employees		+						
14.	Some outdated local regulations			+				+	
15.	Non-integrity when acting in the course of one's employment			+				+	
16.	Improper performance by employees based on the Law "On prevention of Corruption"			+	+	+		+	+
17.	Biased assessment of students' knowledge by teachers			+	+			+	
18.	Presence of corruption factors in organizational and administrative documents				+		+		+
19.	Getting an improper advantage during the admission campaign				+		+		+
20.	Getting an improper advantage during distribution of living places in a dormitory				+		+		

No.	Risk	SI "DMA" of the MoH	DNU	VNU	HSEE "TSMU"	NUoPh	ZSMU	UMAD	SI "ZMAPE"
21.	Possible abuse in the use and disposal of material resources				+	+			
22.	Failure to comply with legal requirements in the development of orders and other documents					+		+	
23.	Lack of personal responsibility of university officials for violations with regard to processing requests, appeals, etc.					+			
24.	Reduced liability of the person in charge in connection with the expected dismissal					+			
25.	Improper conducting of comprehensive monitoring of the market of products or services					+			
26.	Decision-making by collective bodies by means of voting under conditions of conflicts of interest						+		+
27.	Decision-making under conditions of conflicts of interest during the renting out of state property						+		+
28.	Obtaining an improper advantage in performing medical activities						+		
29.	Problems of formation in human resources, recruitment of unqualified or dishonest employees						+		+
30.	Obtaining an improper advantage in implementing measures aimed to control knowledge during the educational process						+		+
31.	Acquisition of substandard material resources and acquisition of substandard services						+		
32.	Failure to comply with requirements with regard to the preparation of estimates and the introduction of amendments in them							+	
33.	Creation of opportunities for officials or other persons to employ persons who are close to them							+	
34.	Violation of the organization of the competitive selection of scientific and pedagogical staff							+	
35.	Inadequate regulation in the sphere of sub-threshold public procurement							+	
36.	Discrepancies and inconsistencies in the current legislation of Ukraine within the sphere of public procurement							+	
37.	Unimproved system for corruption notifications through the official website							+	
38.	The lack of the anti-corruption program—and statutory regulation for the approval of anti-corruption programs at enterprises—in institutions and organizations							+	
39.	Possibility to reduce access to information about the institution's activities							+	

No.	Risk	SI "DMA" of the MoH	DNU	VNU	HSEE "TSMU"	NUoPh	ZSMU	UMAD	SI "ZMAPE"
40.	Formation of the incorrect value when carrying out public procurement								+
41.	Decision-making under conditions of the conflict of interest when carrying out public procurement								+
42.	Illegal write-offs of the institution's property								+
43.	Risks of violating anti-corruption legislation in terms of financial control by officials								+

APPENDIX 7
INTEGRITY OF THE SYSTEM
OF MEDICAL EDUCATION

PROFESSIONAL PRELIMINARY HIGHER EDUCATION

VALUE CHAIN	ADMISSION	EDUCATIONAL PROCESS	FAVORABLE LEARNING ENVIRONMENT	INTERNAL CONTROL	EXTERNAL CONTROL
INTEGRATED SYSTEM	Meritocratic approach	Level of students' training sufficient for mastering the program	Safe and comfortable conditions of life	Clear and transparent criteria of evaluation	Зрозумілі та прозорі критерії оцінювання
		Relevant content of educational programs	Appropriate educational and research equipment	Reliability of testing results	Надійність результатів оцінювання
	Reliability of exam results	Adequate professional qualifications of teachers	Transparent and fair administrative and financial procedures	Compliance of the testing form and content with tasks of the educational program	Compliance of the testing form and content with tasks of the educational program
CORRUPT SYSTEM	Bribes for marks at admission exams	Bribes for missed classes	Bribes for living in the dormitory	Bribes for marks at an exam and fail/pass exam	Bribes for passing the KROK-M exams
		Abuse in the distribution of the teaching load	Abuse in procurement		
	Use of family or friendship ties for obtaining a higher mark at admission exams	Purchase of teaching positions	Purchase of administrative positions	Passing of an exam or fail/pass exam for someone else	

HIGHER EDUCATION

VALUE CHAIN	ADMISSION	EDUCATIONAL PROCESS	FAVORABLE LEARNING ENVIRONMENT	INTERNAL CONTROL	EXTERNAL CONTROL
INTEGRATED SYSTEM	Meritocratic approach	Level of students' training sufficient for mastering the program	Safe and comfortable conditions of life	Clear and transparent criteria of evaluation	Clear and transparent criteria of evaluation
		Relevant content of educational programs	Appropriate educational and research equipment	Reliability of testing results	Reliability of testing results
	Reliability of testing results	Adequate professional qualifications of teachers	Transparent and fair administrative and financial procedures	Compliance of the testing form and content with tasks of the educational program	Compliance of the testing form and content with tasks of the educational program
CORRUPT SYSTEM	Bribes to the transfer to the the preferred specialty	Payments for missed classes + purchase of teachers' books	Bribes for living in the dormitory	Bribes for marks at an exam and fail/pass exam	Bribes for passing the KROK-1 and KROK-2 exams
		Abuse in the distribution of the teaching load	Abuse in procurement		
		Purchase of teaching positions	Purchase of administrative positions	Passing of an exam or fail/pass exam for someone else	

INTERNSHIP

VALUE CHAIN	ADMISSION	EDUCATIONAL PROCESS	FAVORABLE LEARNING ENVIRONMENT	INTERNAL CONTROL	EXTERNAL CONTROL
INTEGRATED SYSTEM	Sufficient offer	Level of students' training sufficient for mastering the program	Safe and comfortable conditions of life	Clear and transparent criteria of evaluation	Clear and transparent criteria of evaluation
	Meritocratic approach	Relevant content of educational programs	Appropriate educational and research equipment	Reliability of testing results	Reliability of testing results
	Compliance with professional interests of a graduate	Access to practical classes and patients	Transparent and fair administrative and financial procedures	Compliance of the testing form and content with tasks of the educational program	Compliance of the testing form and content with tasks of the educational program
	Awareness of the options available				
CORRUPT SYSTEM	Bribes for the distribution to the preferred specialty	Bribes for accessing patients and procedures	Bribes for living in the dormitory	Bribes for passing certification	
	Bribes for employment		Abuse in procurement		

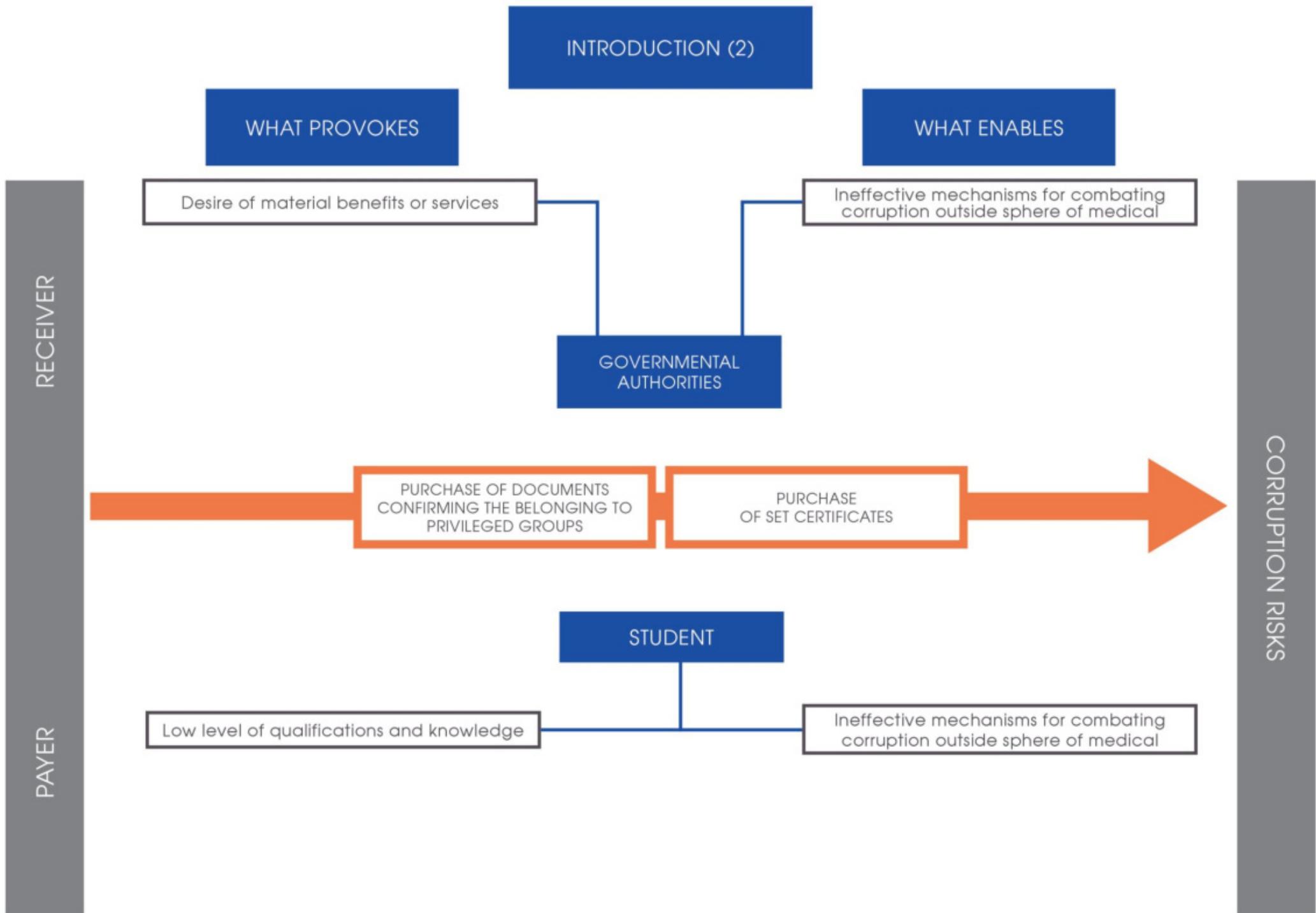
POSTGRADUATE/DOCTORAL STUDIES

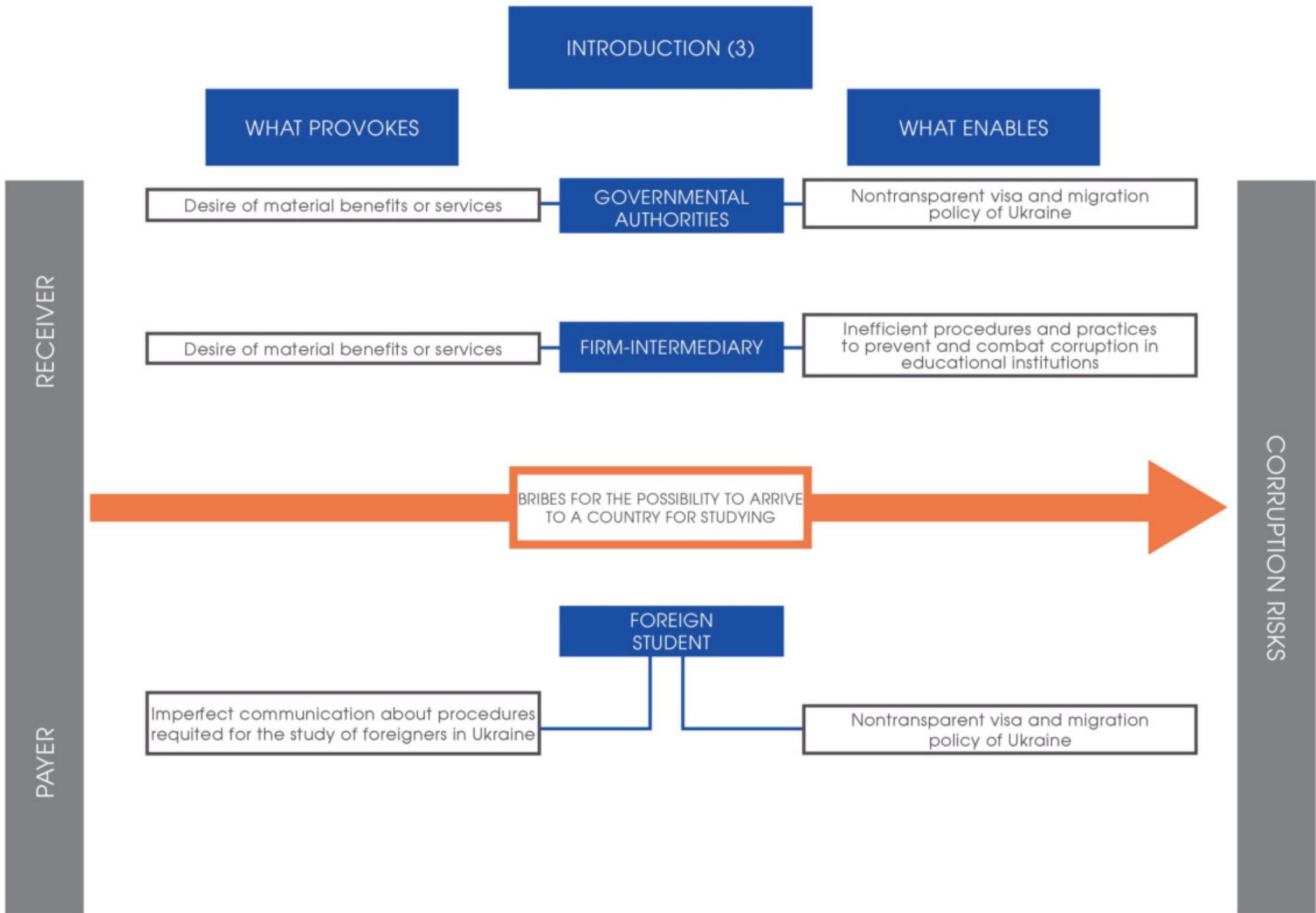
VALUE CHAIN	ADMISSION	EDUCATIONAL PROCESS	FAVORABLE RESEARCH ENVIRONMENT	PUBLICATIONS	PROTECTION
INTEGRATED SYSTEM	Meritocratic approach	Relevant content of educational programs	Safe and comfortable conditions of life	Transparent and demanding editorial policy of professional publications	Publicity
	Reliability of exam results	Access to equipment and patients	Appropriate educational and research equipment		Financing of a protection procedure
	Compliance with professional interests of a graduate	Competitive funding of research activities	Transparent and fair administrative and financial procedures	Internal review	Independent examination
CORRUPT SYSTEM	Bribes for admission	Falsification of research results	Bribes for living in the dormitory	Payments for publications without review	Bribes to AC members or opponents for successful defense
			Abuse in procurement	Use of publications of other people	

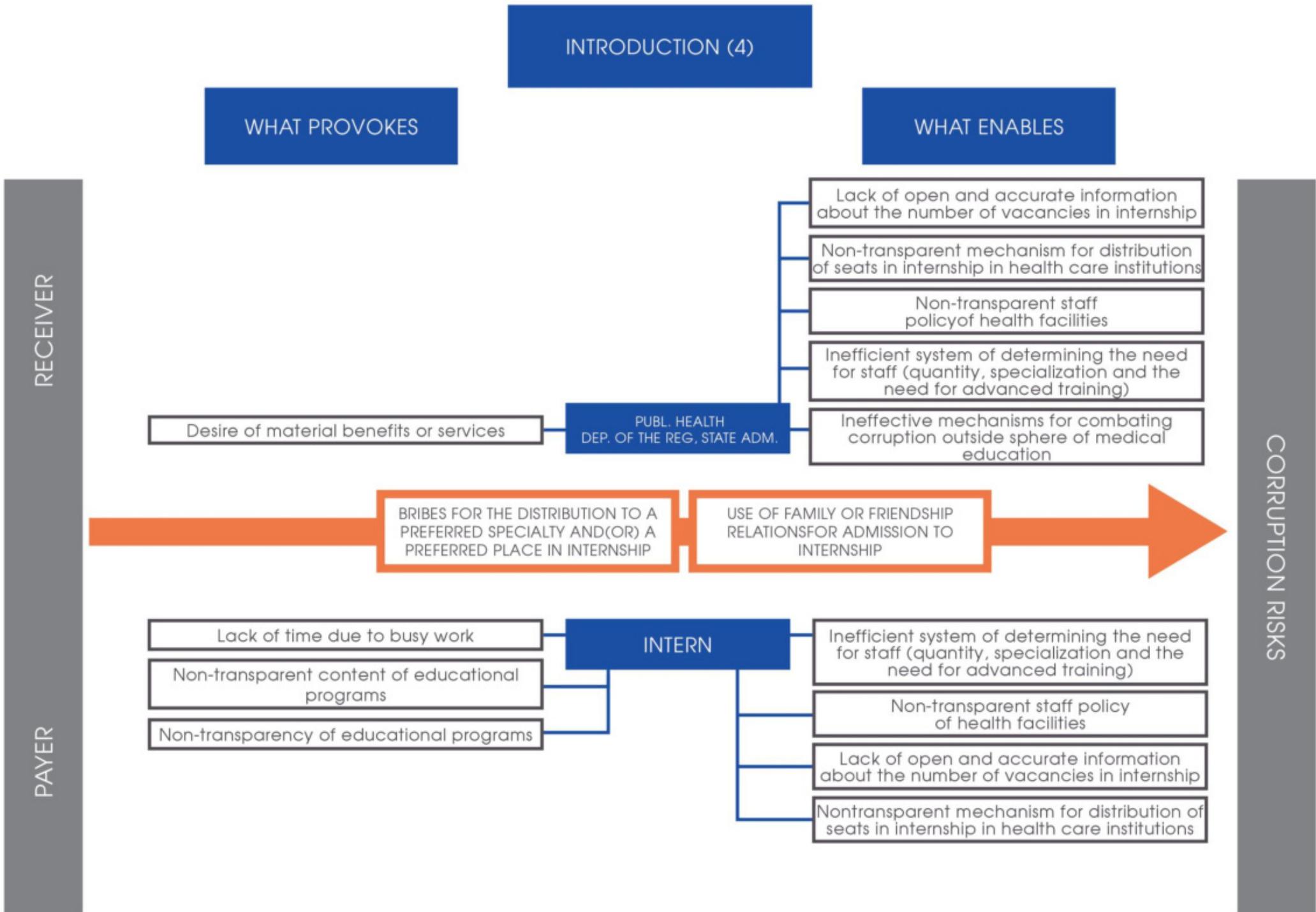
CONTINUING PROFESSIONAL DEVELOPMENT

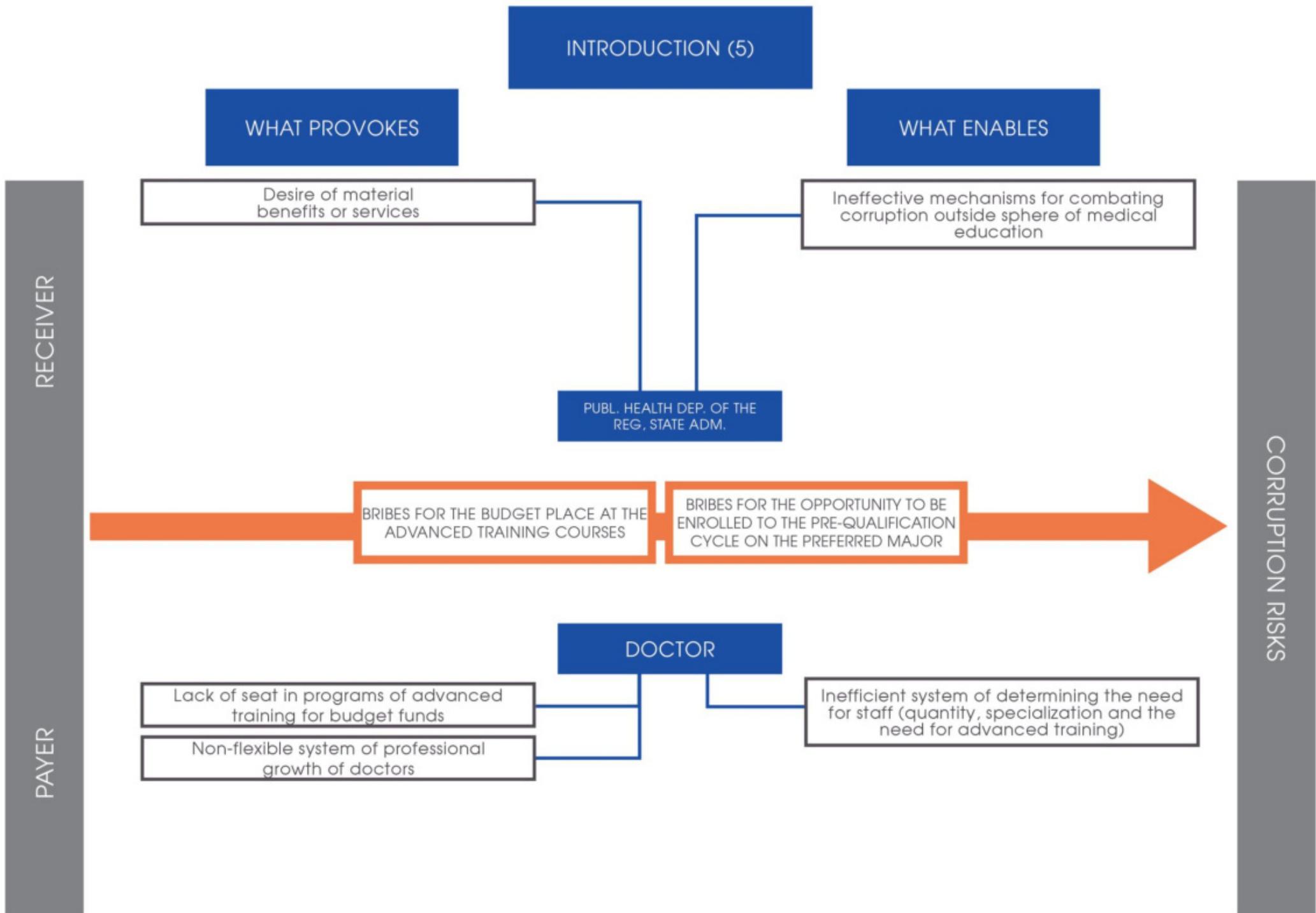
VALUE CHAIN	ENROLLMENT	EDUCATIONAL PROCESS	CERTIFICATION
INTEGRATED SYSTEM	Sufficient offer	Relevant content of educational programs	Clear and transparent criteria of evaluation
	Transparent and fair financing	Access to practical classes, equipment and patients	Reliability of testing results
	Awareness of the options available	Flexible forms	Adequate remuneration for professional growth
	Compliance with professional interests of a graduate		
CORRUPT SYSTEM	Bribes for the opportunity to be admitted to course or to the preferred major	Payment for the possibility of not attending classes	Bribes for the successful completion of certification
	Bribes for a budget-financed place		

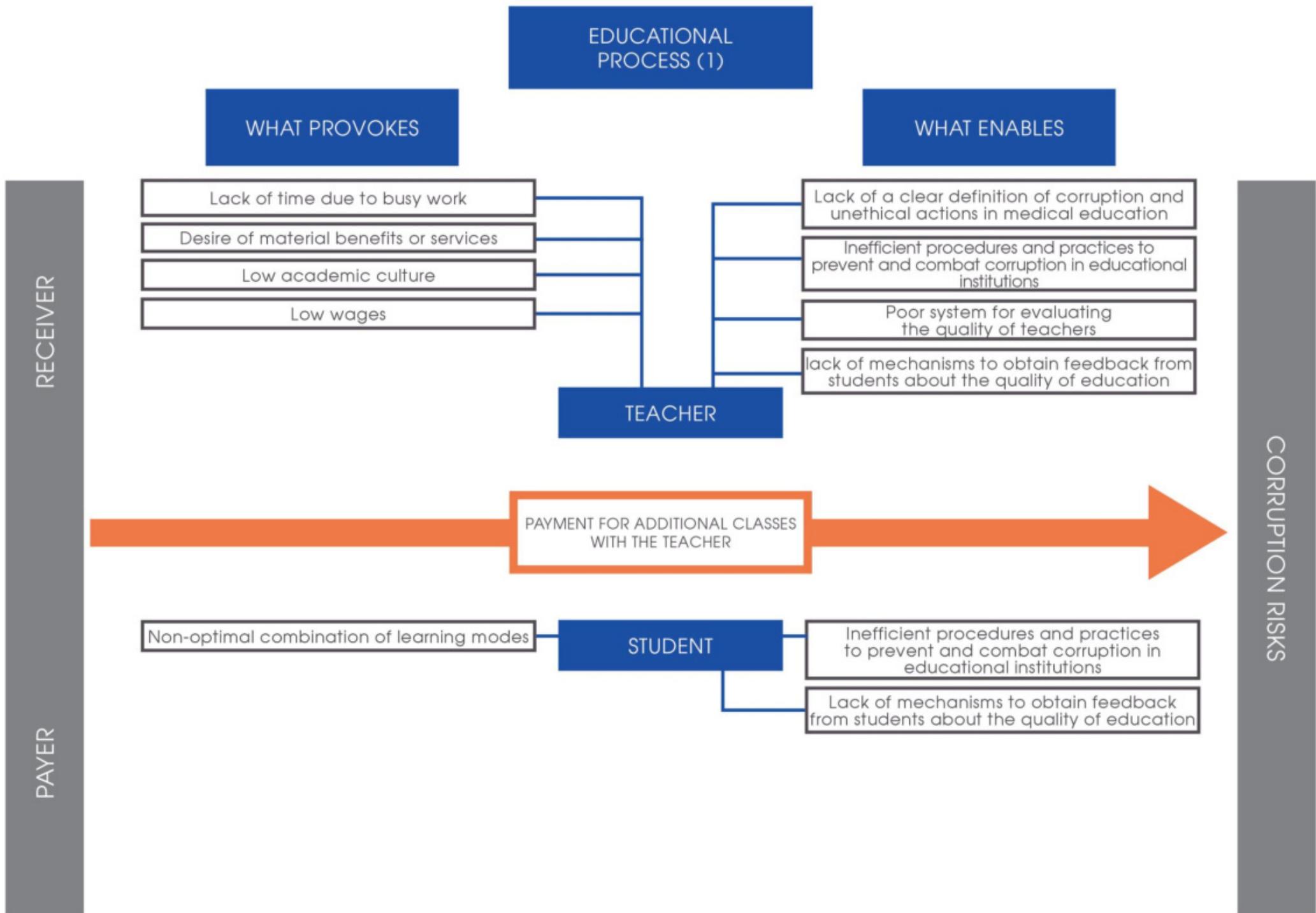
APPENDIX 8
CORRUPTION SCHEMES: FACTORS AND PARTICIPANTS

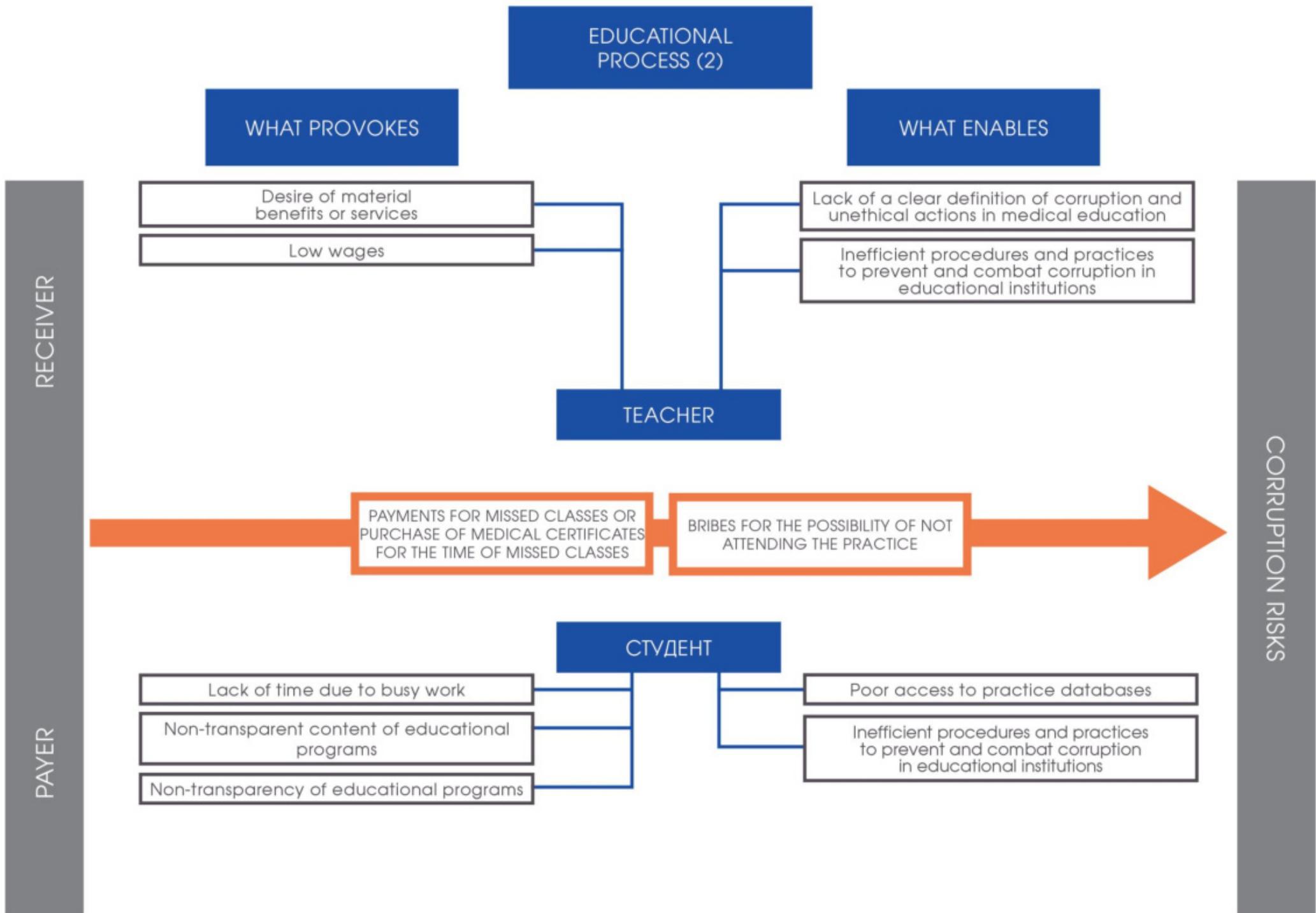


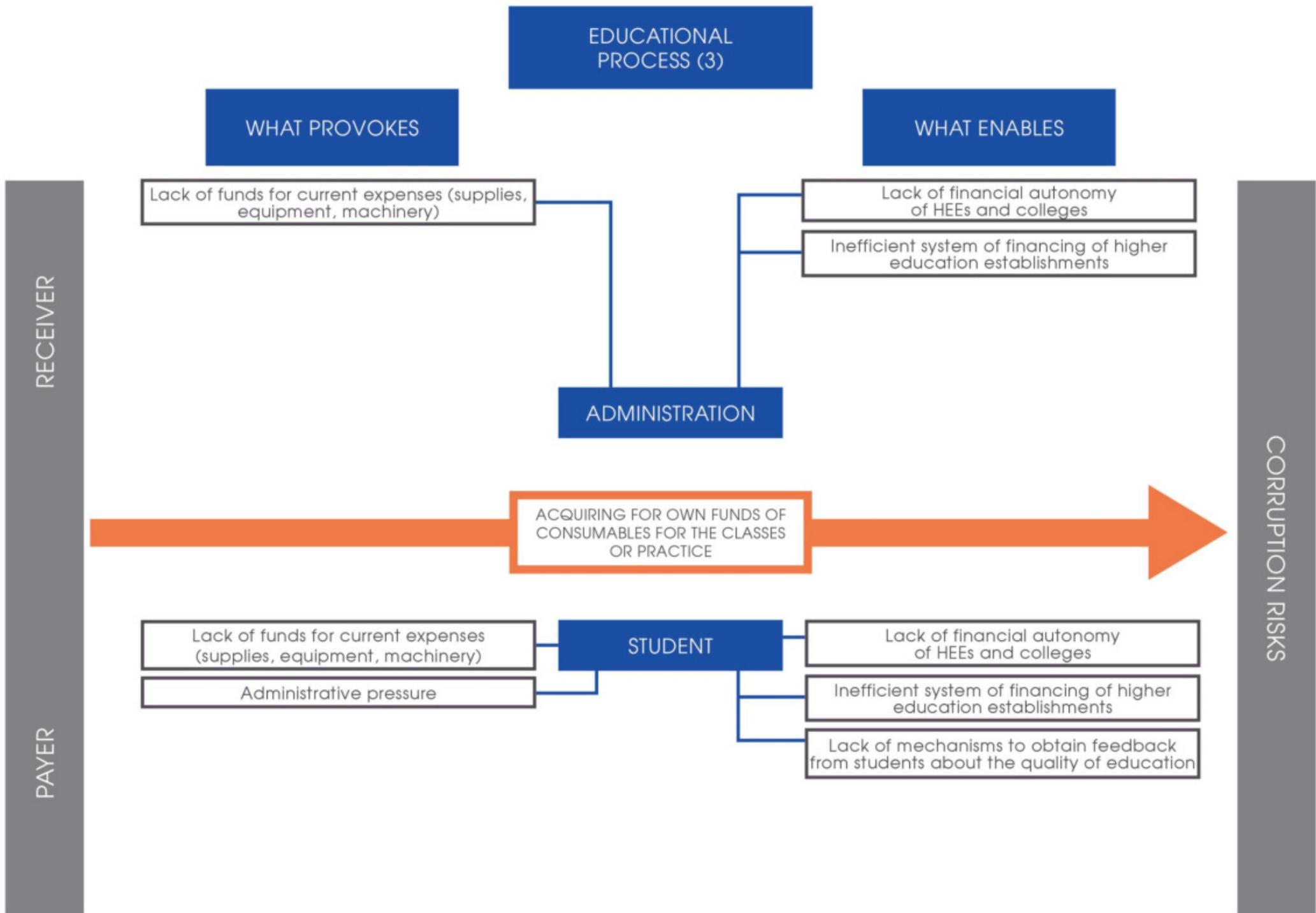


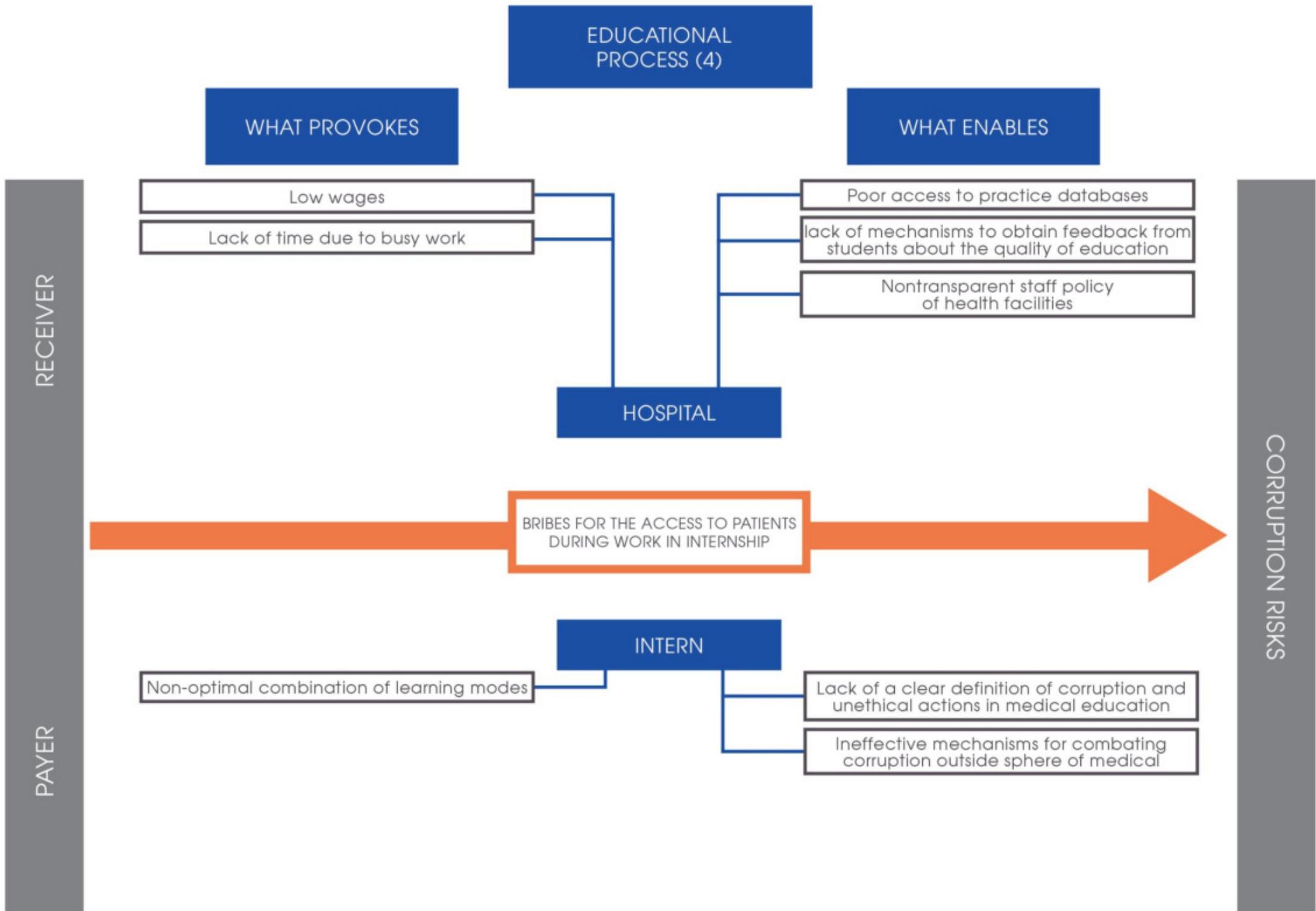


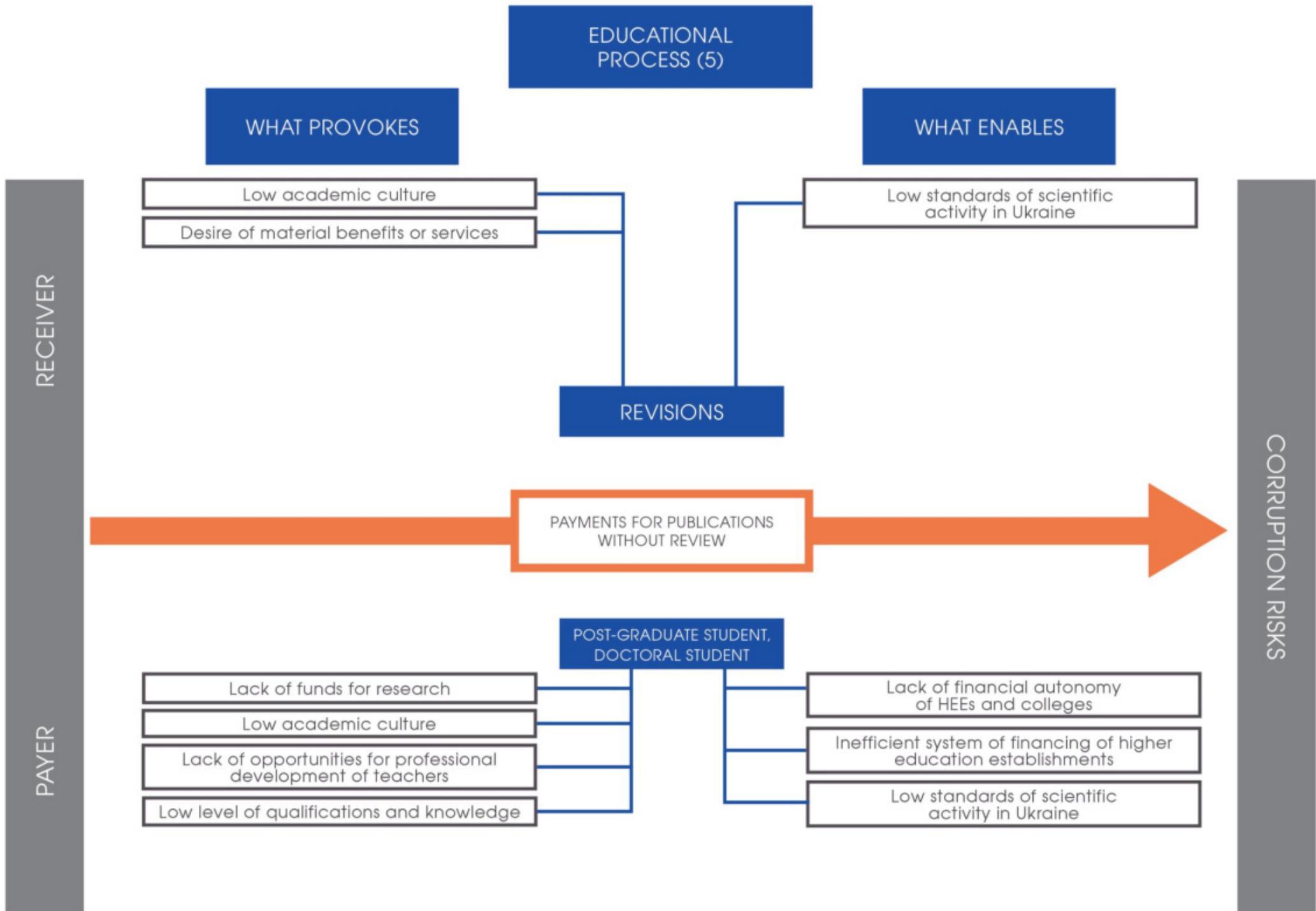


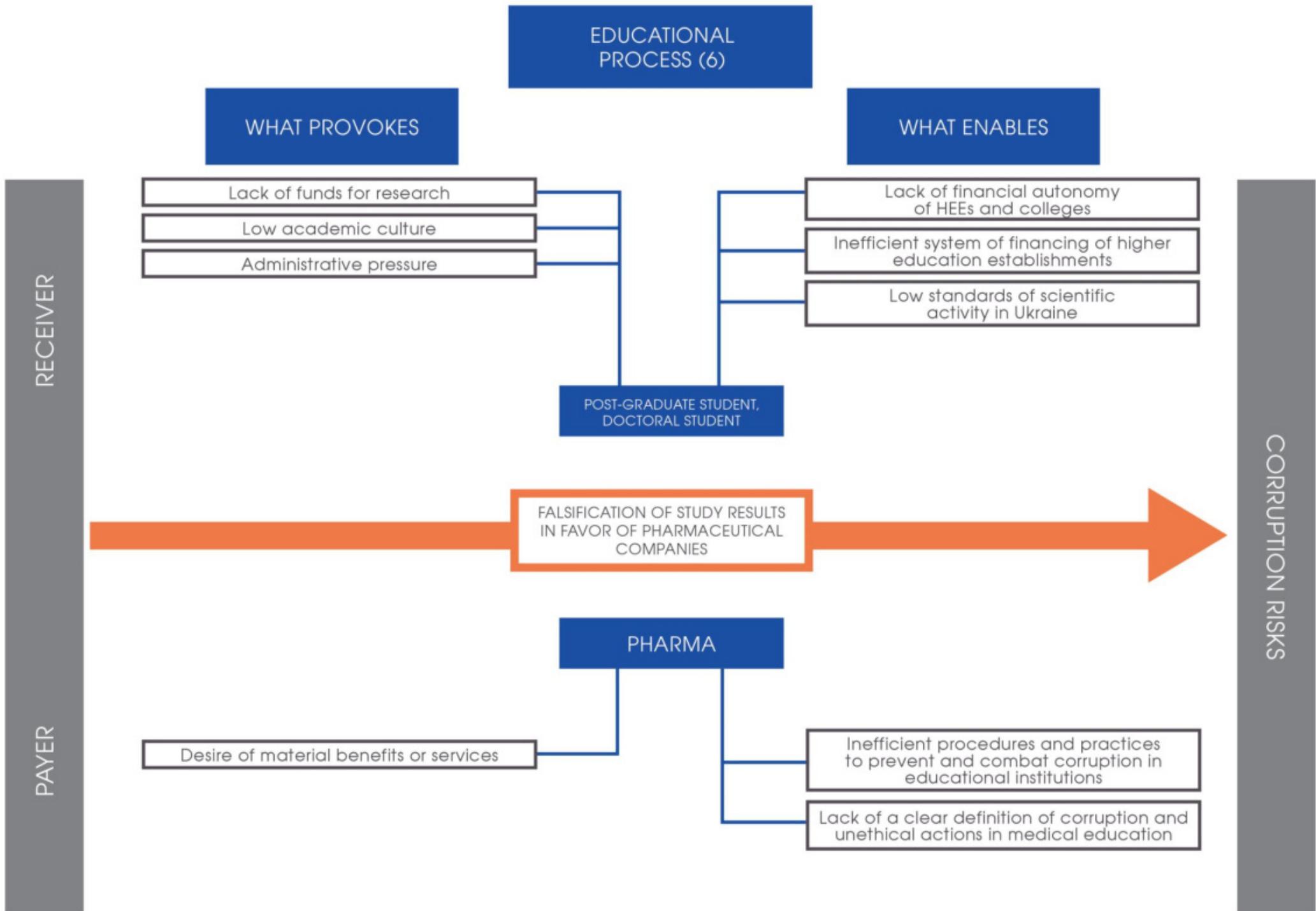


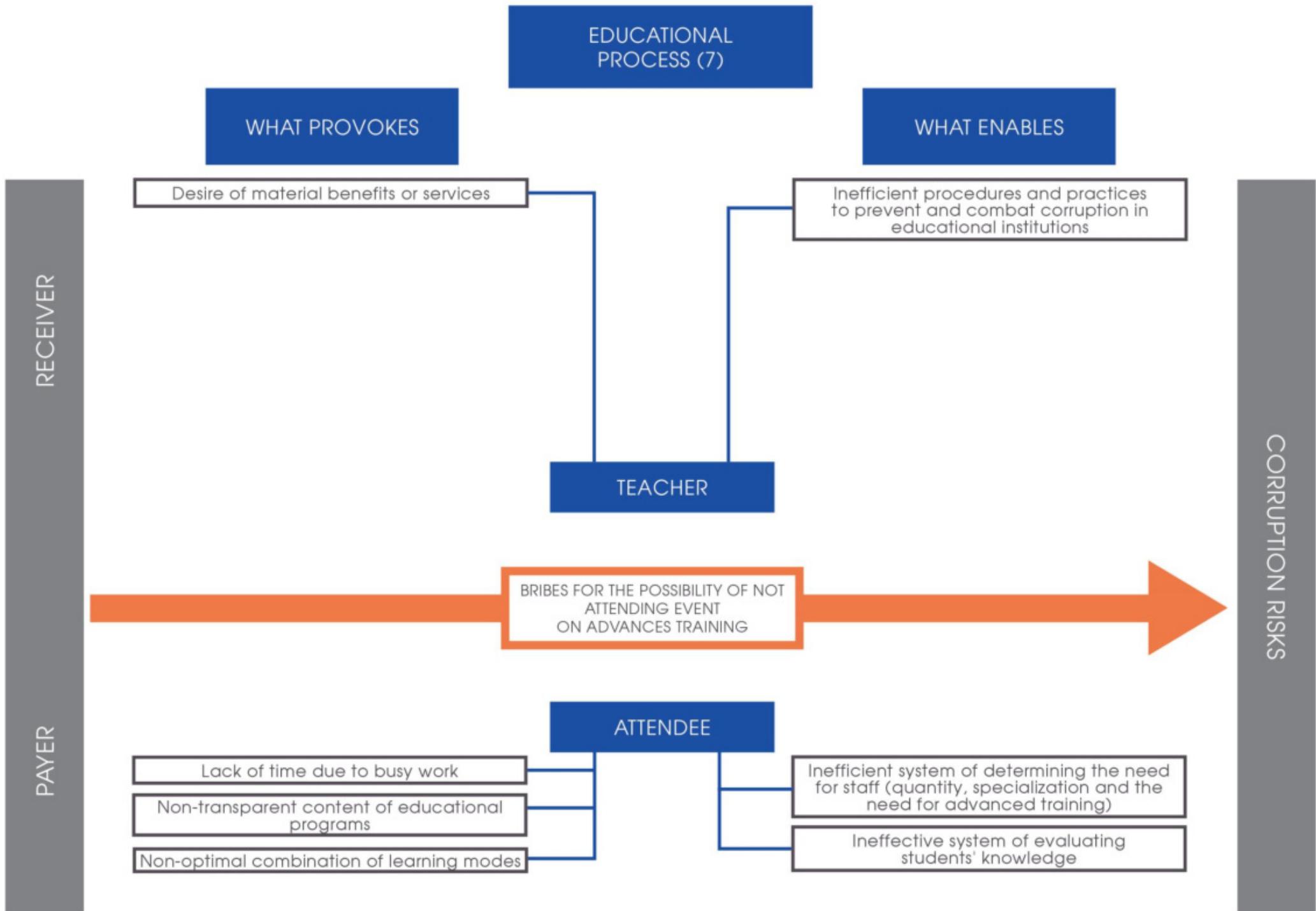


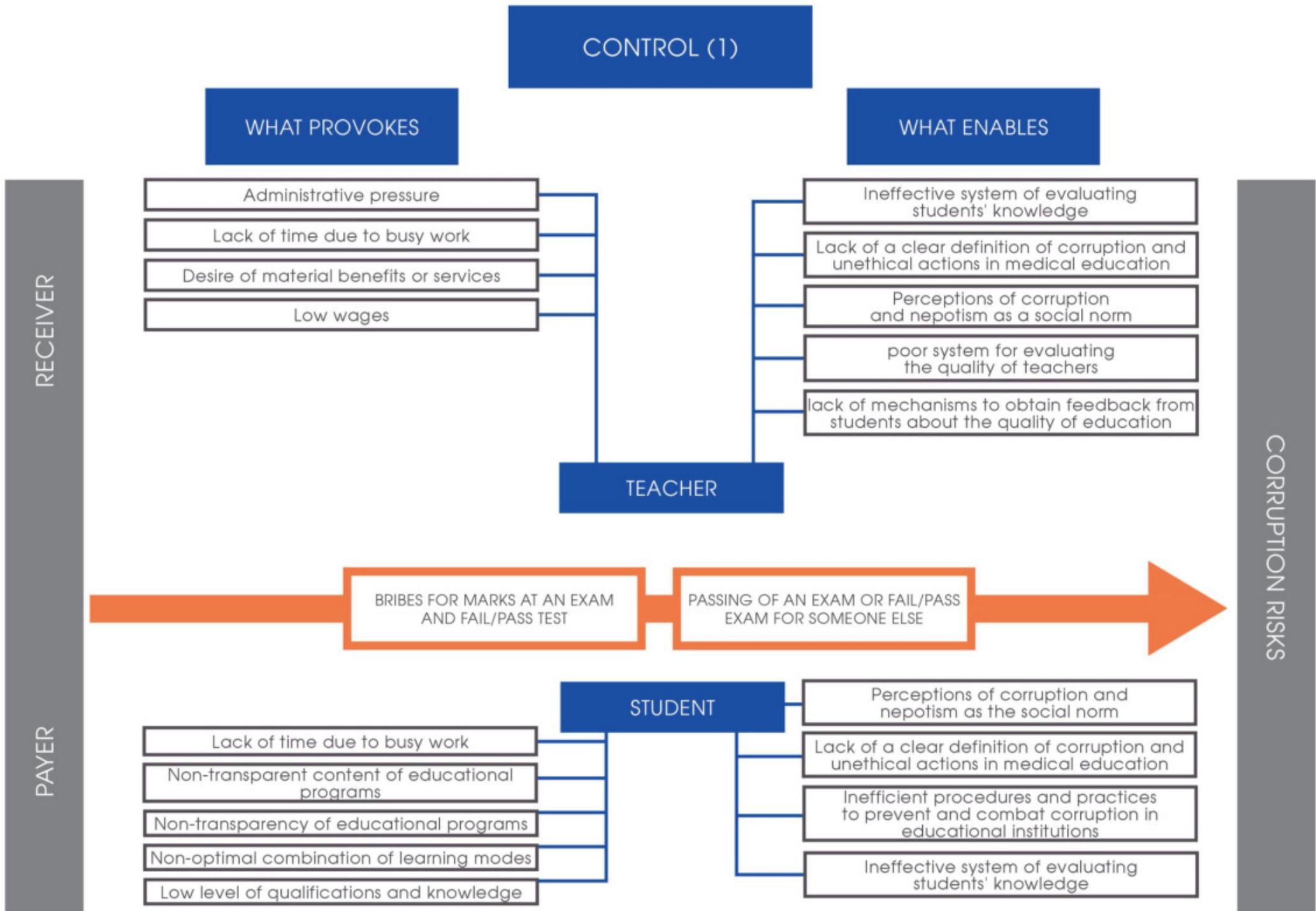


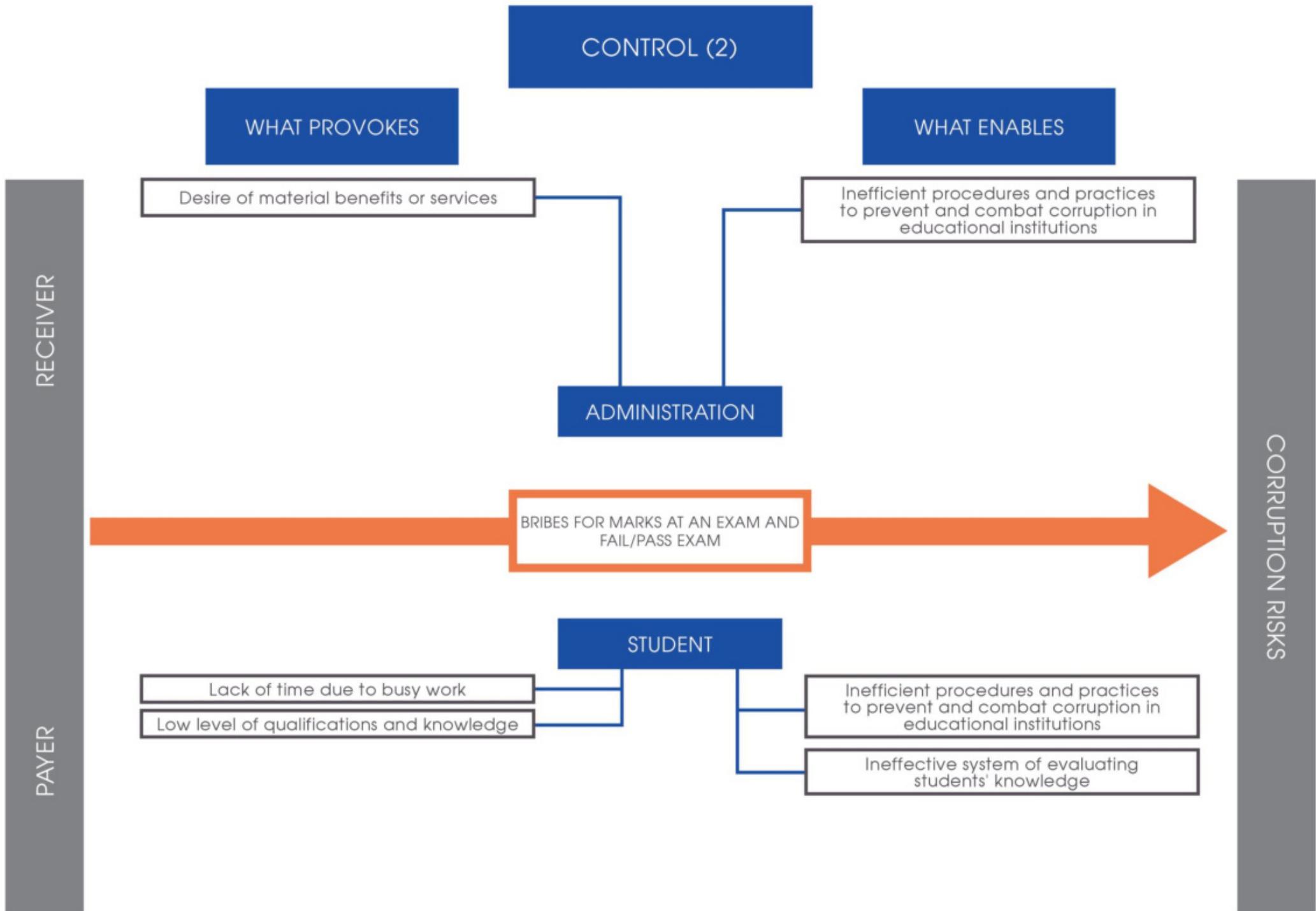


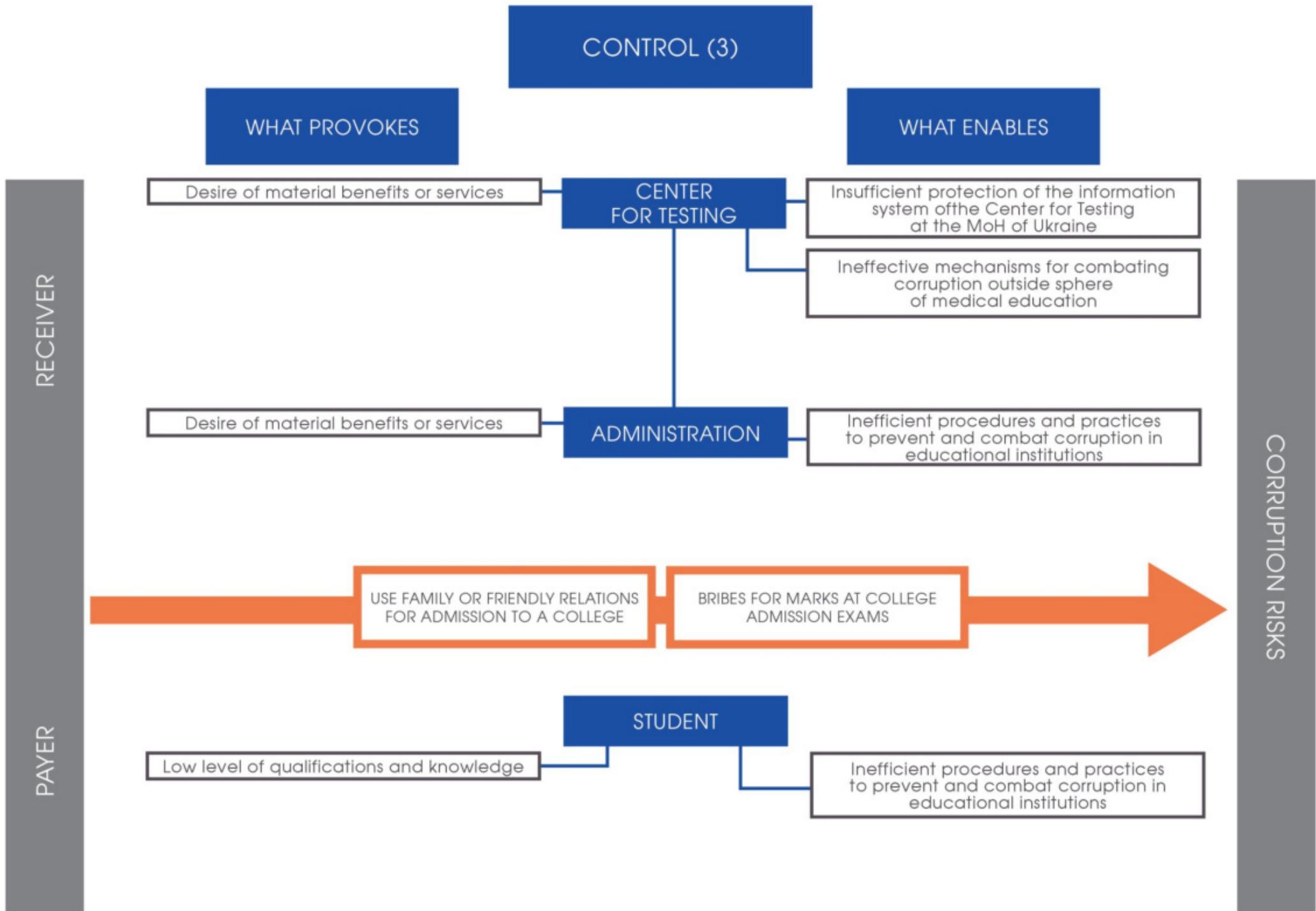


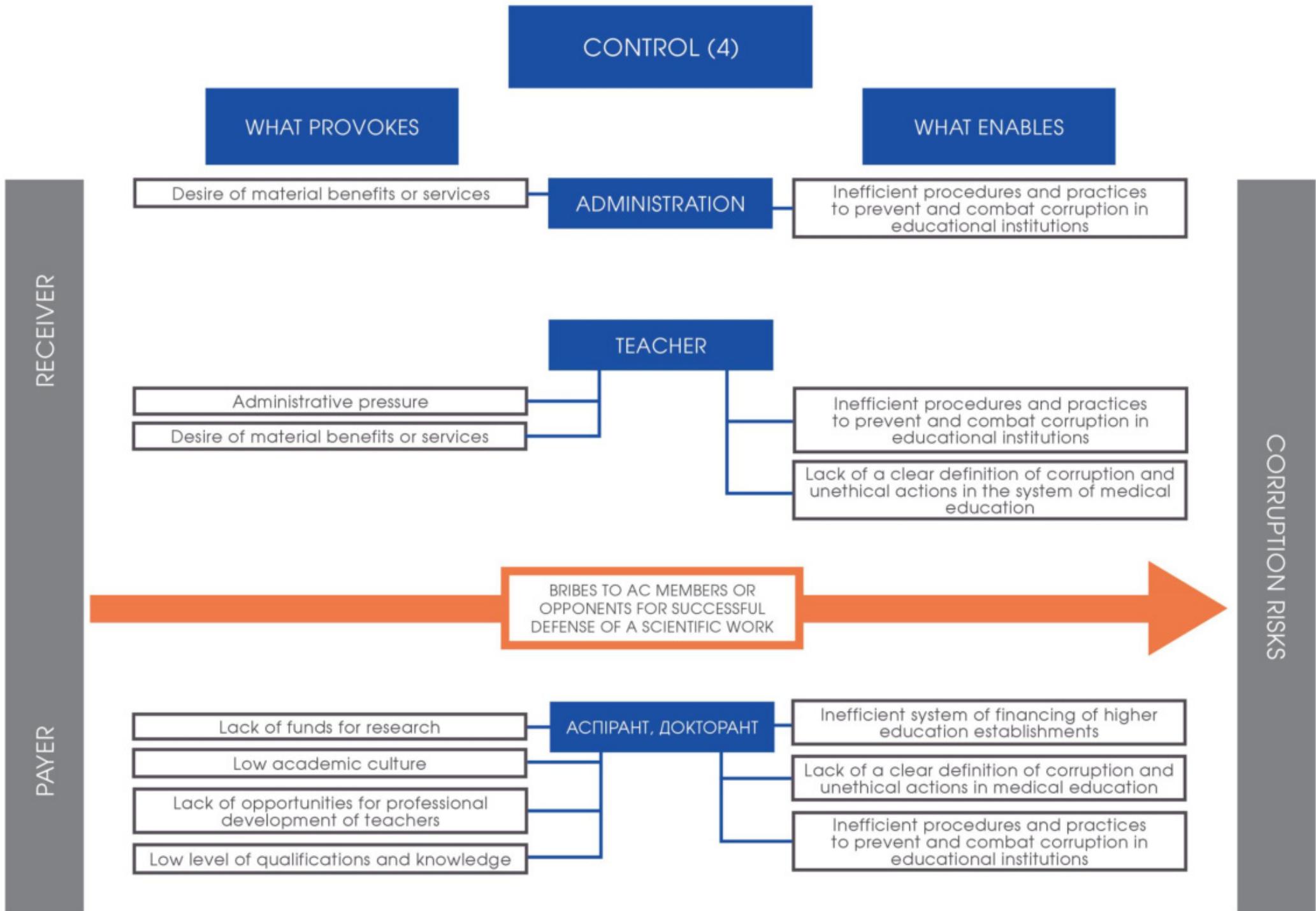


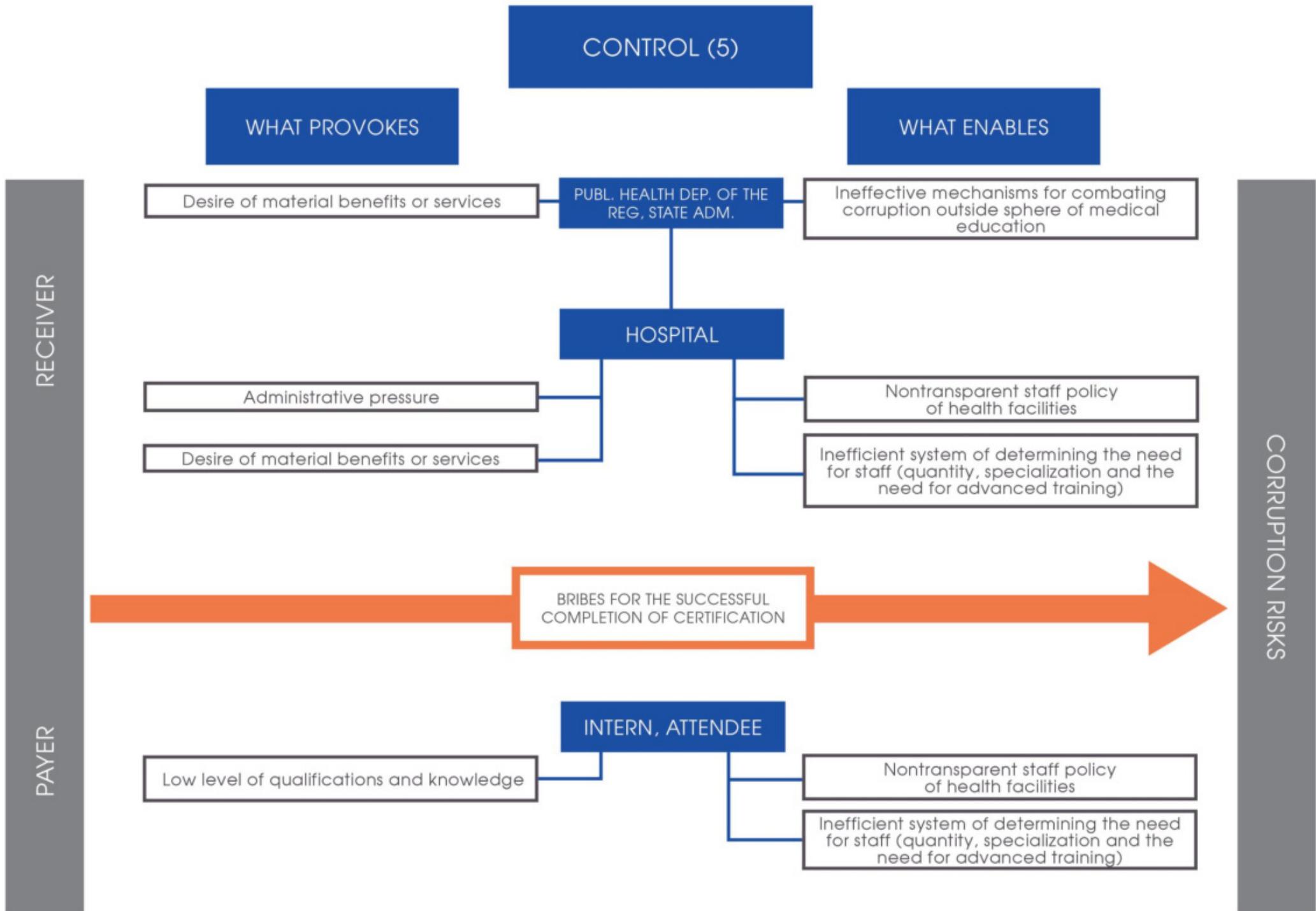


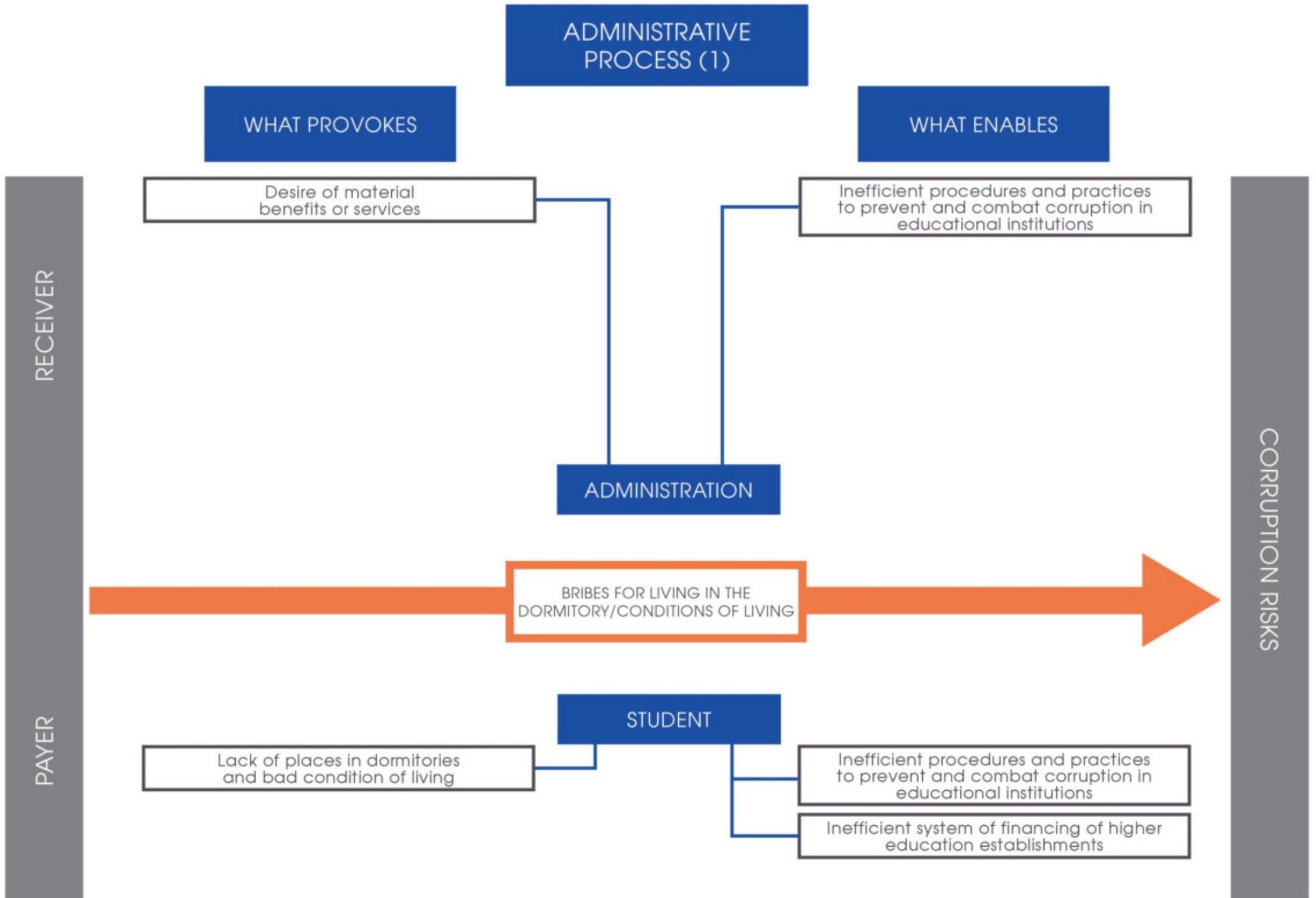


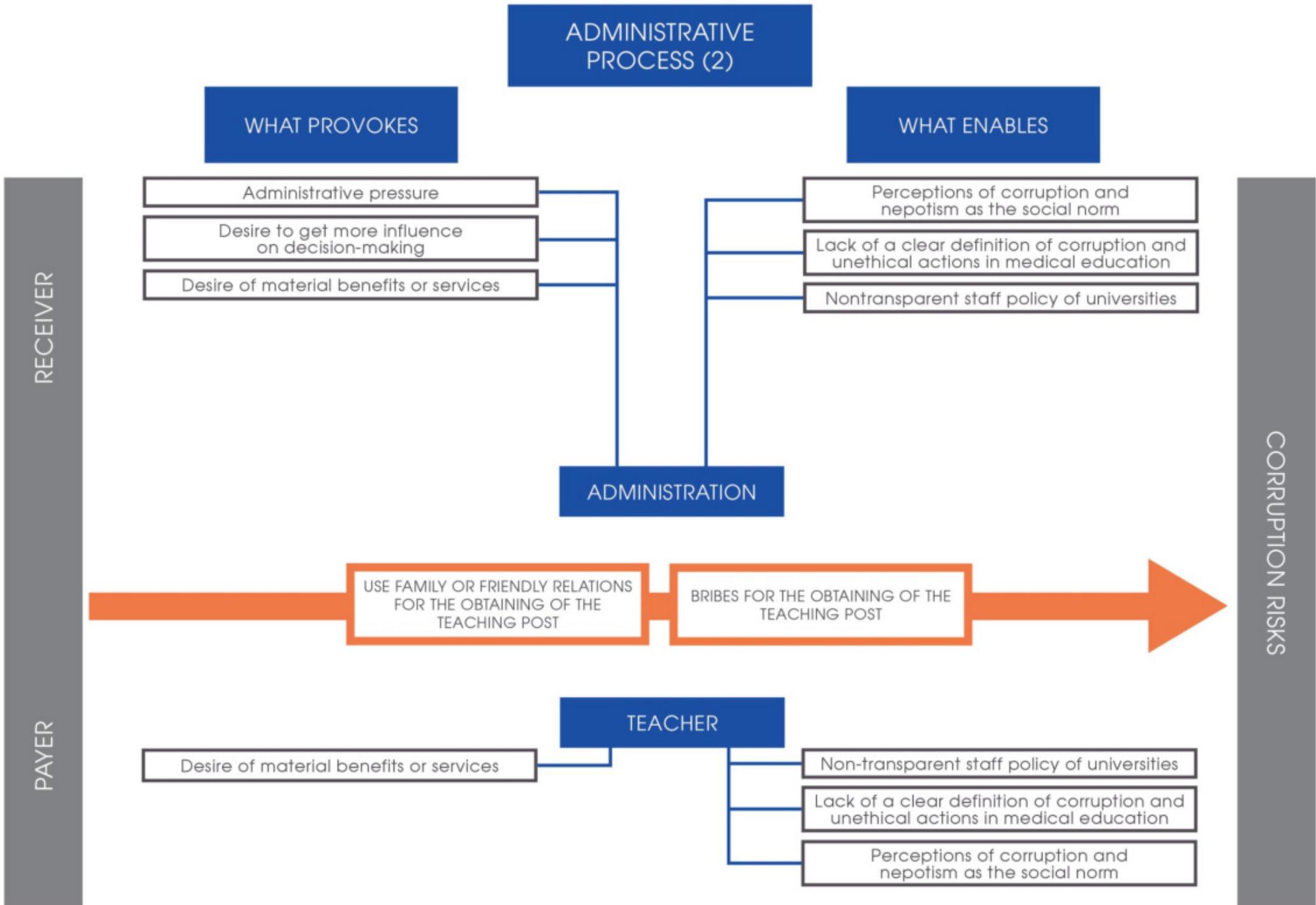


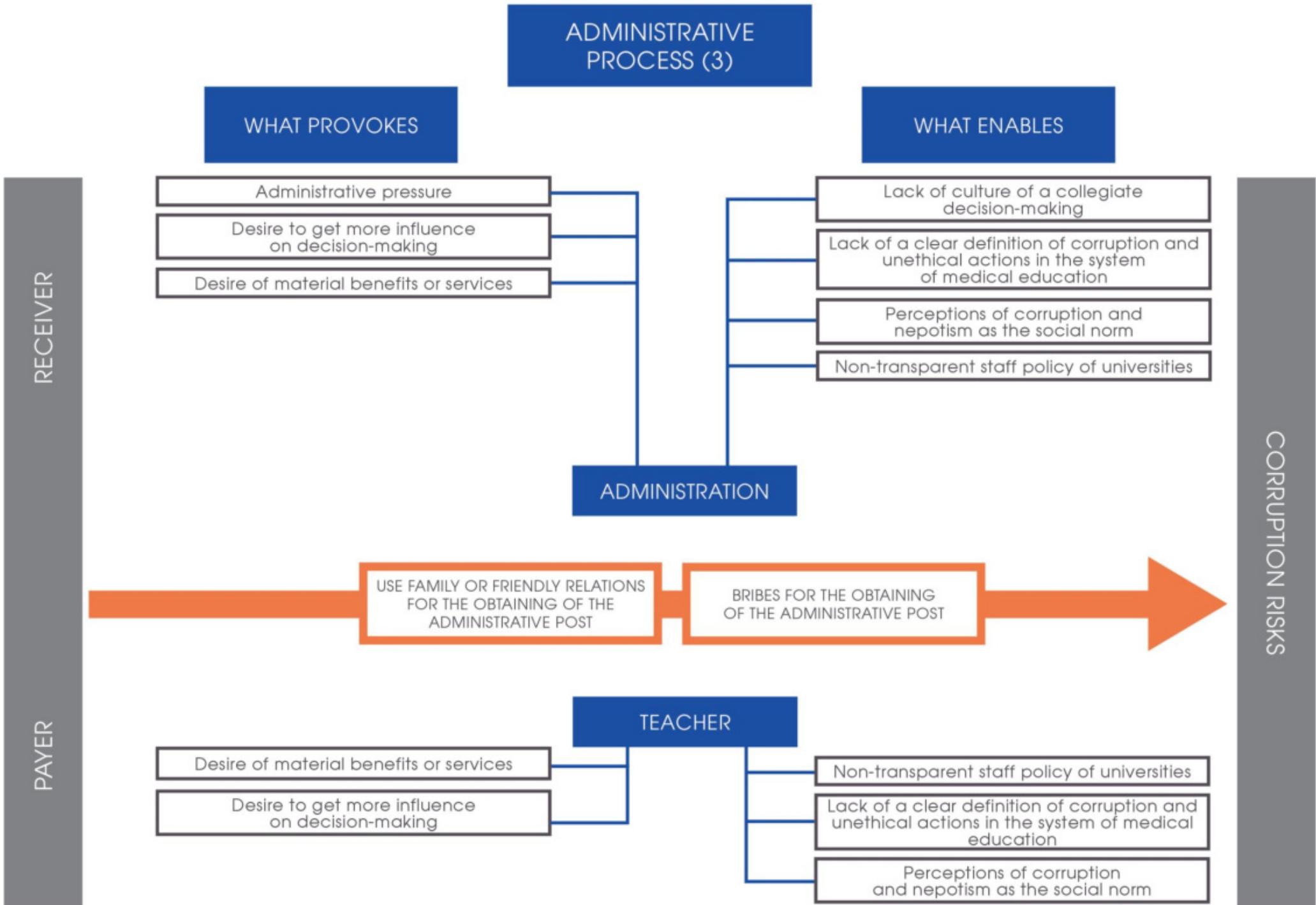


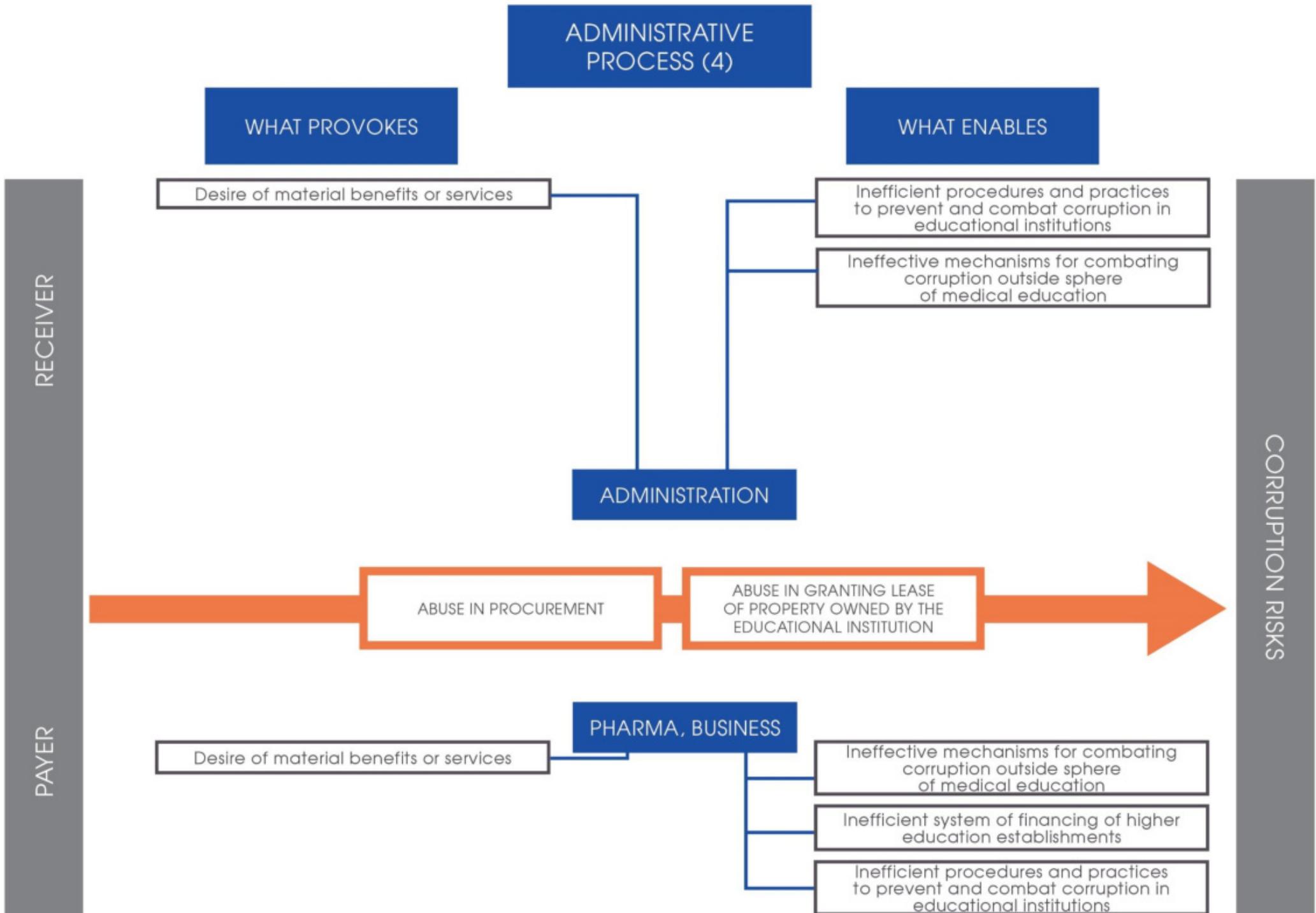














APPENDIX 9
CONTENT ANALYSIS

METHODOLOGY

ROLE

The **main role** is assigned to an object under study, if such object is a center (the sole participant) or one of very active participants of an action described in the text.

The **secondary role** is assigned to an object under study, if such object is an indirect participant of an action described in the text.

The **minor role** is assigned to an object under study, if appearance of such object is one-time and of minor importance, and it may NOT correspond to the general context of the publication.

TONALITY

Positive tonality is assigned, provided that an action described in the article will have a clearly positive impact on the development prospects of the object under study.

Neutral tonality is assigned, provided that an action described in the text does not cause any major impact on development of the business or it is not yet possible to predict the impact of such action on the company's business.

Negative tonality is assigned, provided that an action described in the text will cause a serious negative impact on the developing the business of the object under study.

SELECTED NEWS

To prepare the report, all the news with hits of the companies under study from the mass media data base (more than 12 thousand sources) were selected.

TYPES OF MASS MEDIA

Hits from five years types of mass media (Internet, press, news agencies, radio, TV) and social media were taken for the analysis.

MEDIA FAVOURABILITY INDEX– refers to an indicator that reflects benevolence of publications about a company and takes into account the tonality of publications. It is calculated as the ratio of positive to negative hits:

- Index is <1 – negative hits prevail;
- Index is $=1$ – the same number of positive and negative hits;
- Index >1 – positive messages prevail.

MEDIA VISIBILITY refers to an indicator of visibility of a company in media that, when being analyzing in dynamics, provides an objective assessment of the company's activities in the sphere of communications. It is calculated on the basis of data about each publication or the whole array of hits. It takes into account characteristics of the publication (role, tonality) and characteristics of media (type, level).

MEDIA QUALITY refers to an indicator that reflects the aggregated estimate of publications about a company for a certain period of time. It is calculated for the entire array of publications. It takes into account characteristics of the publication (role, tonality) and characteristics of media (type, level). It allows comparing companies with a different number of hits, because, during the calculation, the number of hits is leveled out.

INTRODUCTION



GOAL OF THE WORK

To investigate media coverage of the topic and its spread for the period from 1 August 2018 to 12 August 2019.



SOURCES

For this work, sources of national and regional press, Internet, television, radio and news agencies were used.



EXPECTED RESULT

To describe the topic based on all quantitative indicators.

RESUME



TRADITIONAL MASS MEDIA(IN GENERAL)

- Number of publications: 217
- Potential Reach
(online): 371,723
- Main role: 63%
- Positive: 10%
- Negative: 19%



TRADITIONAL MEDIA (NURSING EDUCATION)

- Number of publications: 44
- Potential Reach
(online): 36,906
- Main role: 84%
- Positive: 0%
- Negative: 52%
- Media Favourability Index: 23 (only negative)
- Media Visibility: -57
- Media Quality -1,3



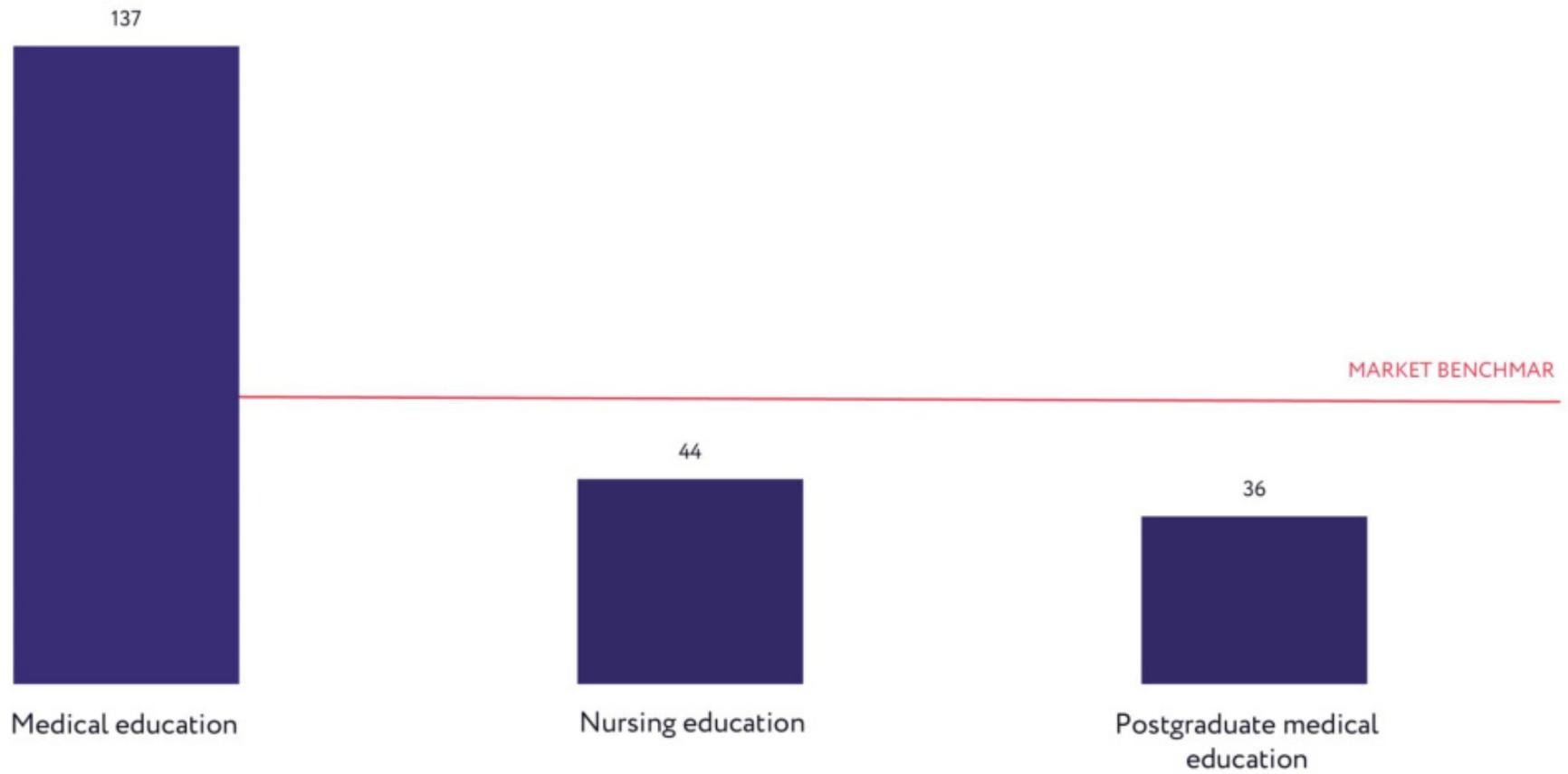
TRADITIONAL MEDIA(MEDICAL EDUCATION)

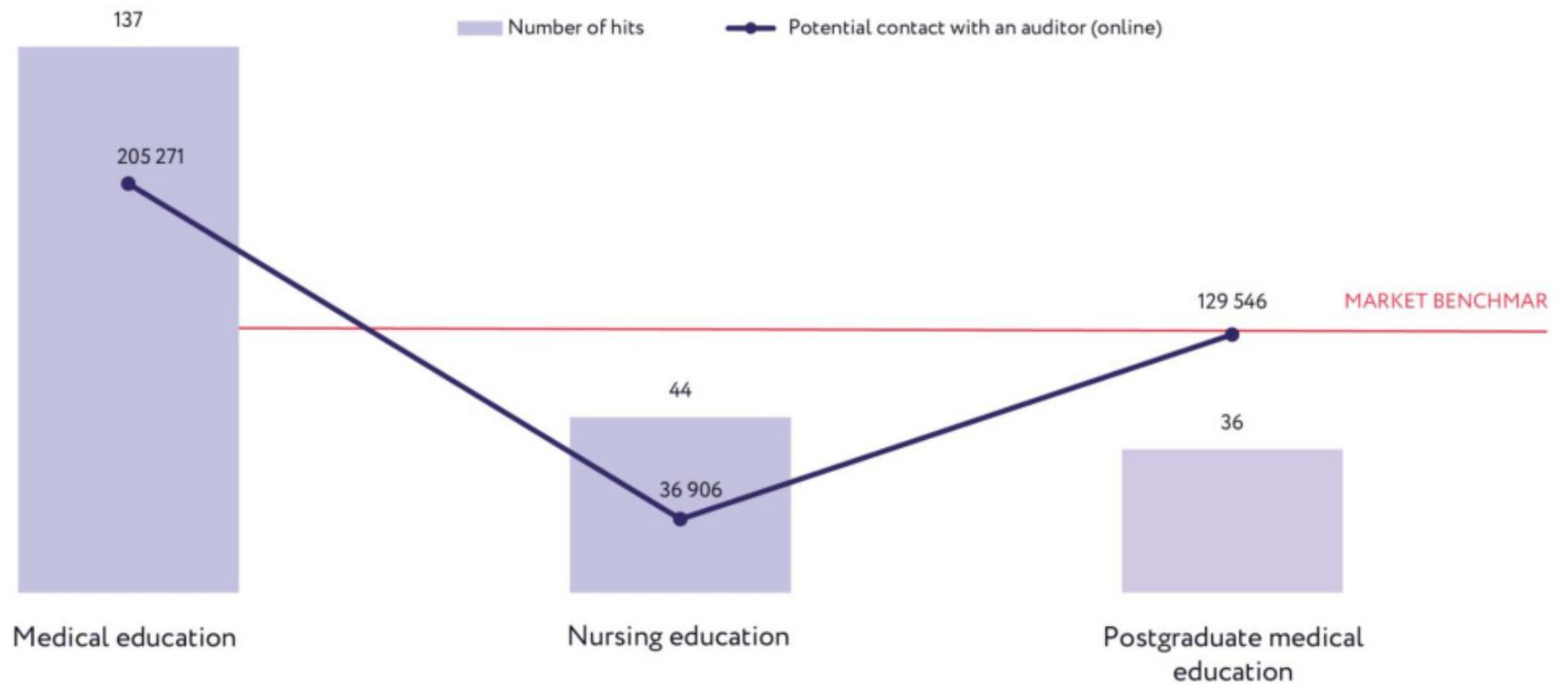
- Number of publications: 137
- Potential Reach
(online): 205,271
- Main role: 69%
- Positive: 15%
- Negative: 10%
- Media Favourability Index 1.5
- Media Visibility: 246
- Media Quality 1.8

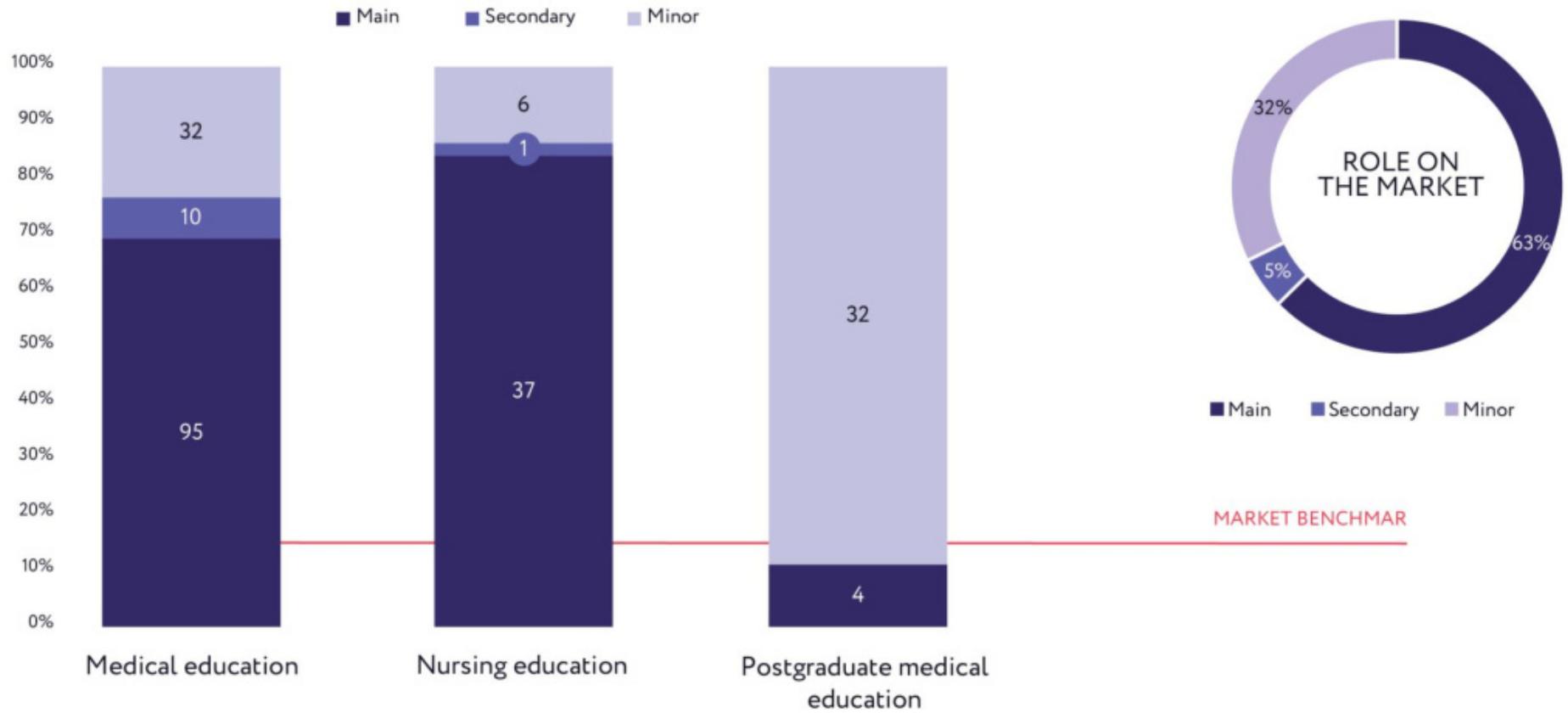


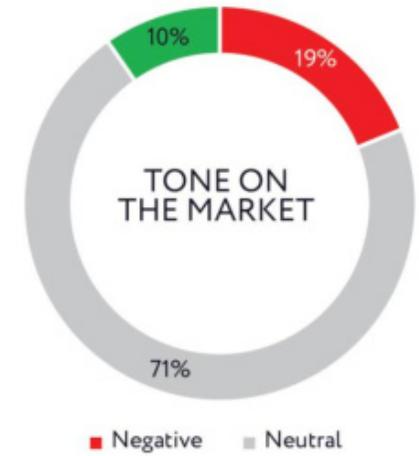
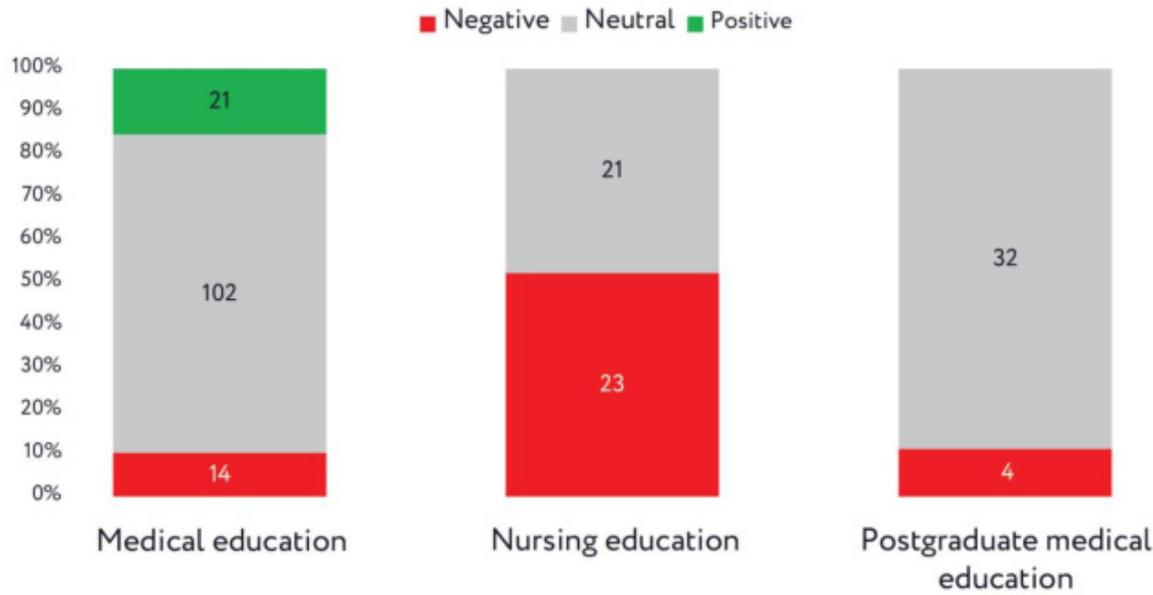
TRADITIONAL MEDIA (POSTGRADUATE MEDICAL EDUCATION)

- Number of publications: 36
- Potential Reach
(online): 129,546
- Main role: 11%
- Positive: 0%
- Negative: 11%
- Media Favourability Index: 4 (only negative)
- Media Visibility: 5
- Media Quality 0.1

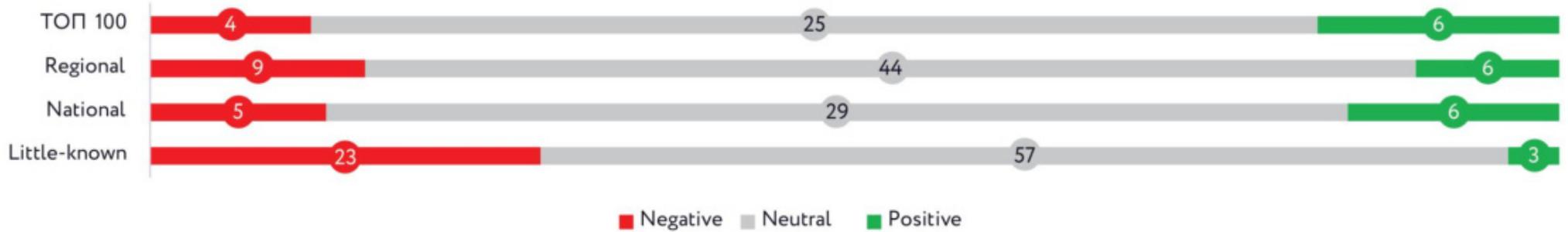


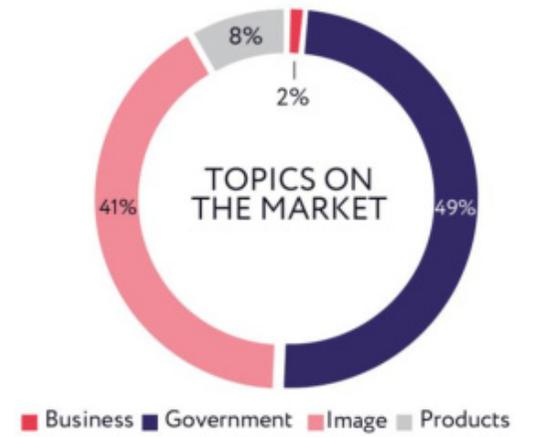
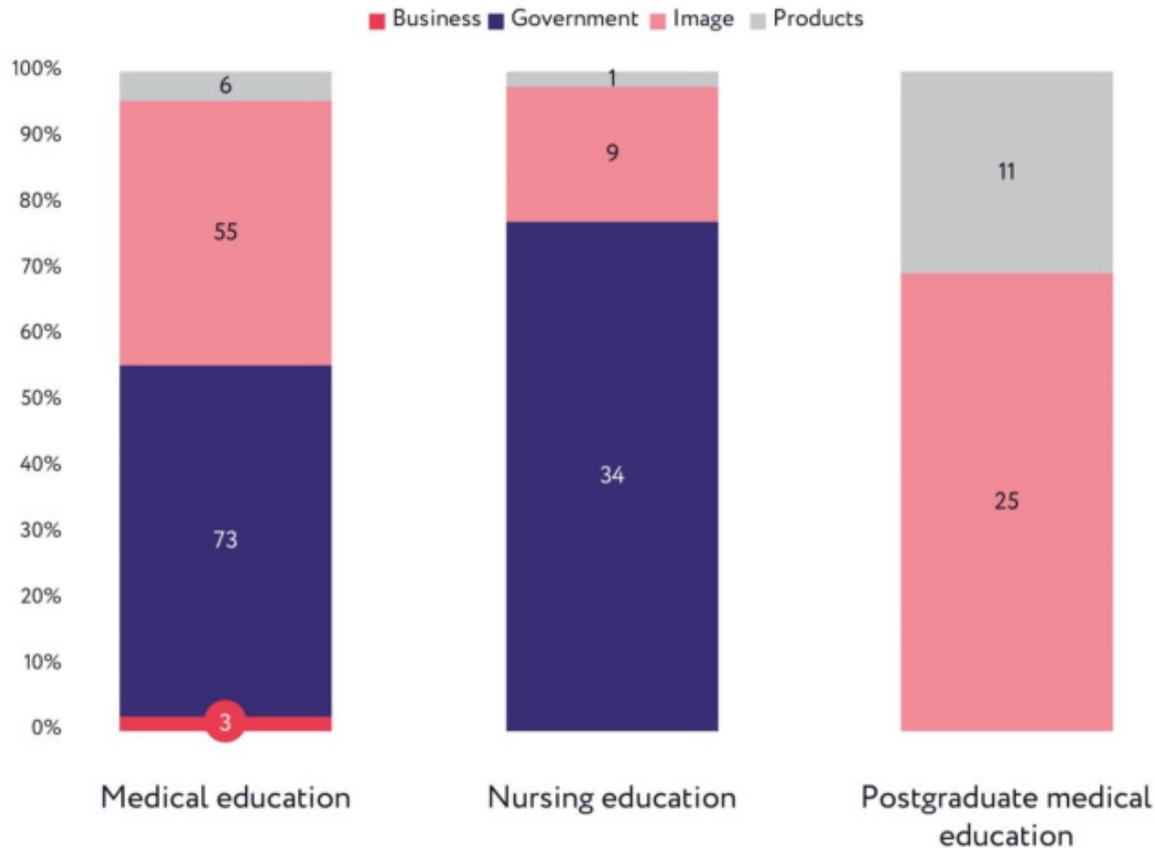


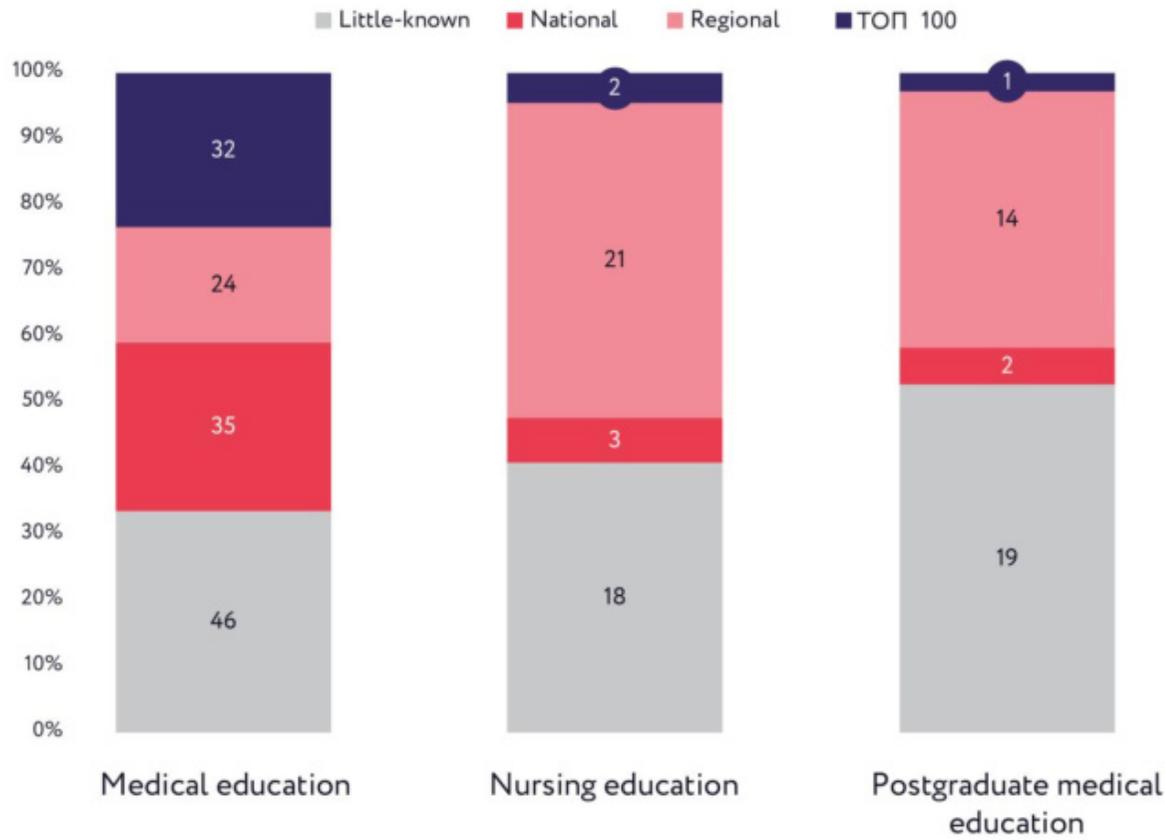




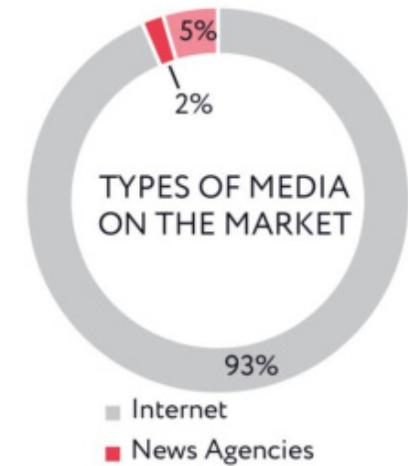
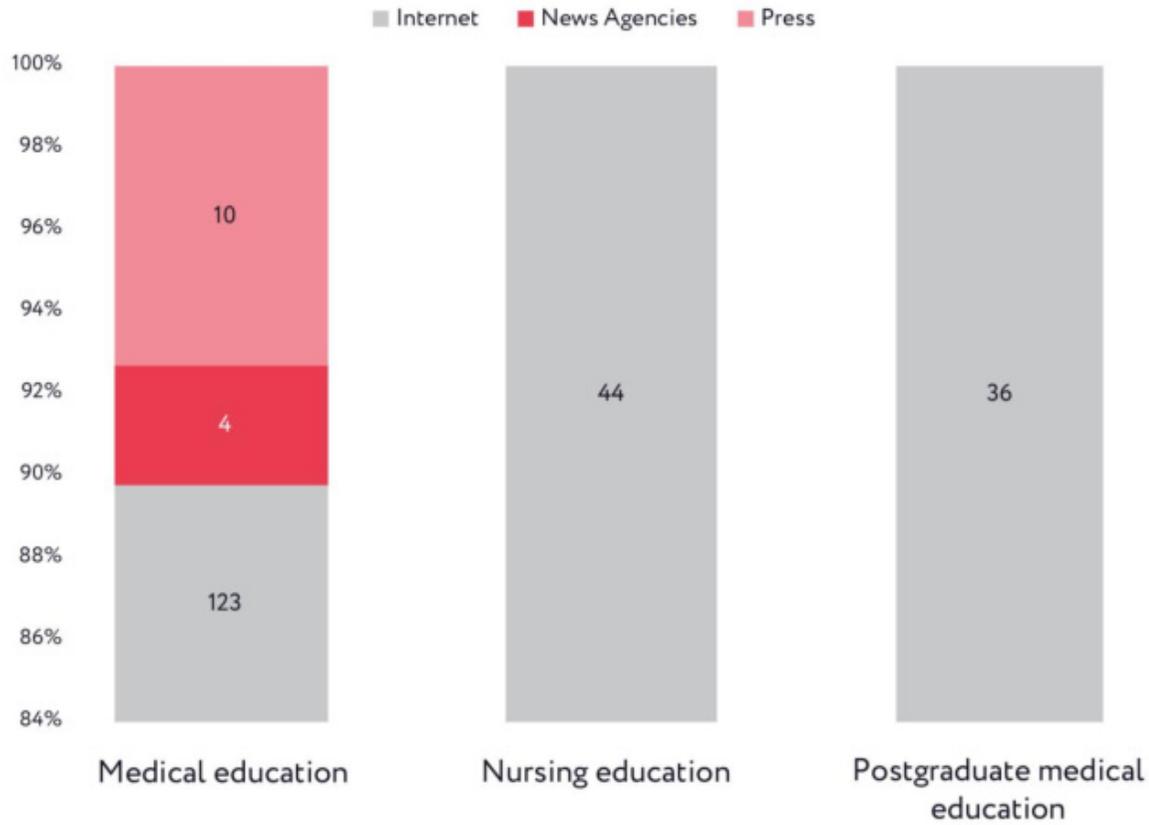
The tone in terms of media



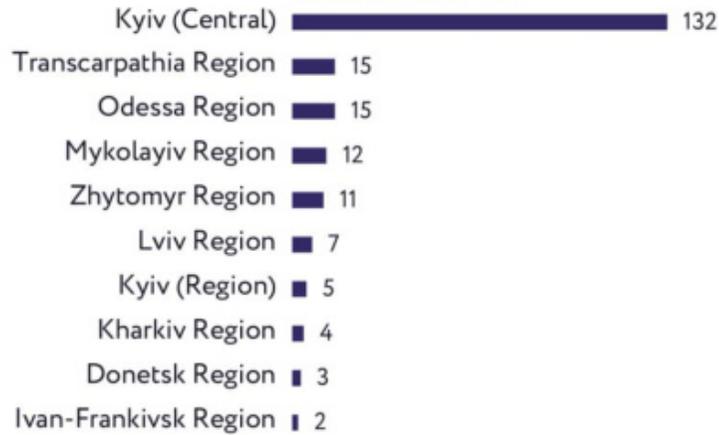




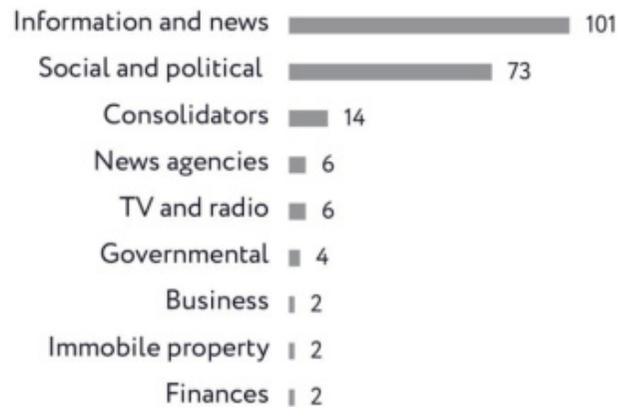
TYPES OF MASS MEDIA



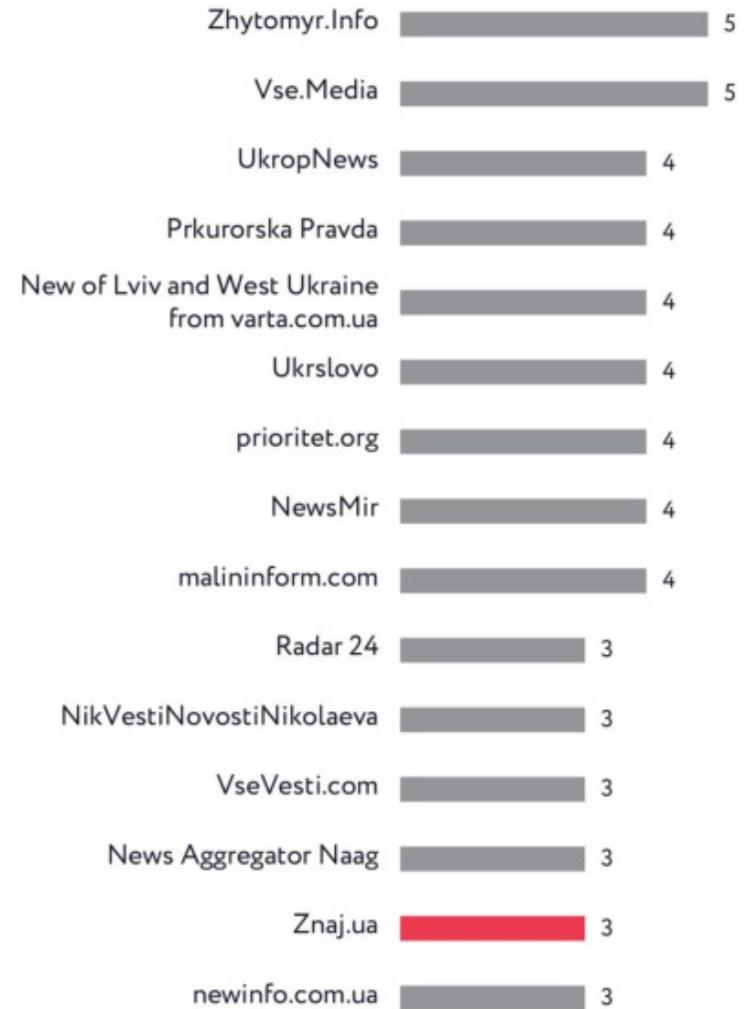
GEOGRAPHY



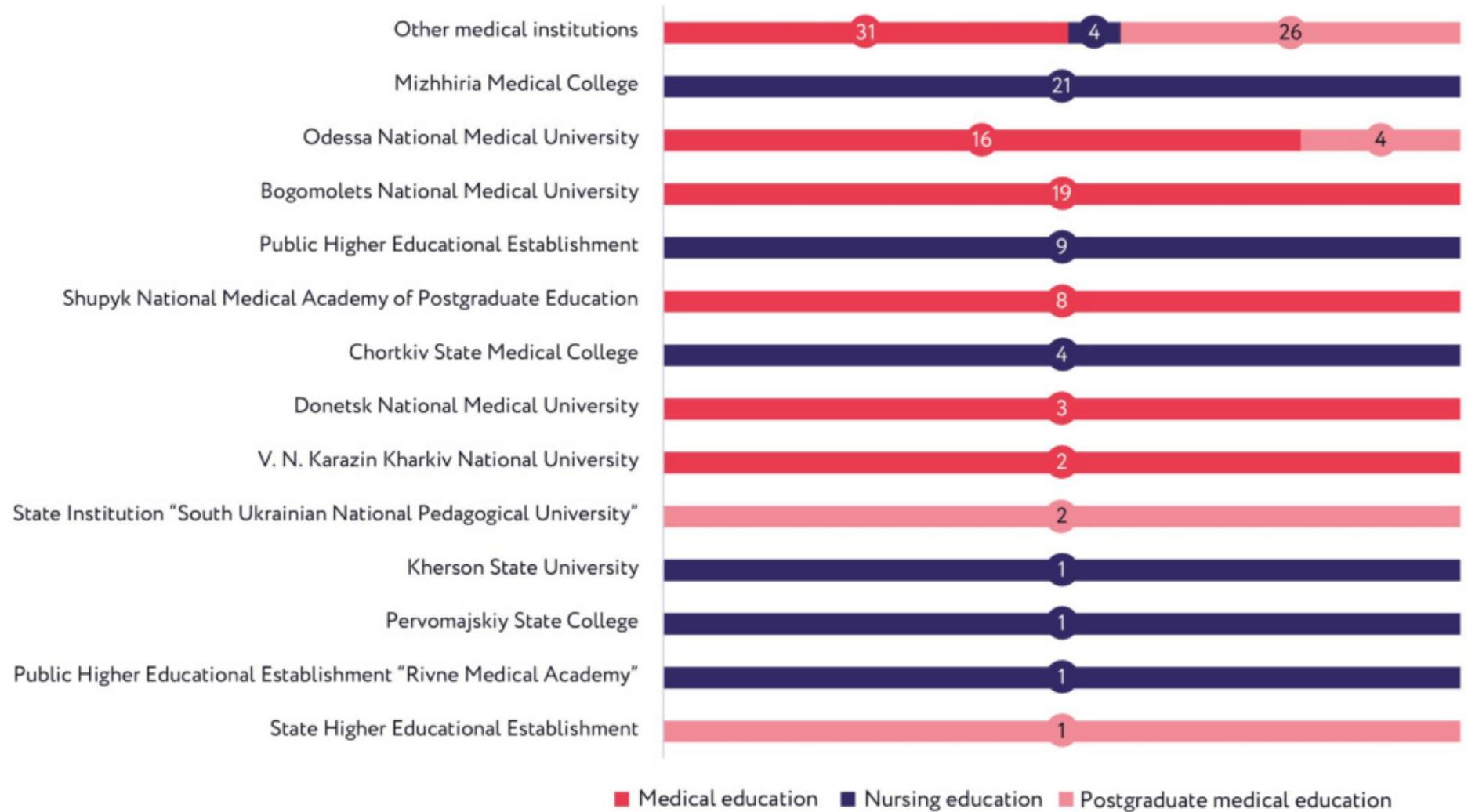
CATEGORIES



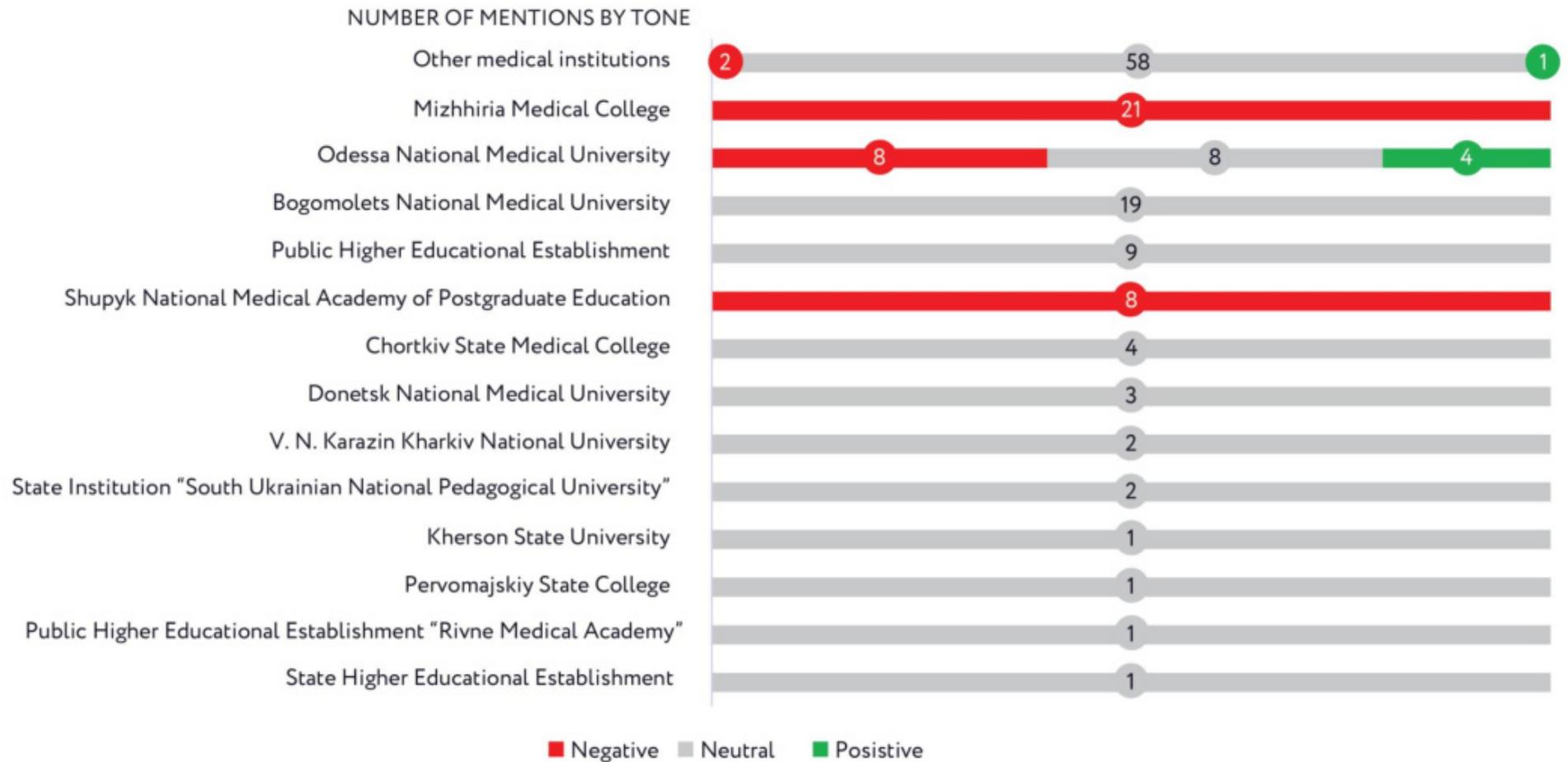
TOP MEDIA



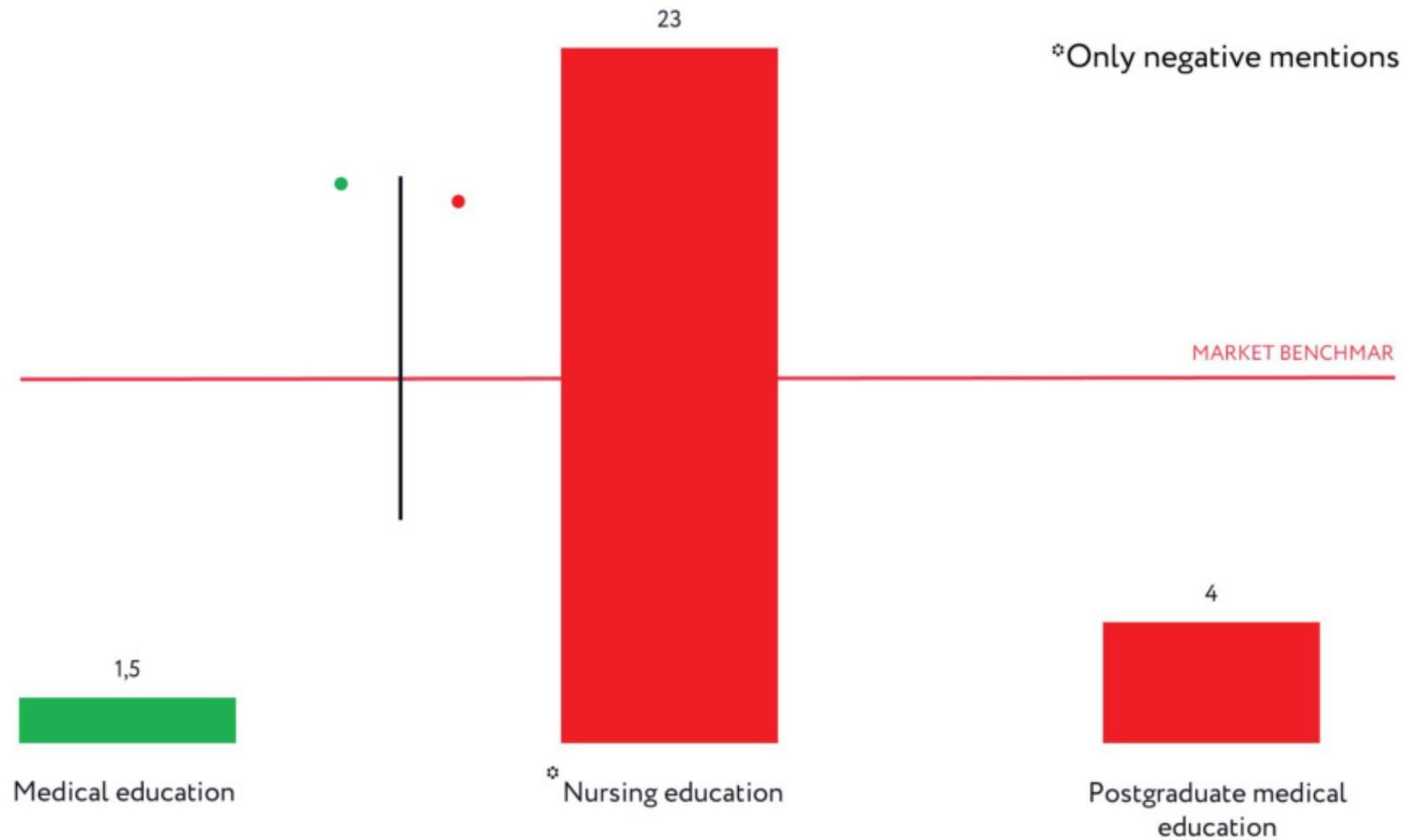
MEDIA HITS (UNIVERSITIES)

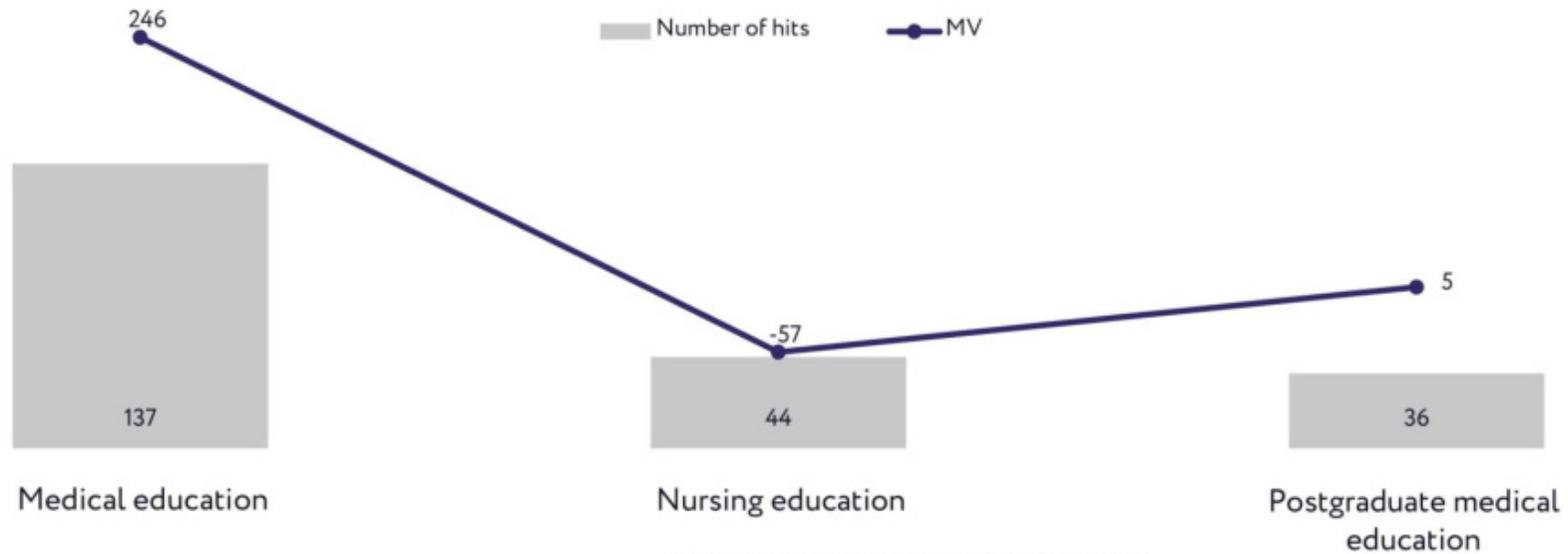


MEDIA HITS (UNIVERSITIES)



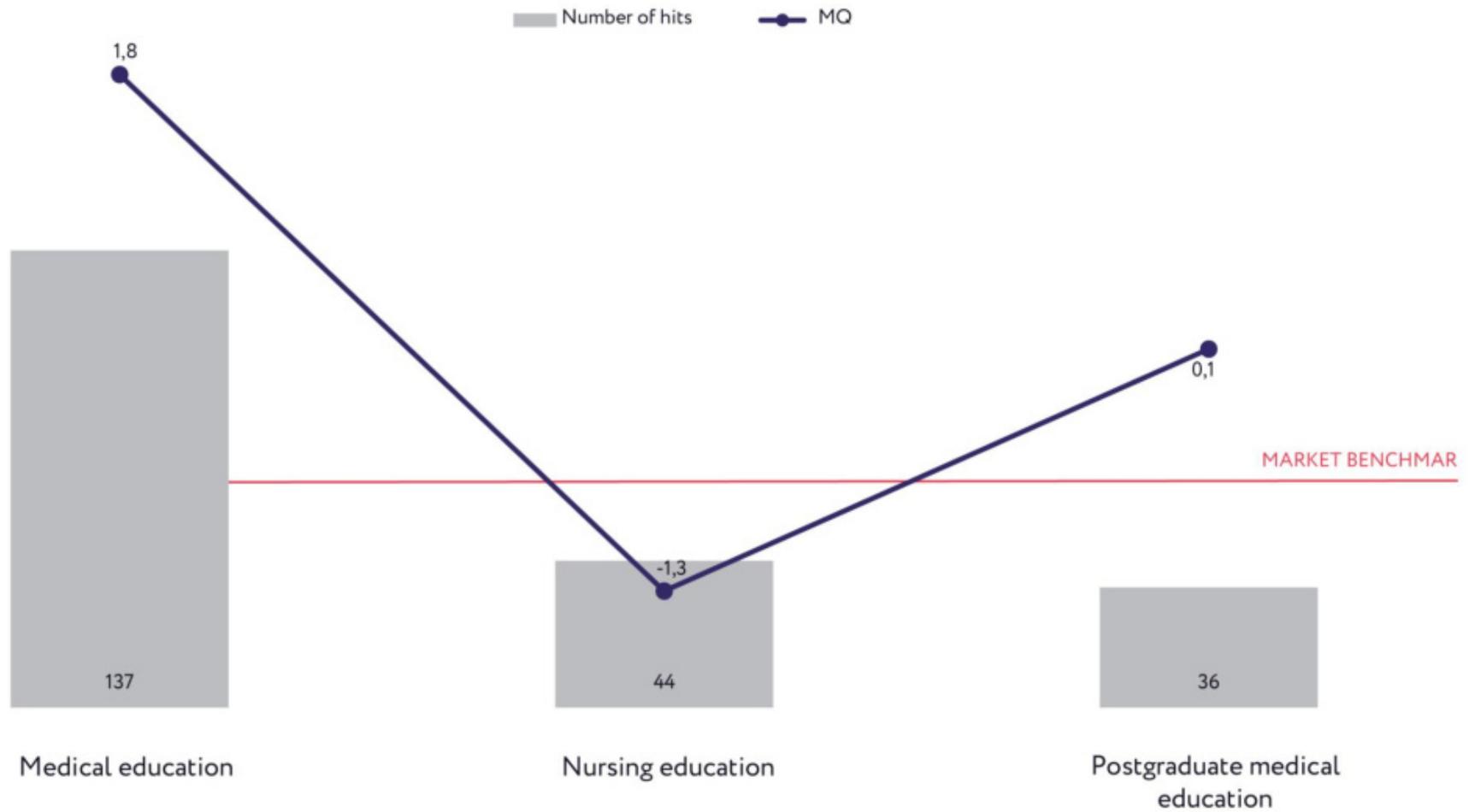
MEDIA FAVOURABILITY INDEX





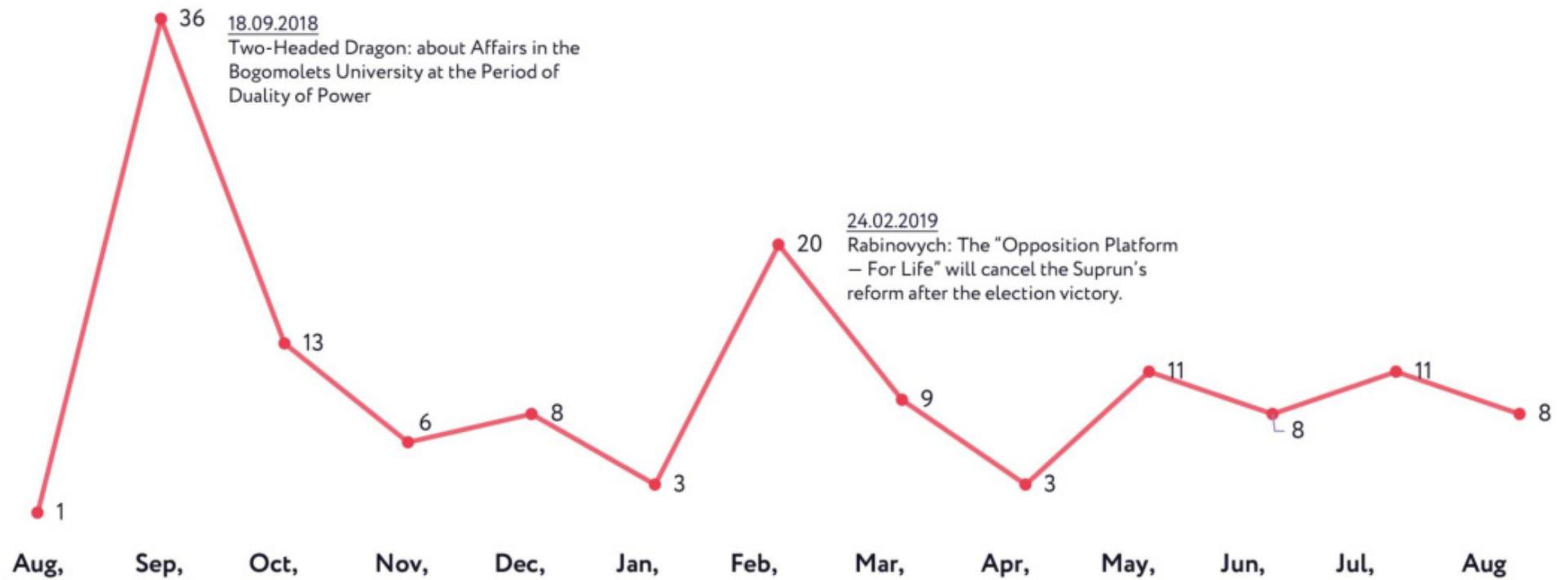
Dynamics of Media Visibility by Months

	Medical education	Nursing education	Postgraduate medical education
Aug	3	0	0
Sep	190.125	-68.25	0
Oct	-84.25	0.75	0
Nov	20.187	3	0.75
Dec	37.062	0	0.25
Jan	3	5	0.125
Feb	15.5	1.75	1.625
March	10.406	-2.25	1.875
Apr	0.687	0	0
May	26.25	0	2.625
June	6.25	0.5	0.125
July	4.875	2.25	-2
Aug	12.75	0	0

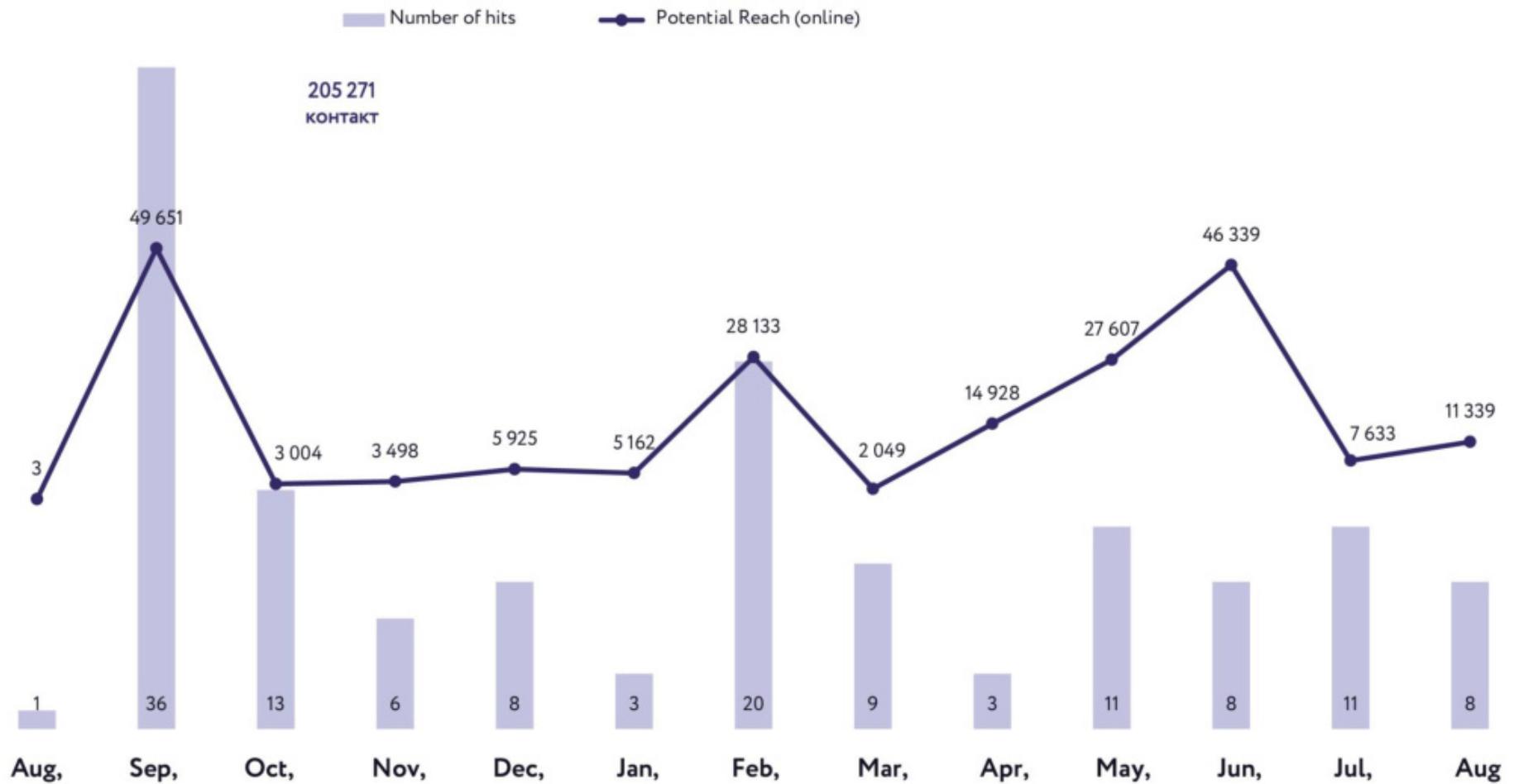


DYNAMICS OF HITS IN TRADITIONAL MEDIA

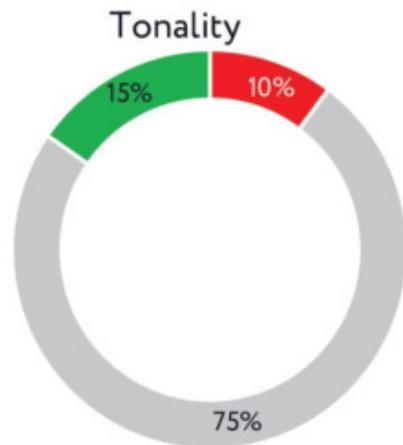
137 publications



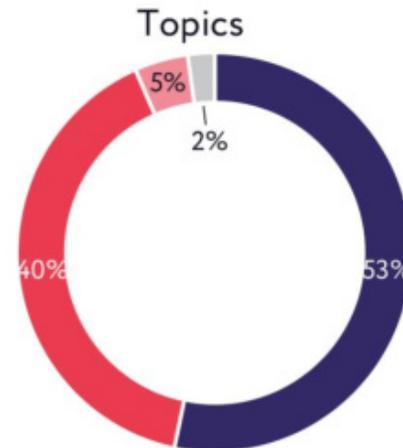
POTENTIAL REACH



TONALITY AND TOPICS



■ Negative ■ Neutral ■ Positive

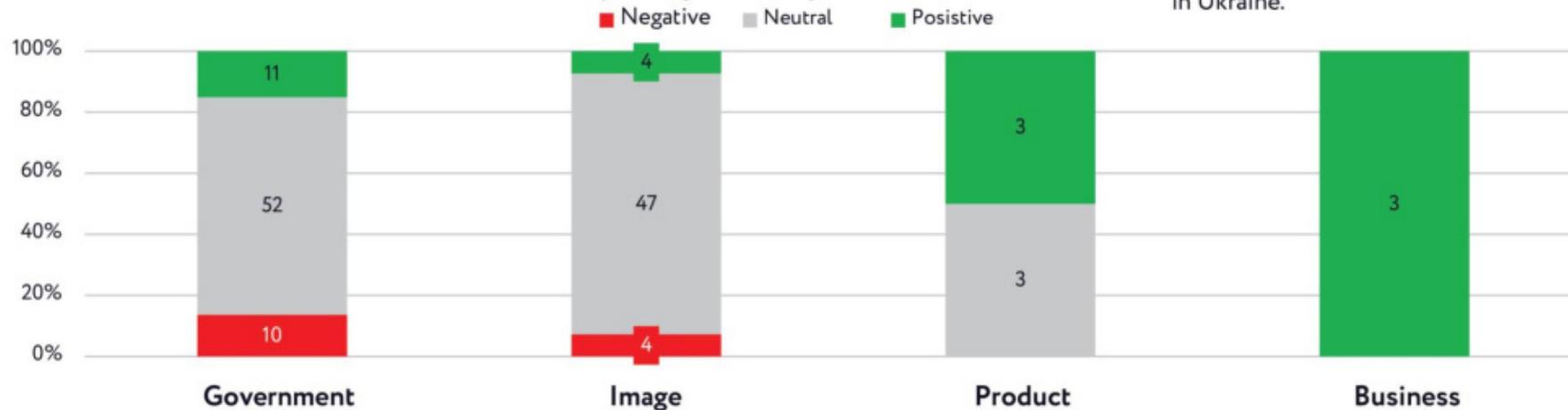


■ Government ■ Image ■ Product ■ Business

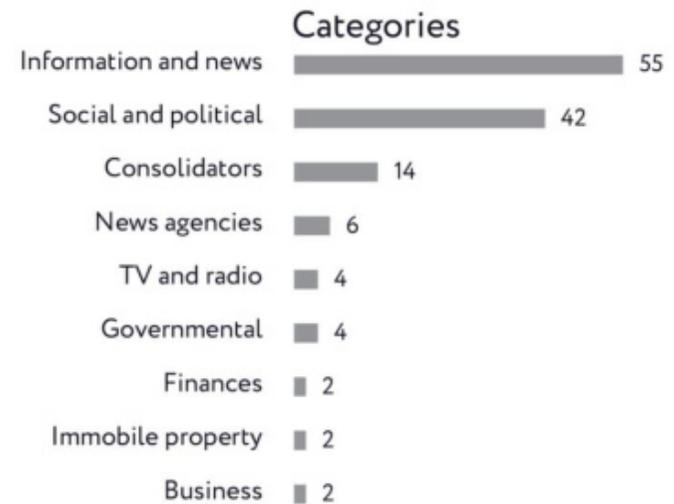
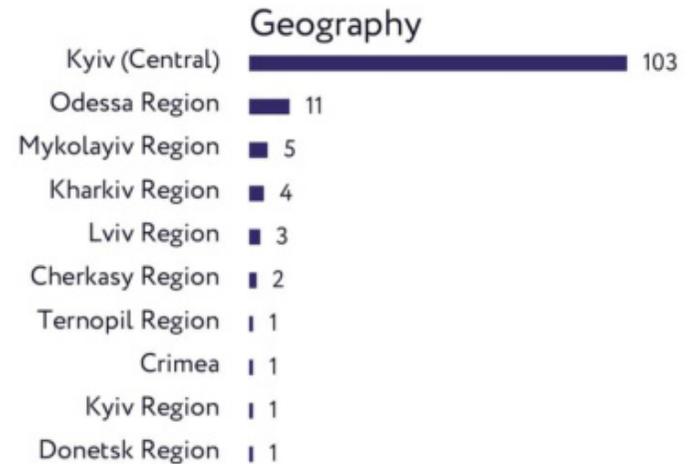
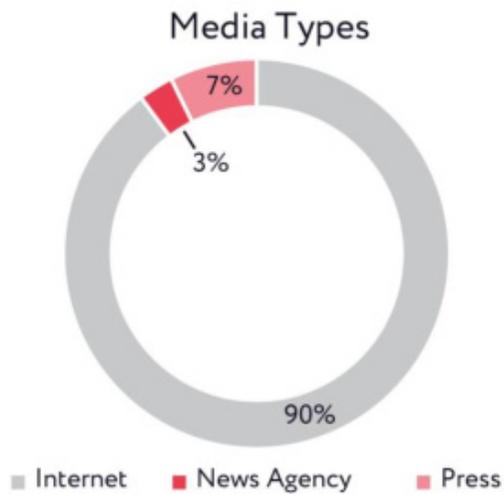
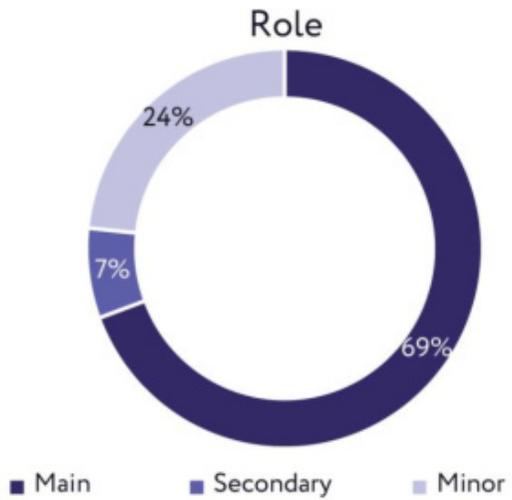
Explanation:

- The main negative topics:
 - Minister of the Ministry of Health Ulyana Suprun is trying to reform the Shupyk National Medical Academy of Postgraduate Education;
 - Former Rector of the Odessa Medical University Zaporozhan continues to destroy and embezzle the University with the help of his supporters.
- The main positive topic is related to information about the proposition of the MoH of Ukraine to establish standards of medical education of developed countries in Ukraine.

Topics by Tonicity



ROLE, TYPES OF MASS MEDIA, GEOGRAPHY AND CATEGORIES

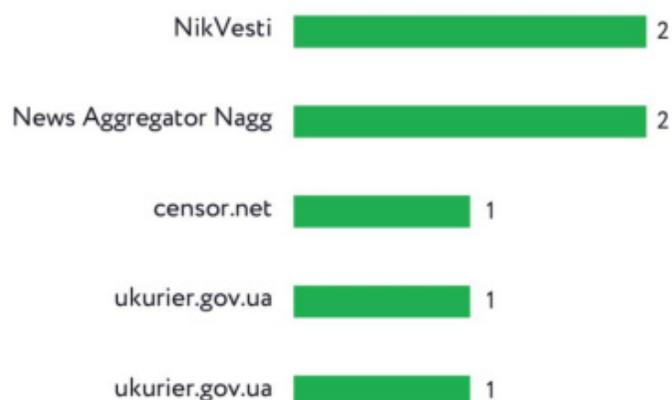


MASS MEDIA

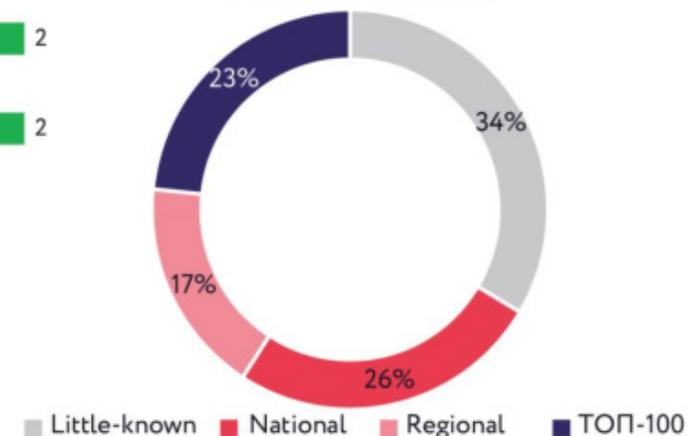
Top Media



Top of Positive Media



Level of Sources



Top of Negative Media



Two-Headed Dragon: about Affairs in the Bogomolets University at the Period of Duality of Power*Repetitions: 9*

Future doctors who entered the Bogomolets National Medical University (NMU) this year can observe an interesting dualism even in social media: on Facebook, there are two pages of the higher educational institution, at each of which statements that are contradictory by their meanings are published. The large-scale reform of the sector has affected not only primary link, but also the entire system of medical education. However, in key medical higher educational establishments, they are the spirit of resistance and behind-the-scenes games with forgery and duality of power.

Suprun – Hulchyi: an Operation aimed at the Breakup of the Shupyk National Medical Academy of Postgraduate Education has been already Launched*Repetitions: 7*

The Shupyk National Medical Academy of Postgraduate Education

is to become the next victim of the reformer. Shupyk National Medical Academy of Postgraduate Education Preliminary reforms to seize the institution are already in progress: a scheme of actions remains the same, and it is Vice-Rector of the Academy Olesya Hulchyi who has to help Mrs. Suprun in the implementation of the plan.

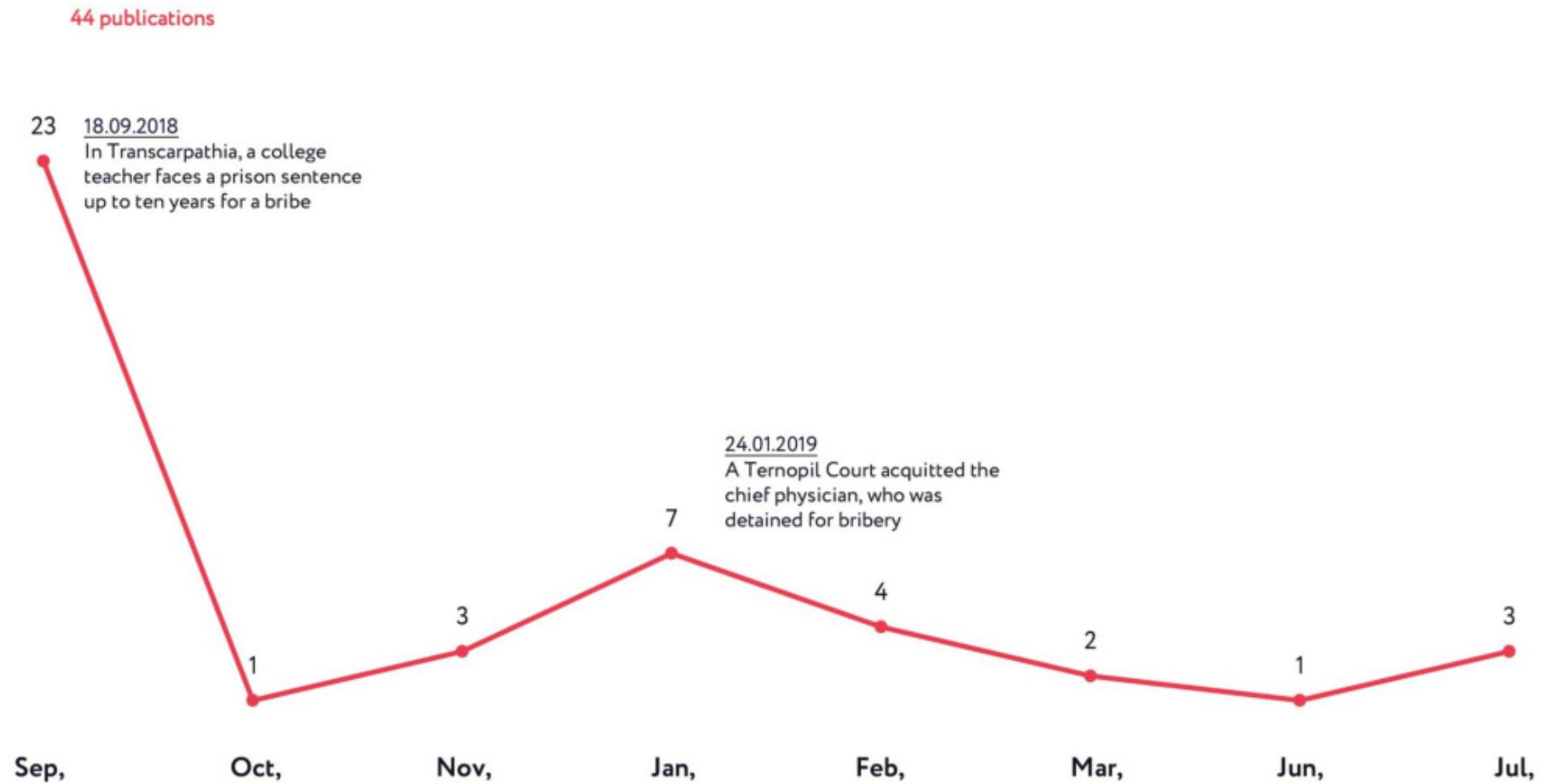
The Ministry of Health proposes to establish in Ukraine standards of medical education of developed countries*Repetitions: 6*

The Ministry of Health presented a new strategy for medical education, one of the main principles of which is the compliance with programs of medical training in developed countries. "Medical education is the priority of the government and Ministry of Health. We are not looking for ways to close something, we are search for ways to increase the trust of patients to the doctor and the level of medical care," acting Minister of Health Ulyana Suprun said during the presentation of the strategy in Kyiv on Wednesday.

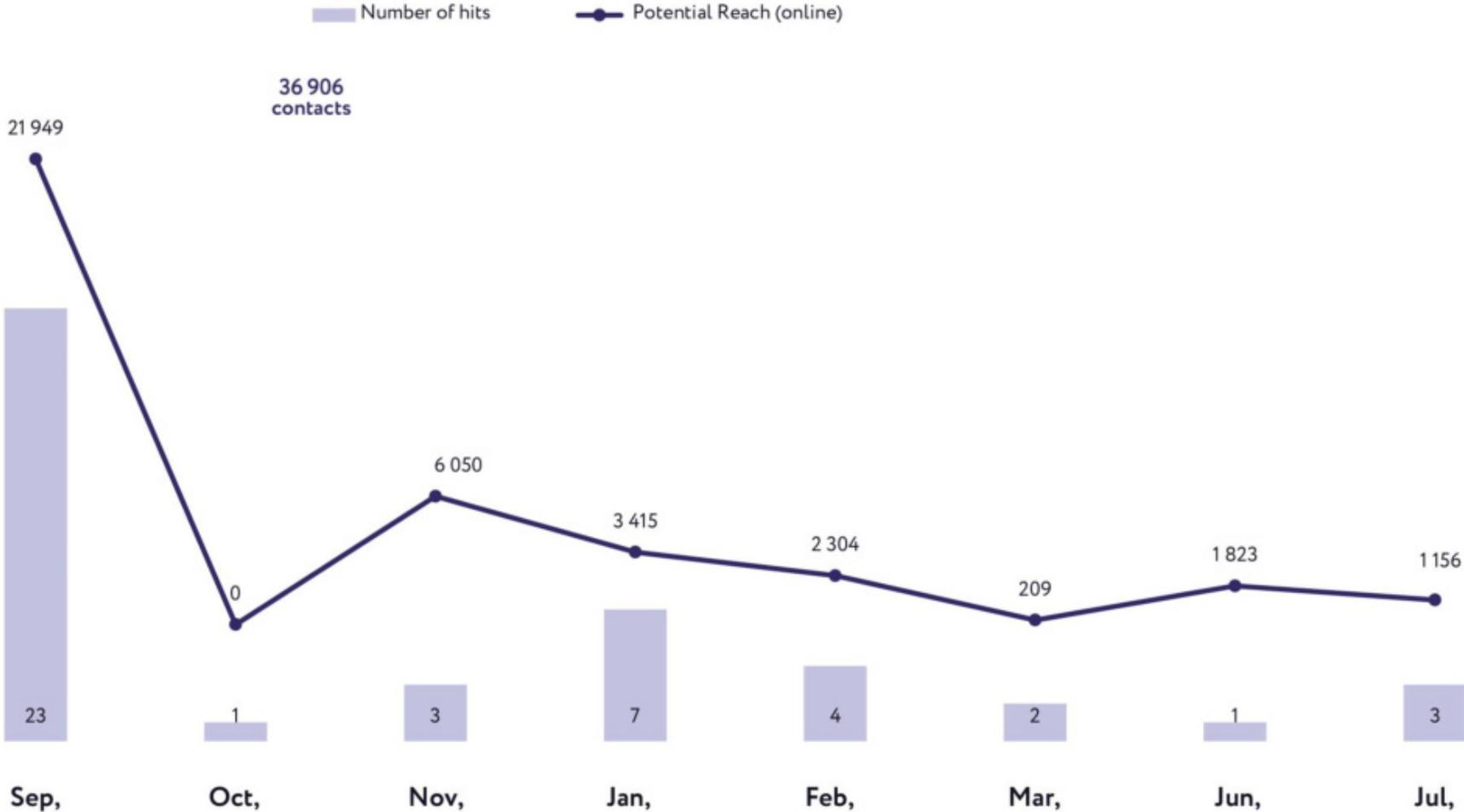
Rabinovych: The "Opposition Platform – For Life" will cancel the Suprun's reform after the election victory.*Repetitions: 6*

Authorities represented by acting Minister of Health Ulyana Suprun deprives Ukrainians of opportunities to be treated in a proper way and deprives health workers of the possibility to work in an adequate atmosphere. The essence of the of health care reform only boils down to exterminate people as many as possible, to legalize transplantation of organs and destroy a system of free health care. This statement was made by People's Deputy, Chairperson of party "Opposition Platform – For Life" Vadym Rabinovych during a live author's program on the channel "112".

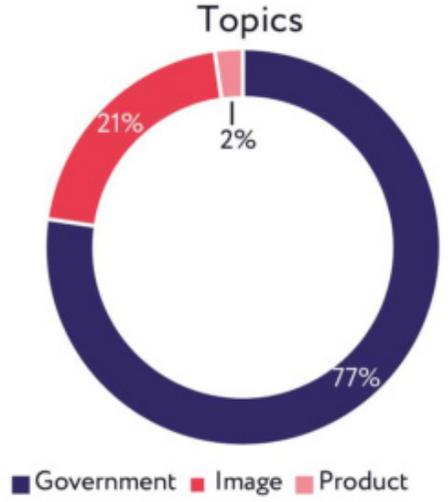
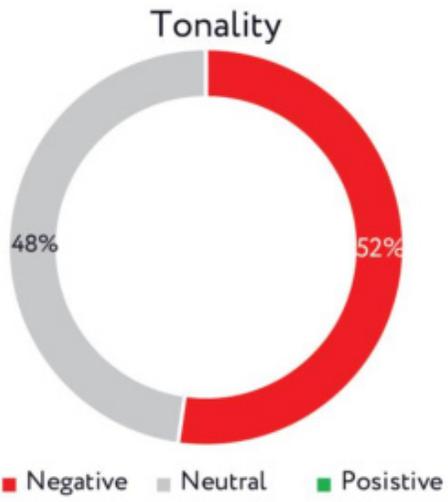
DYNAMICS OF HITS IN TRADITIONAL MEDIA



POTENTIAL REACH

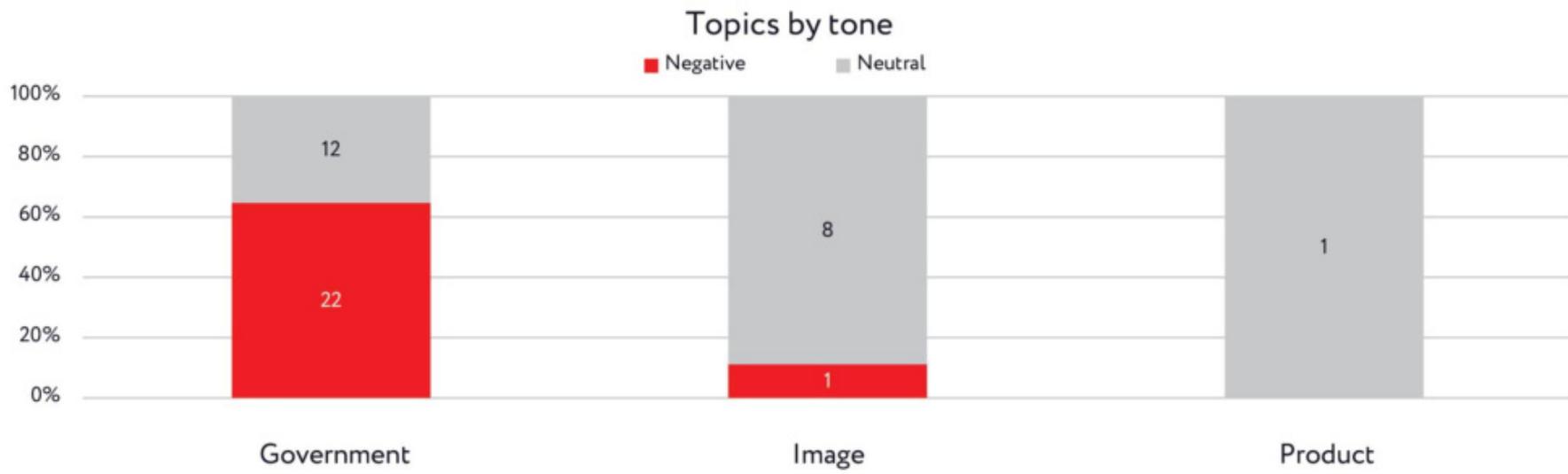


TONALITY AND TOPICS

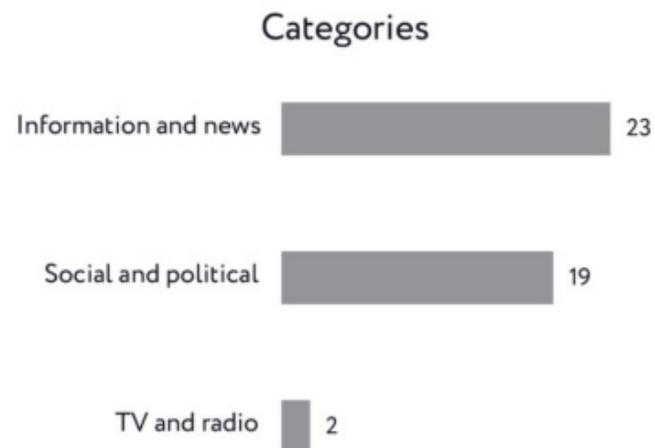
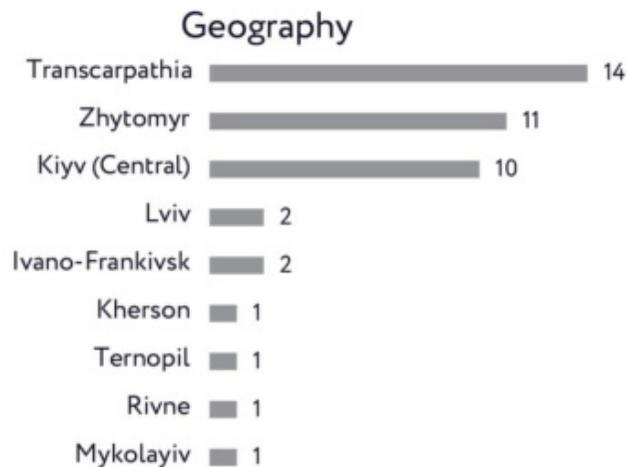
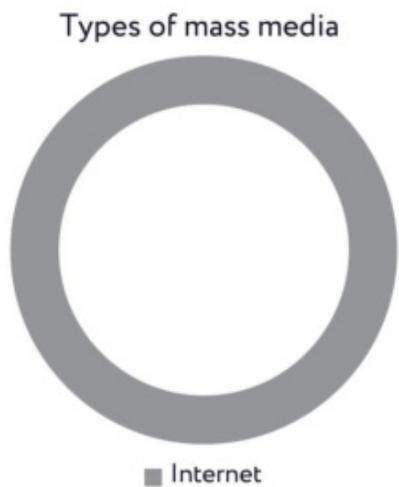
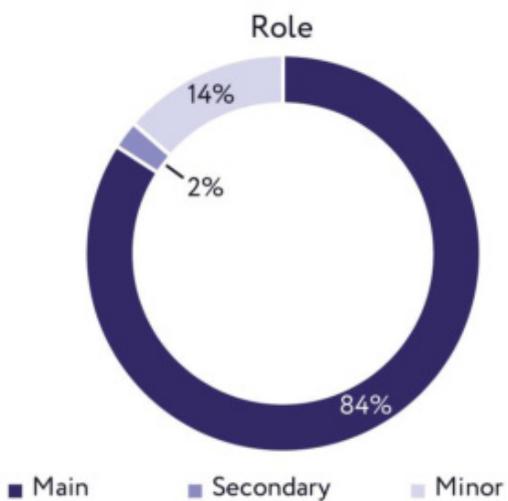


Explanation:

- The main negative topic is related to bribetaking by a teacher of the Mizhhiria Medical College in Transcarpathia.
- There are no positive topics.

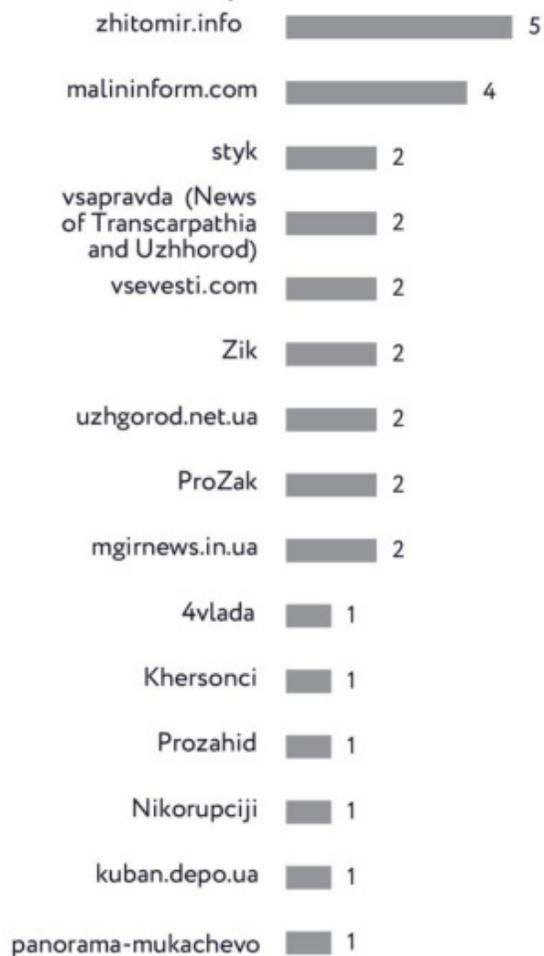


ROLE, TYPES OF MASS MEDIA, GEOGRAPHY AND CATEGORIES



MASS MEDIA

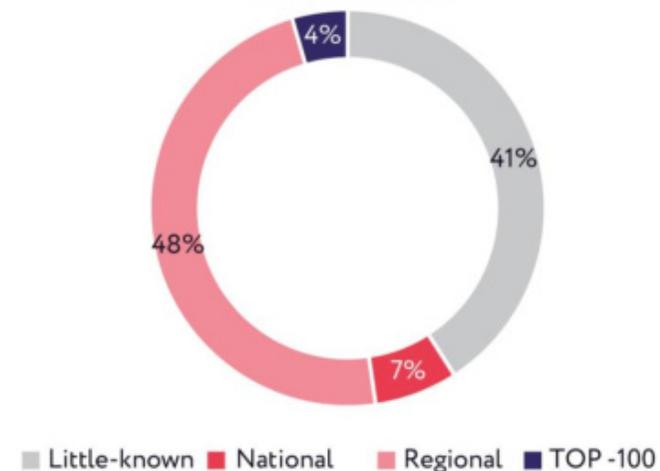
Top Media



Top of negative media



Source level



A teacher of the Mizhhiria Medical College will be brought to court for taking bribes*Repetitions: 13*

It has been found that a teacher of the Mizhhiria Medical College did not give marks on the subject taught by her to students and extorted money from them by threatening them with the non-transfer to the next course of training. Later, in the classroom of the medical college, the suspect received from a student a part of the previously agreed improper advantage in the amount of 2600 hryvnias.

In Transcarpathia, a college teacher did not give final marks to students until they gave bribe*Repetitions: 2*

The prosecutor's office has finished the investigation in respect of a teacher of Mizhhiria Medical College and has brought the matter to court. The prosecutor's office has found that the college teacher did not give students exhibited final marks for their subject taught by her, until they gave the bribe. She threatened students that would not be transferred to the next course without the final mark.

Scandalous ex-director of the Berdychev medical college was not allowed to speak at the session of the Zhytomyr region*Repetitions: 2*

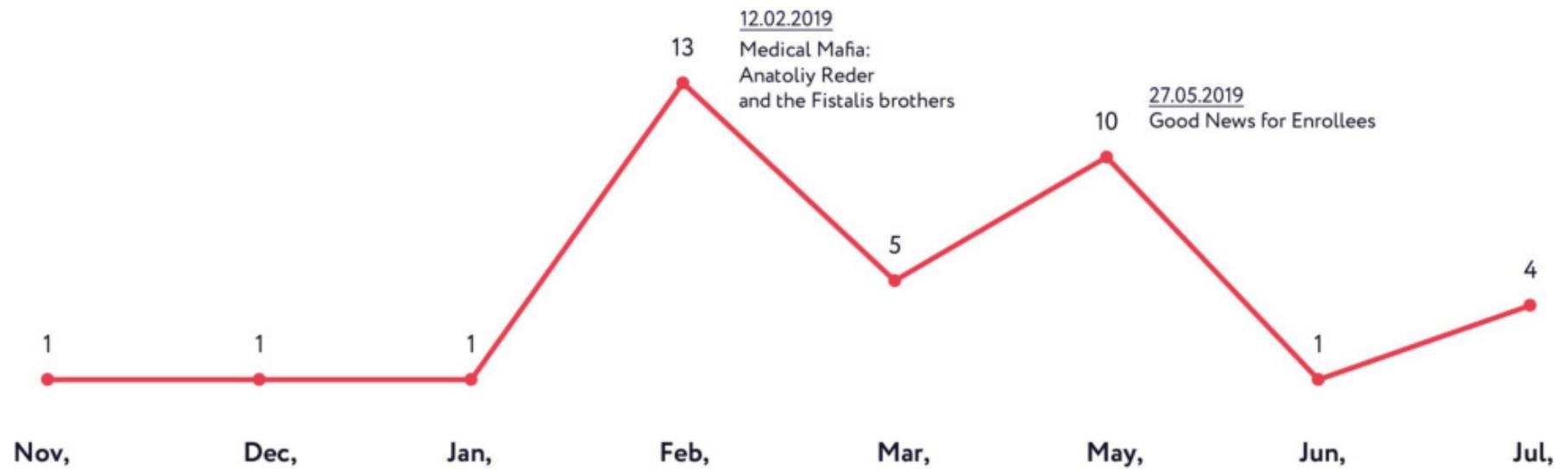
Dismissed director of the Berdychev medical college Volodymyr Klymenyuk wanted to speak at the session, but failed to do so. Klymenyuk was given the floor to speak at the end of the extraordinary session of the Zhytomyr Regional Council held on July 9. "Till when the Berdychev medical college will be managed by a "flatfoot", who is covered by the head of the regional council and chairman of the supervisory board Romanskyy (a deputy of the regional council, runs for a people's deputy in election district number 63 – Ed.). I'll tell you that he hired a woman who is a deputy. chief accountant , in buffet, they sell products from Vinnytsia, every day, they put in the pocket....," Klymenyuk began his speech, but he was not allowed to speak without being interrupted.

The Zhytomyr Regional Council announced a competition for the position of director of Berdychev medical college*Repetitions: 1*

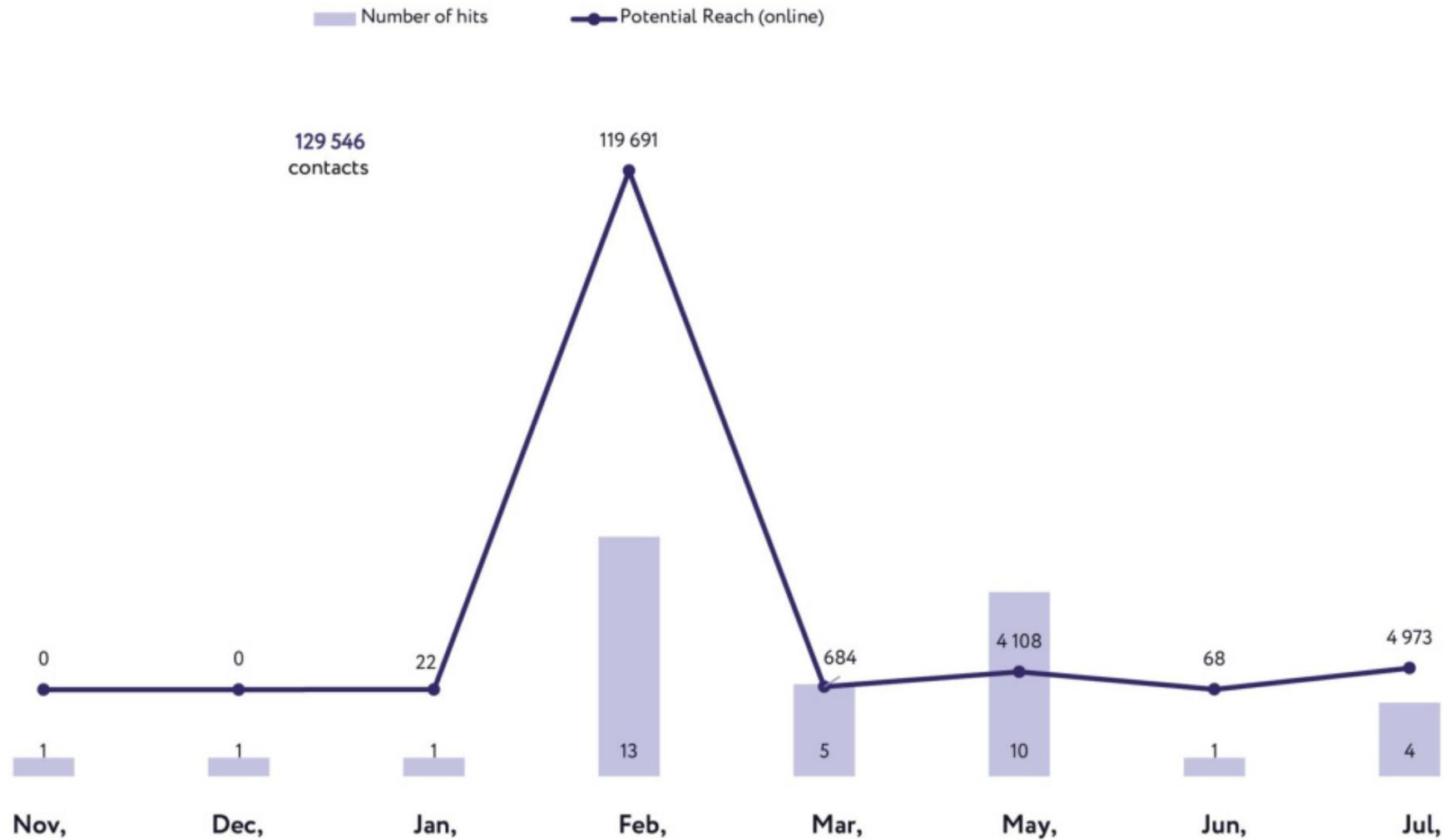
The Zhytomyr Regional Council announced a competition for the position of the Director of Public Higher Educational Establishment "Berdychev Medical College". The notice of the competition was published on November 29 by the press service of the Zhytomyr Regional Council. In accordance with the law, heads of higher educational establishments are to be elected by the collective by means of secret ballot for five years.

DYNAMICS OF HITS IN TRADITIONAL MEDIA

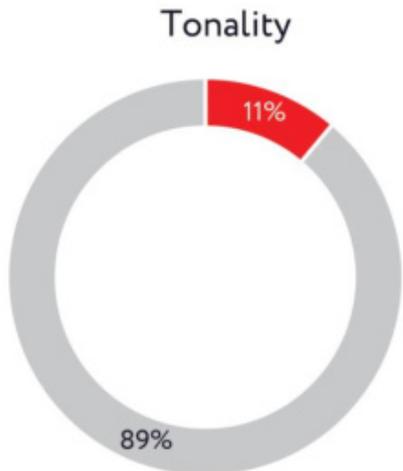
36 publications



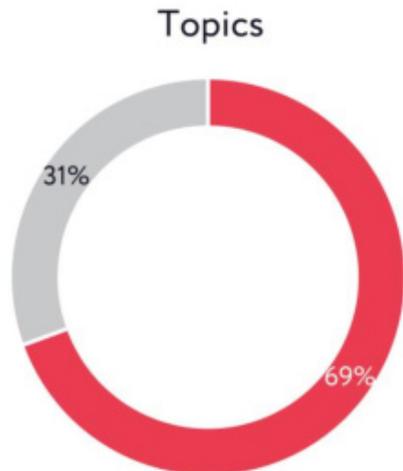
POTENTIAL REACH



TONALITY AND TOPICS



■ Negative ■ Neutral ■ Positive

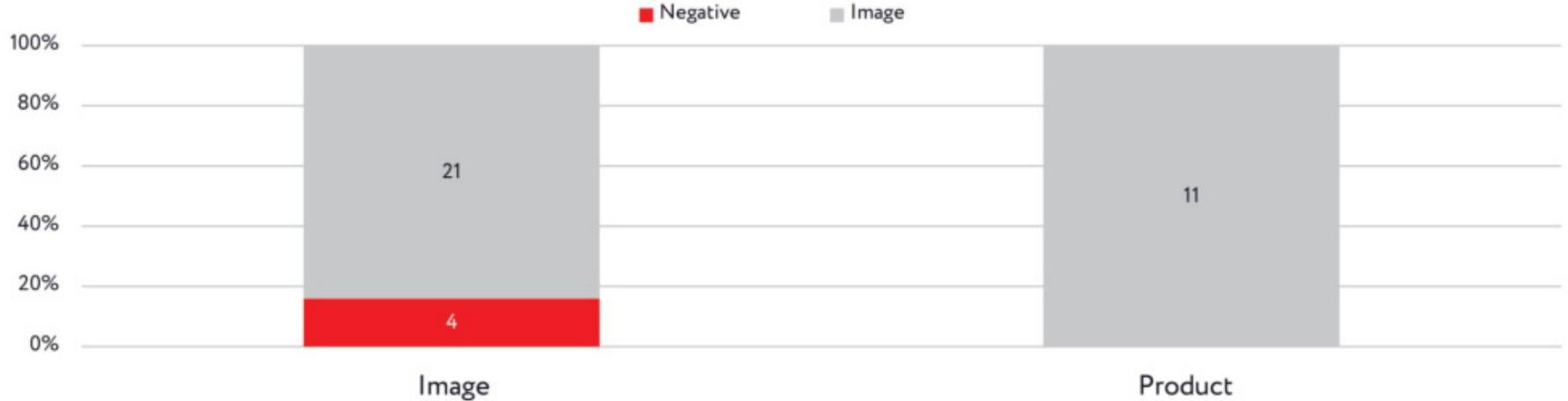


■ Image ■ Product

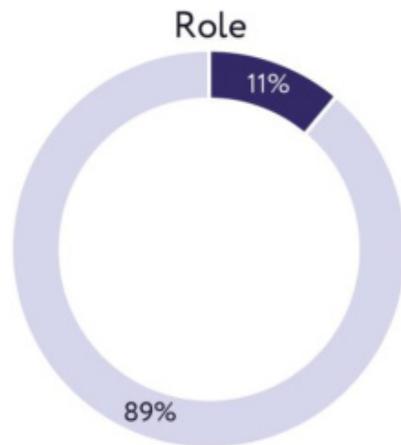
Explanation:

- The main negative topic is about functioning of the Odessa Medical University and, in particular, its former rector Zaporozhan.
- There are no positive topics.

Topics by tonality



ROLE, TYPES OF MASS MEDIA, GEOGRAPHY AND CATEGORIES



■ Main ■ Secondary ■ Minor

Types of mass media

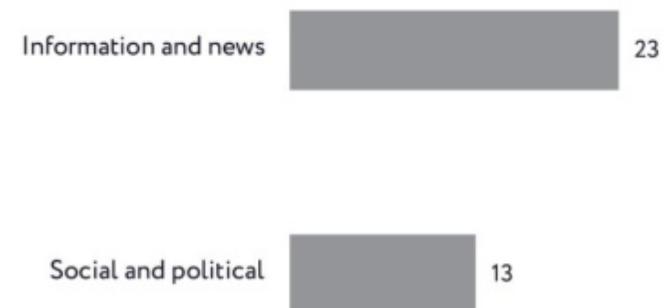


■ Internet

Geography



Categories



MASS MEDIA

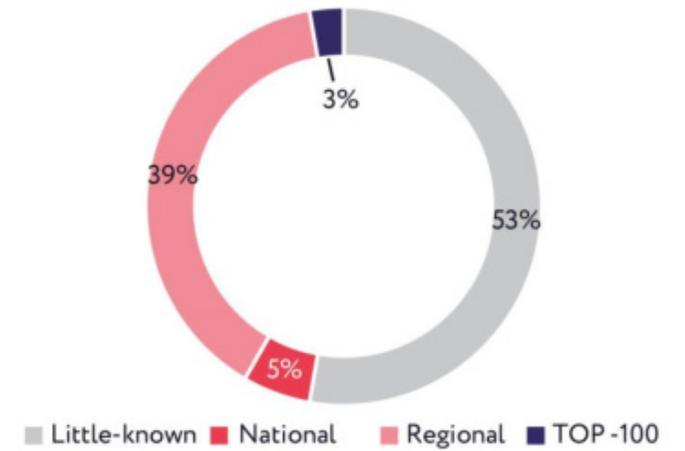
Top Media



Top of negative media



Source level



Medical Mafia: Anatoliy Reder and the Fistalis brothers***Repetitions: 11***

The domestic pharmaceutical market continues to be a breeding ground for businessmen with doubtful reputation – too large amounts: both budget funds and those out of the pockets of the population, circulate in this sphere. The most prominent businessmen in the sphere of pharmacy in Ukraine remain Peter Bahriy (PJSC "Hansa", LLC "Pharmaceuticals of Regions"), a People's Deputy and the owner of CJSC "Pharmaceutical Company "Darnitsa", Hleb Zahoryy, Borys Lytovskyy (LLC "Norton Ukraine" and many others), Mykola Kuzma (LLC "Ukrmed").

Good News for Enrollees***Repetitions: 8***

The Pylyp Orlyk has obtained a license for the first specialty in Ukraine, training for which will be carried out according to European standards. Public health is a popular specialty in universities in Europe and America. This year, it appeared for the first time in Ukraine. Training of specialists by this specialty are based on the world's best practices and the experience of such institutions in Ukraine as the State Sanitary and Epidemiological Service, health centers, centers of medical statistics, social protection of population and others. The specialty is based on the nationwide principle "Health is in all the policies of the country".

Former rector of the Odessa Medical University Zaporozhan continues to destroy and embezzle the higher educational establishment with the help of his supporters***Repetitions: 3***

The former rector built a strict hierarchy and system of kickbacks. Extortion of bribes for the transfer to the budget form of education, "charitable" contributions of future physicians for a place in the prestigious internship or post graduate studies, mediation of the administration of the higher educational establishment in solving problems with unfulfilled program requirements, daily extortion, sold and destroyed dormitories, old textbooks – all these are terrible realities of students' life.

Students of the DonNTU will participate in a new international project***Repetitions: 1***

Head of the Department of Postgraduate and Doctoral Studies of the DonNTU Oleksandra Seld told students more details about the program. Her speech was complemented a video message of manager from London Ivan Zhupych, the chief British curator of the DonNTU students in Kingston.