

Session 3: Engineering Education and Practice

Student Attitudes about Cheating in High Education

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Abstract: This paper presents an attempt to obtain some insight into the phenomenon which all stakeholders in the process of education deal with. That phenomenon is definitely bad as for the acquisition of knowledge is concerned, but students from all over the world apply it through the process of their education. It is most pronounced in high education. Namely, we wanted to examine students what do they think about cheating in situations which cover several aspects of studying on high education institutions. A total number of 237 students from 11 study programs on four faculties were anonymously surveyed. Questionnaire with mostly closed questions was used for the survey. The results confirmed the situation which we are facing in the process of teaching – students do cheat. However, some of the results could be useful to professors to reduce the extent of cheating: (1) 40.08% of students ranked Pressure of high stakes test (one chance only) as the greatest reason to cheat; (2) 53.19% of students said that they would be less likely to cheat if the goal of a class is that they learn and master the material and they can retest if they haven't met that goal.

Keywords: *survey; questionnaire; assessment scale; exam cheating; students*

1. INTRODUCTION

Cheating at faculties, although not new, is a raising problem both for the community and for the individual [1]. This problem is increasing with technology development. Term cheating at universities is recognized as academic dishonesty, with Internet plagiarism as one of the most common forms [2]. There are many other definitions of cheating and all of them include some variety of unethical behavior. In this regard, teachers tend to get new task-finding appropriate mechanisms for test cheating prevention.

According to Kaufman [3], "students are sacrificing their education for what they think are indicators of success" and they put sign equal between success and grade.

There are many reasons for test cheating and almost every student who cheats has its own. However, all the reasons for cheating could be integrated into one: environment and test give possibility for cheating [4].

With information technology development educational process got new dimensions. Teachers use many opportunities of learning management systems, online virtual environment, online communication and e-testing. With new opportunities for teaching and learning, new cheating methods appeared. Scott [5] identified Internet as a major culprit for academic dishonesty. With technology development, students get possibility to use sophisticated methods as "bugs for cheating". Beside that "old" methods are still in use.

There are many related research which are dealing with test cheating, but with different purposes and goals. Tonković et al [1] surveyed 565 students from University of Zagreb. They examined the current and earlier behavior related to cheating, attitudes towards cheating, and the assessment of the unacceptability of certain forms of cheating, the adequacy of penalties, and situational (un) justification of cheating, with conscientiousness, as the dimension of personality, and sociodemographic characteristics of students. David [6] performed research about relation of cheating and personal values, self-esteem and mastery. Also, the same author examined frequency and type of cheating.

Blau and Eshet-Alkalai [7] examined the following research questions:

- comparing digital vs. non-digital cheating, plagiarism, fabrication, facilitation;
- most common and legitimate type of digital academic dishonesty;
- relation between the dishonesty pervasiveness and legitimacy.

Considering the fact that cheating is most prevalent at the college level [10], authors of this research wished to identify:

- Attitudes of students about cheating in general;
- The extent of the use of technology in the process of cheating;
- Reasons for cheating;
- Frequency of cheating and
- Relation between students' satisfaction with teaching and cheating.

The goal will be achieved through few tasks: creating questionnaire, choosing sample for research, conducting research, analyzing results.

The paper has following structure: Introduction section which includes related research, methodology, results and discussion and conclusion.

2. METHODOLOGY

During the summer semester of 2017/18, 237 students were anonymously surveyed. Questionnaire with mostly closed questions was used for the survey. The survey included students from four HEIs, whereas three were from Serbia (Faculty of Technical Sciences in Čačak; Faculty of Hotel Management and Toursim in Vrnjačka Banja - Both from University of Kragujevac; and Faculty of Biology in Belgrade from University of Belgrade) and one from Austria: FH Joanneum in Graz (University of Applied Sciences). Number of students by institution and by study program is presented in table 1.

The questionnaire consisted of 10 questions whereas one assessment scales with 5 statements; 3 were double choice questions; 3 were multiple choice questions; 1 was a ranking question and 1 was an open question. Thus, we could say that questionnaire was divided into 5 parts:

Part one:

 Three statements (presented in table 2) to which students responded with YES or NO and Agree or Disagree;

Part two:

- Three statements (presented in table 3) from which students choosen one from the given answers (or more in one case); Part three:
 - A question where students ranked 7 given reasons for cheating (listed in the next chapter) from 1 (the least reason to cheat) to 7 (the greatest reason to cheat);

 Assesment scale with 5 statements related to quality of teaching where we examined the correlation with cheating. It was necessary to enter the answer into the table that matches the opinion of the surveyed students for the corresponding statement the most. Possible answers were in categories from 1 (strongly disagree) to 5 (strongly agree);

Part five:

• An open question where students could write down whether they have ever dealt with the consequences of cheating on the exam and if yes, which ones.

Table 1. The structure of the sample

HEI	Study program	Sem.	No. of stud.
	Information technologies (IT)	4	41
Faculty of Technical Sciences, Čačak	Entrepreneurial Management (EM)	4	12
	Engineering Management (IM)	4	21
	Technics and informatics (TI)	6	5
	Computer Engineering (CE)	6	4
	Total from	n FTN	83
Faculty of Hotel Management and Tourism, Vrnjačka Banja	Hotel Management and Tourism	8	58
	58		
FH Joanneum, Graz	Production technology and organization (PTO)	2	16
	Sustainable food management (LEB)	2	30
T	46		
Faculty of Biology, Belgrade	Biology (B)	2	25
	Molecular Biology (MB)	2	17
	Ecology (E)	2	8
Total	50		
GRAND TOTAL			237

3. RESULTS AND DISCUSSION

Table 2 presents the answers of the surveyed students on questions in the first part of the survey. Numbers of Yes and No (Agree and Disagree) answers are presented, as well as their percentage values.

Table 2. Answers in the first part of the survey

Statement	Yes		I	No
	No.	%	No.	%
 Cheating on homework or a minor assignment is not as bad as cheating on a test or plagiarizing a paper. 	198	83.54	39	16.46
2. I would be more likely to cheat on an assignment that I would consider "busy work", something that I won't need later, than on an assignment whose objectives I will need for other classes later.	170	71.73	67	28.27
3. I believe cheating is wrong.	169	71.31	68	28.69

The majority of students (71.31%) believe cheating is wrong. But, similar percent (71.73) would be more likely to cheat on an assignment that they consider "busy work", something that they won't need later, than on an assignment whose objectives they will need for other classes later. Also, they think in an even greater percent (83.54), that cheating on homework or a minor assignment is not as bad as cheating on a test or plagiarizing a paper.

Table 3 presents the answers of the surveyed students on questions in the second part of the survey. Number of answers for every given answer of the question is shown as well as its percentage.

As we can see, cheating on minor assignments is more present among students then cheating on major assignments – 26.58% of students never cheated on a major assignment while 18.57% never cheated on a minor assignment. Students cheat whenever they have a chance in 11.39% on a minor assignment and in 4.64% on a major one. There are more students who cheated once on a major assignment (20.25%) then who cheated once on a minor one (13.08%), but from the overall point of view, this also favors the assertion that students tend to cheat less on major assignments.

Interesting fact is that 47.68% of students have not used technology to cheat but have observed or know other students who have, while on the other hand, 42.62 used a cell phone, i-pod or tablet to look up information during a test and 10.55% gave or received information during a test through a cell phone. So, we can conclude that almost half of surveyed students have not used technology to cheat and the other half have used it.

Table 3. Answers in the second part of the survey

Question	An	Answer	
Question		%	
4. I have cheated on a minor (homework, classwork, small as (1 answer only)	assig signn	nment nents)	
1. Never	44	18.57	
2. Once	31	13.08	
3. Two or three times	79	33.33	
4. More than three times	56	23.63	
5. Whenever I have a chance	27	11.39	
5. I have cheated on a major ass (tests, projects, quizzes). (1 answ	ignm wer on	ent /y)	
1. Never	63	26.58	
2. Once	48	20.25	
3. Two or three times	73	30.80	
4. More than three times	42	17.72	
5. Whenever I have a chance	11	4.64	
6. I have used technology to c following ways (multiple answers p	heat	in the le)	
1. Plagiarizing from the Internet.	32	13.50	
 Using a cell phone, i-pod or tablet to look up information during a test. 	101	42.62	
 Giving or receiving information during a test through a cell phone. 	25	10.55	
 I have not used technology to cheat but have observed or kno other students who have. 	ow 113	47.68	
5. Other	8	3.38	

Figure 1 shows the rankings of the given reasons for cheating (third part of the survey). There were 7 reasons (marked with R1 to R7):

- 1. Pressure from parents to get good grades.
- 2. Pressure from teachers to do well.
- 3. Pressure of high stakes test (one chance only).
- 4. Pressure to do better than peers.
- 5. Threat of not being able to participate in sport or activity.
- 6. Threat of losing privileges like pocket money from parents.
- Rewards offered for getting good grades like money or material things like i-pods, phones...



Reasons for cheating

Interesting is that students ranked every reason, except the third, as the least reason to cheat. The third reason *"Pressure of high stakes test (one chance only)*", was ranked as the greatest reason to cheat by 40.08% students. What we could conclude from this is that students would be less likely to cheat if there was another chance for every test and activity during the semester. Definitely the least good reasonc for cheating, by students' opinion were 2 and 4: *"Pressure from teachers to do well*" and *"Pressure to do better than peers"*.

Figure 2 shows the answers of the surveyed students on claims from the assessment scale (fourth part of the survey). Claims, which are all related to quality of teaching, are marked with C1 to C5 which correspond to:

- 1. I cheat more on exams that are not directly
- related to my future profession.I cheat more on exams where I am not satisfied with the quality of teaching.
- 3. I cheat more on exams that have no predefined rules about all our obligations on the course.
- 4. I cheat more on exams where there are no serious sanctions if I'm discovered.
- 5. If the goal of a class is that I learn and master the material and I can retest if I haven't met that goal, I would be less likely to cheat.

Students mostly agree with all the claims except for the third one – they do not think that lack of predefined rules about their obligations on the course influences on cheating on exam (43% vs 23%). Also, greatest number of indecisive students was present on that question (76/235).

We obtained an interesting observation with claim 5. Namely, 53.19% of students (in contrast to 27.23%) agree that they would be less likely to cheat if the goal of a class is that they learn and master the material and they can retest if they haven't met that goal.

90 80 70 60 50 40 30 20 10 0 C4 C1 C2 C3 C5 Strongly Disagree Disagree Indecisive Agree Strongly Agree

Assessment scale

As for the fifth part of the survey is concerned, students mostly answered that they did not suffer any consequences of cheating on the exam. But they also wrote some interesting things such as:

- No, only indirectly: Because other students cheated and I didn't, my mark was below the average;
- No, because I do not cheat;
- Yes, I was thrown out of that exam;
- Yes, my cell phone was taken away;
- As far as the homework is concerned, I do not consider it to be a cheating because I learn when I copy. I do not care if I'm going to copy it from a notebook, from the Internet or from someone else – I'll definitely know what I have copied.

4. CONCLUSION

Some general observations from this research are:

- 71.31% of students believe cheating is wrong;
- 71.73% of students would be more likely to cheat on an assignment that they consider "busy work", something that they won't need later, than on an assignment whose objectives they will need for other classes later;
- 83.54% of students think that cheating on homework or a minor assignment is not as bad as cheating on a test or plagiarizing a paper;
- 11.39% of students cheat whenever they have a chance on a minor assignment;
- 18.57% of students never cheated on a minor assignment;
- 4.64% of students cheat whenever they have a chance on a major assignment;
- 26.58% of students never cheated on a major assignment;
- 47.68% of students have not used technology to cheat;
- 53.17 used a cell phone, i-pod or tablet to look up information during a test and gave or received information during a test through a cell phone;
- 40.08% of students ranked Pressure of high stakes test (one chance only) as the greatest reason to cheat;
- 53.19% of students said that they would be less likely to cheat if the goal of a class is that they learn and master the material and they can retest if they haven't met that goal.

It turned out that cheating is a common phenomenon among students. But, according to the surveyed students, their attitude towards cheating is not positive since 71.31% of them believe cheating is wrong. Nevertheless, they do cheat but they distinguish minor and major assignments as well as subjects they think they will use in their future career and the ones they will not. Also, it seems that they would not cheat if all the courses would have second chance for passing some of the content and if they would have an option to test themselves if they have met the goal of the class.

Presented findings suggest that academic dishonesty is an integral part of our education system. We can seek justification and say that educational system does not act in a vacuum but reflects wider social, political and economic processes. However, we saw that cheating could be reduced if professors would invest a little more effort and imagination in designing and conducting their courses.

In future research authors will broaden the sample and conduct various statistical analysis. Also, we will consider connection of cheating with gender, year of study, type of HEI (faculty or college), study program, the field which HEI belongs to, etc.

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