How Are Pedagogical Practices Associated with Cheating among Students of Russian Universities

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Abstract

Student academic dishonesty is one of the most serious problems of higher education in Russia and all over the world. This problem became especially severe and widespread during a mass forced transfer to distant education followed by the Covid-19 pandemic. In this regard, it is highly demanded to find affordable measures to combat academic dishonesty, some of which can be implemented at the level of the organization of the learning process. The purpose of this study was to assess and analyze the relationship between the prevalence of passive and active pedagogical practices and academic cheating among students. Based on pieces of evidence, we hypothesized that students are more likely to cheat in conditions where their classes are organized mostly around passive educational practices such as writing down or retelling the course material. The empirical basis of this study is data gathered within the project "Monitoring of education markets and organizations" in spring 2020. Students of full-time bachelor and specialist programs of Russian higher educational institutions were surveyed. The sample includes 17,316 students from 291 Russian universities. Data analysis was carried out using a series of binary multilevel logistic regressions with the sequential addition of groups of individual and group level variables. This study was the first to show the relationship between different pedagogical practices and student cheating. The main result of this study can be considered a confirmed positive relationship between the prevalence of rewriting and retelling of the course materials during seminars (passive pedagogical practices) and student cheating. The second hypothesis about the relationship between active pedagogical practices and cheating received partial confirmation. The results of this study may be used as a base for recommendations for instructors and administrators of universities to enforce student academic integrity and reduce the prevalence of cheating among them.

Keywords

academic dishonesty, higher education, pedagogical practices, distant education, academic dishonesty, cheating.

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Academic cheating is a serious problem in higher education in Russia and all over the world. According to recent studies, 40% of Russian students cheated at least once in the academic year on a credit test or examination [Sukhanova, Froumin, 2021]; a third of students (34%) did the assignments they were supposed to do independently together with other students; and about a quarter of students (25%) photocopied lecture notes and summaries of primary sources taken by other students [Rudakov, Roshchina, 2018]. Moreover, comparative studies show that Russian students are more tolerant of cheating and use it more often than European and U.S. students [Lupton, Chaqman, 2002; Magnus et al., 2002; Grimes, 2004]. Teachers in various countries report that as universities have massively gone online due to the COVID-19 pandemic, controlling students' academic integrity has become very difficult [Mukhtar et al., 2020]. Student academic dishonesty is one of the main challenges of distance education, and it is becoming increasingly common [Guangul et al., 2020].

Cheating and other types of dishonest behavior can be combated, for instance, by introducing proctoring in quizzes and tests. This measure is an effective way to reduce the prevalence of cheating [Davis, Rand, and Seay, 2016; Karim, Kaminsky, and Behrend, 2014], but is costly and therefore unaffordable for most universities. In addition, universities are actively introducing codes of and courses on ethics aimed at instilling the values of academic integrity in students. However, research shows that these measures reduce the prevalence of cheating insignificantly [Bloodgood, Turnley, and Mudrack, 2008; Corrigan-Gibbs et al., 2015; Tatum et al., 2018]. Another solution to the problem of cheating could be to introduce a system of sanctions with strict penalties for cheating, including reporting the misconduct to the university administration by a teacher. However, only a few university teachers in Russia are ready to use this measure [Chirikov et al., 2020; Shmeleva, 2016]. Besides, some studies have provided paradoxical results: there is either no relationship between academic cheating and students' perceptions of the severity of punishment, or this relationship is positive [Passow et al., 2006; Harding et al., 2007].

Thus, there is a demand for feasible and affordable measures to combat cheating, especially those that can be implemented at the organizational level of the learning process. For example, students are less likely to cheat if they are assessed using randomized or personalized tests and classes are delivered in the form of student presentations [Guangul et al., 2020]. The objectives teachers set for the students — achieving mastery or demonstrating good performance — matter as well [Anderman, 2007]. The present study investigates how the pedagogical design of classes, namely the use of certain teaching practices, is related to student cheating.

1. Literature Review

1.1. Why it is important to study teacher behavior to prevent students' dishonesty

The prevalence of cheating is related to contextual factors determined by the educational environment, for instance, the frequency with which fellow students use dishonest practices [McCabe, Feghali, Abdallah, 2008; Megehee, Spake, 2008] and students' attitudes towards the teacher [Murdock, Beauchamp, Hinton-Dampf, 2008]. One of the major contextual factors is teacher behavior [Bluestein, 2015; Lang, 2013; Simon et al., 2004; Broeckelman-Post, 2008]. Through direct contact with students, teachers can create and maintain an educational environment in which dishonest practices are kept to a minimum.

Several characteristics of teacher behavior are particularly closely related to the prevalence of cheating: teachers' immediate reactions to cheating [Chirikov et al., 2020; Yu et al., 2016; Shmeleva, 2016; McCabe, Butterfield, Trevino, 2006], teachers' warning about the unacceptability of cheating and clarifying the consequences [Broeckelman-Post, 2008; Mahmoud et al., 2020], as well as the availability of clear requirements and relevant instructional material [Murdock, Miller, Goetzinger, 2007]. Students' decisions to cheat depend on their attitudes towards the teacher: students who disrespect their teacher and consider him or her incompetent and dishonest are more likely to use dishonest practices in the learning process [Murdock, Beauchamp, Hinton-Dampf, 2008]. Thus, a positive experience of teacher-student interaction can generate respect for the teacher in students and, consequently, reduce the likelihood of cheating behavior [Bluestein, 2015; Sivak, 2006]. At the same time, scientific literature provides little evidence on the nature of the relationship between the prevalence of cheating and the pedagogical practices teachers use in the classroom.

1.2. What is known about the relationship between academic dishonesty and the way classes are organized

Current research shows that what matters is the goals teachers set for their students (see the following meta-analysis: [Krou, Fong, Hoff, 2021]). Students whose teachers prioritize mastery are less likely to cheat in their studies than those whose teachers encourage performance-oriented learning [Anderman, 2007; Anderman, Cupp, Lane, 2009]. The mastery-oriented learning is characterized by teachers encouraging students' efforts and improvement, while the performance-oriented instruction encourages comparisons of students' performance in the classroom, promotes competition, and prioritizes grades.

Furthermore, the prevalence of cheating can be reduced if the assessment of student performance is organized in a way that limits the opportunities to cheat, for instance, by organizing classes based on student presentations, conducting randomized and personalized tests, and using the procedures and principles of case-based problem solving [Guangul et al., 2020; Toledo et al., 2021; Scott, 2017].

A pedagogical design dominated by passive learning practices can contribute to the proliferation of cheating among students. Passive practices focus on memorizing and reproducing the knowledge obtained from the instructor who provides students with the solutions [Prince, 2004]. The examples are the copying and retelling of the learning content. Traditionalism in education, which is characterized by passive learning practices, is usually opposed to the constructivist approach and active pedagogical practices that aim to engage students in the process of knowledge acquisition and let them solve problems independently [Beswick, 2007; Carr, Palmer, Hagel, 2015]. These practices include, among other things, participation in class discussions, application of theoretical concepts to case studies, and making presentations.

The relationship between particular pedagogical practices and cheating has not been studied using the Russian data yet, while current research in related fields provides contradictory results. In general, student engagement in the learning process is positively related to students' perceptions of the integrity of the educational environment, but the more involved students are in class discussions, the more likely they are to report that other students have cheated on credit tests and examinations [Maloshonok, 2016].

1.3. How classes are organized in Russian universities

In Russian universities, passive learning practices are widely used. Approximately 70% of students in economics and management programmes spend most of their class time writing down what the lecturer dictates and copying what is written on the blackboard or the projection screen [Chirikov, 2015]. According to the results of the nationwide student survey conducted in the summer of 2021, these practices prevail; about 90% of students at least in some classes have copied down the content of the slides, have written down the learning material to the teacher's dictation, and have had to memorize lecture notes or the content of a study guide, while those who reported the use of active learning practices by teachers, such as applying theories to practice, were much fewer [Sukhanova, Froumin, 2021].

Foreign studies have suggested a relationship between cheating and the predominance of copying, memorizing, and reproducing learning materials in the learning process [Pabian, 2015]. Thus, we can expect that students who are taught using mostly passive practices are more likely to cheat (Hypothesis 1). Conversely, students who are taught based on mostly active practices are less likely to cheat (Hypothesis 2).

In order to test these hypotheses, we analyze the relationship between students' responses on the frequency of cheating and those on the frequency of teachers' use of certain pedagogical

practices, namely copying and retelling the learning content (passive practices), participating in class discussions, applying theoretical concepts to case studies and making presentations (active practices).

2. Data

The empirical basis for the study is the data from the project *Monitoring of education markets and organizations*, which surveyed students of full-time education programmes at Russian higher education institutions during the distance learning period in the spring of 2020. Participants from the target group were recruited using administrative recruitment and river sampling[1]. Prior to analysis, the survey data were weighted to adjust for quotas for organizations.

Table 1. **Characteristics of the Study Sample, *N* = 17,316**

Variable	Category	Percentage (%)
Student gender	Female	66.3
	Male	33.7
Year of study	1st year	33.8
	2nd year	29.4
	3rd year	26.2
	4th year	10.6
Field of study	Humanities	9.4
	Public Health and Medical Sciences	8.9
	Engineering, Technology and Engineering Sciences	17.2
	Arts and Culture	3.3
	Mathematical and Natural Sciences	18.1
	Social Sciences	25.3
	Education and Pedagogical Sciences	14.1
	Agriculture and Agricultural Sciences	3.6
University status	Leading	14.5
	Flagship	10.9
	Other	74.6

The study sample included responses of students from 291 higher education institutions pursuing a bachelor's or a specialist's degree. Universities represented by less than 10 students were excluded from the analysis to enable the use of multilevel modeling, with

[1] River sampling is real-time recruitment of the target audience that does not guarantee control at the level of a particular organization: control is only possible at the level of the organization type. The types of organizations were identified based on the criteria used for quota allocation: type of ownership, federal okrug, type of university (flagship, leading, other).

students at the first level and universities at the second level. As a result, the final sample included the responses of 17,316 students.

Among the students in the sample, 66% were female and 78% were pursuing a bachelor's degree. 34% of the respondents were studying in the 1st year, 30% in the 2nd year, 26% in the 3rd year, and 11% in the 4th year (Table 1). Social science students were the largest group (25%), followed by those who studied mathematical and natural sciences (18%), and engineering, technology and engineering sciences (17%). 15% of the students were enrolled in leading universities[2] and 11% in flagship universities.

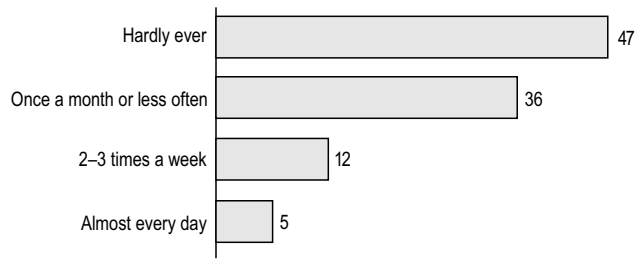
The questionnaire included questions about respondents' learning experiences in the 2019/2020 academic year. Questions on behavior (e.g. student cheating or student engagement) specified that respondents should take into account both offline and online classes of the 2019/2020 academic year.

3. Measurements

3.1. Dependent variable

The dependent variable is cheating in homework. Students were asked the following question: "How often in the 2019/2020 academic year did you copy other students' homework (also during online learning)?". The response options were "Hardly ever", "Once a month or less often", "2–3 times a week", and "Almost every day" (Figure 1). For ease of interpretation, the original variable was converted to a binary one: the value of 0 was assigned to students who hardly ever cheated (47%), and 1 to those who cheated with some regularity (Table 2).

Figure 1. **Distribution of student responses on the frequency of cheating**



3.2. Independent variables

The independent variables include individual student indicators and institutional characteristics of universities.

As the individual-level independent variables, we use the prevalence of certain passive (copying and retelling of the learning con-

[2] Leading universities include members of the Association of Leading Universities and the *Global Universities* Association, as well as national research universities, federal universities, and universities that participated in The Russian Academic Excellence Project (*Project 5-100*).

tent) and active (case studies, group discussions, presentations)[3] learning practices in seminars and practical sessions.

The control individual-level variables include the following student characteristics: gender, year and field of study, the proportion of attended in-person practical sessions and seminars[4], and the frequency of asking questions to the teacher and participating in discussions as indicators of student engagement in the learning process [Maloshonok, 2016][5]. These variables are included in the analysis to separate the effect of pedagogical practices from the effect of student engagement, as there is some empirical evidence of their correlation [Prince, 2004]. The university status has been chosen as the group-level control variable. Table 2 presents descriptive statistics for the dependent and independent variables at the individual and group levels.

Table 2. **Descriptive Statistics of Dependent and Independent Variables, *N* = 17,316**

Variable	Response options	Percentage (%)
Cheating	Yes	53.3
	Hardly ever	46.7
Proportion of attended in-person seminars and practical sessions	Up to 50% of the classes	5.3
	50% to 75% of the classes	14.5
	More than 75% of the classes	80.2
Frequency of asking questions and participating in (group) discussions	Once a month or less often	30.8
	2–3 times a week	40.4
	Almost every day	28.8

[3] Question: 'What proportion of seminars and practical sessions at your higher education institution were conducted in the following formats in the 2019/2020 academic year?» The original variable with four response options was recoded into a variable with three response categories. For several pedagogical practices, the first response option 'None were conducted in this format' had a very low frequency and was therefore merged with the second option 'Less than 30%'.

[4] Question: 'Did you always attend in-person seminars and practical sessions in the last (2019/2020) academic year?' The original variable with five response options was recoded into a variable with three response categories. The first three response options were merged into the category 'Attended up to 50% of the classes' due to their low frequency.

[5] Question: 'How often in the 2019/2020 academic year did you do the following at this university (also in online classes): asking questions, participating in (group) discussions'. The original variable with four response options was recoded into a variable with three response categories. The first response option 'Hardly ever' was merged with the option 'Once a month or less often' due to the low frequency of the former.

Variable	Response options	Percentage (%)
Copying the learning content	Less than 30%	26.2
	30 to 70%	38.3
	More than 70%	35.5
Retelling the learning content by students	Less than 30%	51.1
	30 to 70%	31.3
	More than 70%	17.5
Participating in class discussions	Less than 30%	23.7
	30 to 70%	44.1
	More than 70%	32.1
Application of theoretical concepts to case studies	Less than 30%	37.9
	30 to 70%	42.2
	More than 70%	19.9
Making presentations	Less than 30%	38.4
	30 to 70%	40.1
	More than 70%	21.5

About half (53%) of the students in the study sample have cheated. The vast majority of students have attended more than 75% of the classes, and only about a quarter of the students (29%) have asked teachers questions daily. According to the students, the most frequently used pedagogical practices were the copying of the learning content and discussions: about a third of the students mentioned these as the most common learning formats accounting for over 70% of the class time in seminars and practical sessions (36% and 32%, respectively). The least common teaching technique was the retelling of the learning material: about half of the students (51%) reported that this format of learning accounted for less than 30% of class time.

4. Analytical strategy

The purpose of this study is to assess the relationship between the prevalence of passive and active pedagogical practices and cheating among students. A series of binary multilevel logistic regressions with sequentially added groups of variables are used to assess the odds of cheating. Multilevel modeling is used for the analysis, as the data have a two-level structure: the level of students and the level of universities in which the students are enrolled. The first model includes the average predicted value of the odds ratio for cheating (intercept), taking into account the grouping of students' responses into universities. The second model with a random intercept and

fixed coefficients includes control variables of individual and group levels. In the third model with similar characteristics, we add indicators of the frequency with which different pedagogical practices are used. Each model reflects the odds ratio for cheating in relation to the values of the independent variables.

5. Results

The results of the regression analysis are presented in Table 3. The first model includes the average predicted odds ratio for cheating. The model allows us to estimate the intraclass correlation coefficient (ICC), which shows the level of similarity between students enrolled in different universities. A coefficient of 6% indicates a low variation in the odds of cheating across higher education institutions. It means that universities do not differ much in the ratio of the proportions of students who cheat and those who do not. The use of multilevel regression is justified by the two-level structure of the data and the results of the studies on the relationship between school environment and problem behavior, in which ICC values greater than 0.02 [Bonell et al., 2013] and 0.01 [Shackleton et al., 2016] are considered acceptable.

Table 3. **Factors of Cheating: Binary Multilevel Logistic Regression with Odds Ratios**

		Model 1	Model 2	Model 3	Confidence interval (95%)
Individual student characteristics					
Gender (base — male)	Female		0.66*** (0.05)	0.66*** (0.05)	[0.61–0.71]]
Year of study (base — 1st year)	2nd year		0.92 (0.08)	0.93 (0.08)	[0.85–1.02]
	3rd year		0.70*** (0.06)	0.71*** (0.06)	[0.65–0.78]
	4th year		0.66*** (0.07)	0.68*** (0.07)	[0.61–0.76]
Field of study (base — Engineering, Technology and Engineering Sciences)	Humanities		0.76** (0.14)	0.78** (0.14)	[0.65–0.94]
	Public Health and Medical Sciences		1.08 (0.19)	1.08 (0.19)	[0.91–1.28]
	Arts and Culture		0.51*** (0.12)	0.53*** (0.12)	[0.42–0.66]
	Mathematical and Natural Sciences		1.04 (0.11)	1.05 (0.11)	[0.94–1.17]
	Social Sciences		0.84** (0.09)	0.85** (0.09)	[0.76–0.96]

		Model 1	Model 2	Model 3	Confidence interval (95%)
Field of study (base — Engineering, Technology and Engineering Sciences)	Education and Pedagogical Sciences		0.76*** (0.12)	0.77** (0.12)	[0.65 – 0.91]
	Agriculture and Agricultural Sciences		0.72*** (0.14)	0.71*** (0.15)	[0.58–0.87]
Frequency of class attendance (base — less than 50% of the classes)	50 to 75% of the classes		0.95 (0.17)	0.95 (0.17)	[0.80–1.15]
	More than 75% of the classes		0.44*** (0.07)	0.44*** (0.07)	[0.38–0.52]
Asked questions, participated in class discussions (base — once a month or less often)	2–3 times a week		0.90** (0.07)	0.91* (0.07)	[0.84–0.99]
	Almost every day		0.65*** (0.06)	0.66*** (0.06)	[0.60–0.73]
Characteristics at the university level					
University status (base — other universities)	Leading university		1.06 (0.21)	1.08 (0.21)	0.90–1.31
	Flagship university		1.10 (0.23)	1.09 (0.23)	0.89–1.34
Percentage of study time spent copying the learning content (base — less than 30%)	30 to 70%			1.11* (0.09)	1.02–1.21
	More than 70%			1.26*** (0.11)	1.15–1.38
Percentage of study time spent retelling the learning content (base — less than 30%)	30 to 70%			1.11* (0.09)	1.02–1.20
	More than 70%			1.22*** (0.14)	1.09–1.36
Percentage of study time spent participating in discussions (base — less than 30%)	30 to 70%			0.92 (0.08)	0.84–1.00
	More than 70%			0.78*** (0.09)	0.70–0.88
Percentage of study time spent applying theoretical concepts to case studies (base — less than 30%)	30 to 70%			1.00 (0.08)	0.92–1.08
	More than 70%			0.96 (0.09)	0.86–1.08
Percentage of study time spent making presentations (base — less than 30%)	30 to 70%			1.04 (0.08)	0.96–1.13
	More than 70%			1.07 (0.11)	0.96–1.19

	Model 1	Model 2	Model 3	Confidence interval (95%)
Intercept	1.24*** (0.08)	4.83*** (1.09)	4.24*** (1.09)	3.42–5.25
ICC	0.06	0.04	0.04	
BIC	21 598.1	20 971.8	21 007.2	
Log-likelihood	–10 789.3	–10 393.2	–10 362.1	
Marginal R^2 / Conditional R^2	0.00 / 0.06	0.07 / 0.11	0.08 / 0.11	
Number of students / Number of universities	17 316 / 291			

***p < .001, **p < .01, *p < .50.

In the second model, control variables of individual and group levels are added. Students who have attended more than 75% of the classes are less likely to cheat than those who have attended less than 50%. In addition, students who have asked the teacher questions at least 2–3 times a week during class are less likely to cheat than those who have hardly ever done so. The odds ratios for cheating are not statistically significantly different for students from different types of universities. Model 2 explains 7% of the variance of the dependent variable by fixed effects and 11% by both fixed and non-fixed effects and correctly classifies 67% of the observations.

In the third model, indicators of the frequency with which teachers used various pedagogical practices are added. Students who were more frequently taught using passive practices (copying and retelling the learning content) were more likely to cheat. Statistically significant differences were found between the groups of students for whom these practices occupied less than 30% of class time and those for whom these practices occupied 30 to 70% of class time (odds ratio = 1.11 for the copying and retelling of the learning content). Thus, the first hypothesis has been confirmed.

The use of such an active practice as class discussions in pedagogical design is associated with a relatively low odds ratio for cheating in homework. Students for whom this practice occurred frequently (more than 70% of class time) were significantly less likely to cheat than those for whom discussions took up less than 30% of class time (odds ratio = 0.78). No significant correlation was found between the frequency of using case studies and presentations, on the one hand, and cheating, on the other. Thus, the second hypothesis has been partially confirmed.

Model 3 explains 8% of the variance of the dependent variable by fixed effects and 11% by both fixed and non-fixed effects and cor-

rectly classifies 67% of the observations. These values are not significantly different from those of model 2. Moreover, changes in the BIC and log-likelihood values indicate an insignificant increase in the explanatory power of model 3 compared to model 2. Thus, the inclusion in the model of predictors describing the frequency of use of pedagogical practices increases the explanatory power of the model insignificantly.

The maximum value of the variance inflation factor (VIF) for the models is 3.49, indicating the absence of a multicollinearity problem.

6. Limitations of the study

The present study has several limitations that should be taken into account when interpreting the results.

Firstly, since the pedagogical practices used by teachers are assessed based on a student survey the estimates of their prevalence may be biased, for example, due to some students' low class attendance (20% of the students in the study sample have attended less than 75% of the classes). To account for possible bias in the data, student attendance was considered in the analysis.

Secondly, the study uses the estimated prevalence of pedagogical practices in general, without differentiation by course, while courses may differ significantly in terms of pedagogical design. Thus, the study allows us only to draw conclusions about the prevalence of passive and active learning practices in general and its correlation with cheating can be underestimated. Future research should take into account the specific features of the pedagogical design used in different courses.

Thirdly, since the indicator of cheating used in this study is cheating in homework, the relationship between cheating and pedagogical practices applied in the classroom may be underestimated. Future studies should consider measuring the frequency of cheating in different learning activities: homework, classwork, tests, and examinations.

Fourthly, the study did not take into account any differences in participants' behavior related to the format of learning — distance or in-person. In the questions on behavior, in particular on cheating and engagement, students were asked to describe their experiences in the 2019/2020 academic year, including their experience of distance learning. Thus, the present study does not allow for differentiating students' behavior depending on the format of learning (online or offline).

7. Conclusion and discussion

In recent years, researchers have been increasingly exploring methods to actively prevent cheating and other dishonest academic practices [Eaton, Guglielmin, Otoo, 2017]. The goal of such interventions

is to cultivate and maintain a learning environment characterized by academic integrity [Simon et al., 2004] and falling under the responsibility and authority of the educational institution [DiBartolo, Walsh, 2010; McCabe, Butterfield, Trevino, 2003]. Due to the proliferation of the distance learning format, the risk of student cheating has increased significantly and cheating is becoming one of the factors reducing the quality of education [Sukhanova, Froumin, 2021]. In this context, the importance of preventing academic dishonesty has increased dramatically. The existing methods of fostering students' moral attitudes and punishing misconduct may not be enough to significantly reduce the occurrence of academic dishonesty [Bloodgood, Turnley, Mudrack, 2008; Corrigan-Gibbs et al., 2015; Tatum et al., 2018].

The purpose of this study was to examine the relationship between the frequency of using passive and active pedagogical practices and the frequency of student cheating. An important finding is that there is very little difference in the ratio of students who cheat and those who do not across universities and types of universities — leading, flagship, or other. This means that the prevalence of cheating in Russian higher education institutions does not depend on the institution type. In total, about half (53.3%) of the students have cheated, which is consistent with the results obtained by other researchers [Rudakov, Roshchina, 2018; Sukhanova, Froumin, 2021]. Previous studies have found differences in tolerance for cheating between students from selective and non-selective universities [Chirikov et al., 2020].

This study is the first attempt to assess the relationship between the use of active or passive pedagogical practices by university teachers in Russia and student cheating. Based on previous studies, which suggest that the dominance of passive practices in the classroom can provoke the use of dishonest practices [Pabian, 2015] and their proliferation is determined by the learning design [Anderman, 2007], we have hypothesized that students are more likely to cheat if passive learning practices, such as the copying and retelling of the learning content, prevail in the classroom. Using multilevel modeling, which allowed us to consider both individual student performance and the university status, we have confirmed this hypothesis.

The second hypothesis concerning the association between active pedagogical practices and student cheating has been partially confirmed. Only the frequency of discussions in seminars and practical sessions is negatively related to student cheating. As for other practices (case studies, student presentations), no significant relationships have been found. Furthermore, although there is a significant relationship between the pedagogical practices under consideration and cheating, the variables describing passive and active

learning practices do not contribute much to explaining the variation in the cheating variable. Thus, it cannot be concluded that the format in which learning is organized (at least when measured the same way as in the present study) is a key factor explaining the frequency of student cheating in Russian higher education institutions.

A correlation has been found between cheating and the indicators of students' engagement in the learning process, which were used as control variables in this study. Students who have attended more than 75% of the practical sessions and seminars are less likely to cheat than those who have attended less than 50% of the classes. Moreover, students who have asked questions and participated in class discussions once a month or less often are more likely to cheat than those who have engaged more actively in class discussions. These results are consistent with previous foreign studies [Prince, 2004], but are at odds with the findings obtained in a Russian sample of students [Maloshonok, 2016], in which students more actively involved in discussions were more likely to say that most examinations in their department could be passed easily by cheating. This discrepancy may result from the difference in measuring cheating: we measured the prevalence of cheating based on the respondents' answers to a direct question about their behavior, while Maloshonok [2016] used a less sensitive question in her study — about the possibility of cheating on examinations in general.

Given the relationship found between cheating and the way classes are organized, our key recommendation is to encourage teachers to reduce the use of passive learning practices and replace them with more engaging ones associated with a high quality of education [Carr, Palmer, Hagel, 2015]. This requires investment in teacher retraining, aimed at updating the repertoire of pedagogical practices and introducing those more suitable for distance and blended learning.

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