The Factors that Lead to Cheating in Exams and How to Avoid Them

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Abstract — Cheating is one of the worst habitats that some students use it to pass their exams, and the biggest challenge to teachers and invigilators during tests to control the class and prohibit cheating. Students always try to find and create new methods of cheating and invigilators try to find solutions for this phenomenon. Many Educators discussed this phenomenon and investigated the reasons of cheating, but they couldn't stop this problem. In this research we investigated the reasons behind the cheating, methods of cheating and we introduced some suggestions to reduce cheating in exams.

As a part of this paper, we distributed a questionnaire contained 19 questions among the students in Qatar University to investigate the reasons behind cheating and introduce some suggestions to reduce it in the exams. Questions were grouped in 6 categories and several study hypotheses were then analyzed by using the Z-test. The study detected that the reasons of cheating can be divided into Physiological factors such as fear of failure and reprimand parents; and work related reasons such as large class sizes, the teacher, and Invigilator leniency. In addition, we introduced some recommendations to reduce cheating during the exams.

Keywords — Cheating, Exams, Teacher, Invigilator, Student, Testing Hypotheses

I. INTRODUCTION

The relationship between student and invigilator during exam can be described as a cat-and-mouse relationship, they both wanted to be awakened from the second. Some students want to cheat and invigilator wants to prevent cheating in exam. With the development of technology, methods of cheating become easier and more spread. Examples are minimizing the font size of the page, using wireless devices, mobiles and cheating from fellow student during the exam. The student's cheating in exam is a type of student injustice to himself, which is a moral crime, and if the invigilator indulge during his/her monitoring for the exam, then he is as student partner in crime. Cheating is usually go along with the student whenever he moved to a higher stage, and become as addiction. Therefore, we must find solutions for this

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phenomenon during the early stages of a student's life before increasing the problem.

Nonis and OwensSwift (1998) concluded that in-class deterrents are effective in reducing the levels of cheating on exams. West et. al (2004) found that in a simple regression the relationship between moral judgment scores and cheating behavior was insignificant. Also, when they tested whether including Utilizer scores affected the relationship of cheating and moral judgment, they found that Utilizer affected the relationship significantly. In this study, and through a questionnaire targeted Oatar University students, we tried to categorize and analyze such problems and introduce some possible solutions that may contribute to reduce cheating during exams. Doing such studies will assist educators to better understand the Psychology of the student and will be beneficial to propose solutions that will improve the work's environment. The organization of this paper is as follows: In Section 2, the study hypotheses are presented, analysis of the study and the results are given in Section 3, a real life example is considered in Section 4, and in section 5, a summary of the conclusions and recommendations is presented. Finally, Acknowledgment and references are introduced in Sections 6 and 7.

II. THE POPULATION AND THE SAMPLE

Qatar University is the only governmental university in State of Qatar. It consists of seven colleges and two programs. The colleges are: Arts and Sciences, Business and Economics, Education, Engineering, Law, Pharmacy and Sharia and Islamic Studies. And the programs are: Foundation Program and Honors Program. The mother language of the students is Arabic but the teaching medium in Qatar University is English except some colleges like Education, Law, Sharia and Islamic Studies and some departments of college of Arts.

In the academic year 2012/2013 Qatar University experienced an unexpected increase of almost 35% in student body. The average class size was also increased. Students were divided into male and female campuses. The sample was taken using stratified simple random sampling method to cover all students in all colleges. Some majors don't have males, or the authors couldn't reach to them because the answering of the questionnaire is optional. Table (1) represent the chosen sample from population consists of 9000 students or more.

College	Females	Males	All
Arts and Sciences	60	16	76
Business and Economics	8	3	11
Education	5	0	5
Engineering	20	7	27
Law	3	0	3
Pharmacy	6	0	6
Sharia and Islamic Studies	4	0	4
Foundation Program	9	3	12
Honors Program	0	2	2
All	115	31	146

Table (1) Survey Information on the College and Number of Students

III. THE PURPOSE OF THE STUDY

The purposes of this study are:

- To gather students' opinions regarding the reasons behind cheating in exams.
- To explore some methods of cheating in exams.
- To recommend some possible solutions that may reduce cheating in exams.
- To introduce a real life example to reduce cheating in exams.

IV. THE QUESTIONNAIRE

In this paper, we asked Qatar University students through a questionnaire to investigate their opinions about cheating in the exams, the reasons of cheating and how to reduce this phenomenon. The questionnaire consisted of 19 questions and was distributed by the end of Spring 2013 semester via the "Survey Monkey" software https://www.surveymonkey.com. The benefit of using this method of distribution is to enable students to answer the questionnaire at their own convenience inside or outside campus. Also, "survey Monkey" will enable us to easily analyze the data for our study purposes.

Answering the questionnaire was optional and the answer key of the questionnaire is as the following:

Strongly Agree = 5, Agree = 4, No opinion = 3, Disagree = 2, Strongly Disagree = 1

We may categorize the questions of the questionnaire into six categories:

Category 1: Physiological factors lead to student's cheating Category 2:The role of the family and the community to

Category 3: The role of the student for not good preparation for the exam.

Category 4: Invigilator leniency during exam

reduce or increase the phenomenon of cheating

Category 5: The role of the teacher: Teaching methods and the difficulty of exams.

Category 6: The role of educational institutions and school administrations.

Category 7: Asking students about some cheating methods.

Category8:Some suggestions to reduce the cheating in exams.

A. Study Hypotheses

the student.

- 1) Physiological factors lead in student's cheating Hypothesis 1: The student's fear of failure and reprimand parents because of the low level of school are some of the justifications for exam cheating
- 2) The role of the family and the community to reduce or increase the phenomenon of cheating Hypothesis 2: Weakness of the student's moral deterrent of cheating, and the role of community in growth of this phenomenon by justifying it in the exam as a cleverness of
- 3)The role of the student for not good preparation for the exam

Hypothesis 3: Lack of adequate student's readiness for the test and don't absorb the subject are reasons for cheating in exams

- 4) Invigilator leniency during exam
 Hypothesis 4: Indulgence invigilator during the exam make
 it easier for students to cheat.
- 5)The role of the teacher: Teaching methods and the difficulty of exams

Hypothesis 5: The difficulty of test questions, the teaching methods, and student's hating for the academic material lead them to cheat in exams of that course.

6)The role of educational institutions and school administrations

Hypothesis 6: Increase the number of students per classroom, high rates of admission to enroll in universities, and raise the educational institutions of the minimum mark of success lead students to cheat in exams.

B. Analysis of the Study and the Results

• Testing The Hypotheses of the Study

To test the study hypotheses, we used one sample z-test with level of significant ($\alpha = 0.05$), the null hypothesis H_0 : $\mu = 3$ and the alternative hypothesis H_1 : $\mu > 3$.

By comparing the p-v laue and the significant level ∞ : If p-v laue $<\infty$ then we reject H_0 , otherwise we don't reject H_0

We summarized these tests in the following table:

The hypothesis H_0	Mean	p-value	The Result
The student's fear of failure and reprimand parents because of the low level of school are some of the justifications for exam cheating	3.6164	0.003	Reject H ₀ So the students agree with this hypothesis

Table (2): Test of the hypothesis 1

Table

(3): Test of

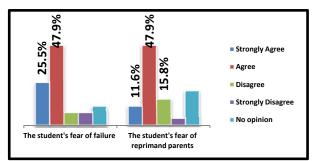


Figure (1): Physiological factors lead to student's cheating

The hypothesis H_0	Mean	p-value	The Result
Weakness of the student's moral deterrent of cheating, and the role of community in growth of this phenomenon by justifying it in the exam as a cleverness of the student.	3.6199	0.002	$\begin{array}{cccc} \text{Reject H_0} \\ \text{So & the students} \\ \text{agree} & \text{with this} \\ \text{hypothesis} \end{array}$

the hypothesis 2

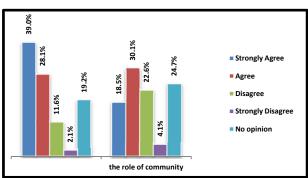


Figure (2): The role of the family and the community

The hypothesis H_0	Mean	p-value	The Result
Lack of adequate student's readiness for the test and don't absorb the subject are reasons for cheating in exams	4.0377	0.000	Reject H ₀ So students agree with this hypothesis

Table (4): Test of the hypothesis 3

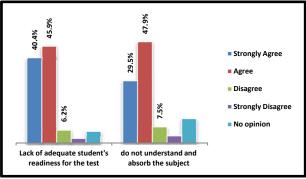


Figure (3): The role of the student for not good preparation

The hypothesis H ₀	Mean	p-value	The Result
Indulgence invigilator during the exam make it easier for students to cheat.	3.8904	0.001	Reject H ₀ So students agree with this hypothesis

Table (5): Test of the hypothesis 4

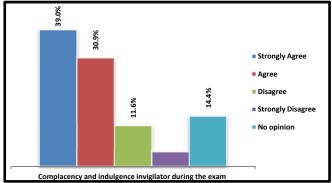


Figure (4): Invigilator leniency during the exam

The hypothesis H_0	Mean	p-value	The Result
The difficulty of test questions, the teaching methods, and student's hating for the academic material lead them to cheat in exams of that course.	3.7192	0.001	Reject H_0 So students agree with this hypothesis

Table (6): Test of the hypothesis 5

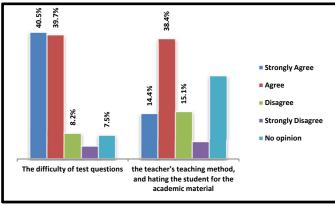


Figure (5): The role of the teacher

The hypothesis H_0	Mean	p-value	The Result
Increase the number of students per classroom, high rates of admission to enroll in universities, and raise the educational institutions of the minimum mark of success leads students to cheat in exams.	3.6689	0.000	Reject H ₀ So students agree with this hypothesis

Table (7): Test of the hypothesis 6

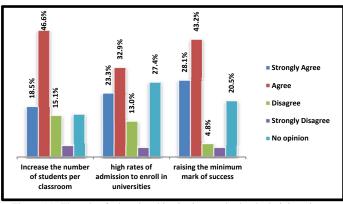


Figure (6): The role of educational institutions and school administrations

Percentages Of Student's Responses on Certain Questions

The following table shows the percentages of student's responses on certain uncategorized questions:

The Question	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
Lack of focus on the written tests as the sole measure of the mark is a solution to reduce cheating	26.7%	66.7%	0.0%	6.6%	0.0%
Oral tests and other activities lead to reduce cheating on tests	7.1%	57.1%	7.2%	28.6%	0.0%
The media contribute to the development of the phenomenon of cheating by showing it as normal Comedy template in programs and series.	14.3%	28.6%	28.6%	21.4%	7.1%

Table (8): Percentages of student's responses on certain uncategorized questions

Also we asked the students to give a percent (out of 100%) on the following statements, their opinions are summarized in the following table:

The Question	Percentage
If you cheat as a student then you will cheat as an employee	72%
Cheating in exams leads to a lack of a sense of responsibility in the future	74%
Cheating in exams leads to kill the spirit of competition among students	76%
Cheating in exams reduce the importance of the tests in the evaluation of school achievement for students	75%
The student must be given enough time between tests to properly prepare for exams	95%

Table (9): Percentages of student's agreements on certain statements

V. REAL LIFE EXAMPLE

MyMathLab is a series of online courses that accompany Pearson's textbooks in mathematics and statistics. Since 2001, MyMathLab--along with MyStatLab and MathXL, have helped over 9 million students succeed at more than 1,900 colleges and universities. MyMathLab engages students in active learning—it's modular, self-paced, accessible anywhere with Web access, and adaptable to each student's learning style—and instructors can easily customize MyMathLab to better meet their students' needs.

MyMathLab provides instructors with a rich and flexible set of course materials, along with course-management tools that make it easy to deliver all or a portion of your course online. MyMathLab provides students with a personalized interactive learning environment, where they can learn at their own pace and measure their progress.

During the academic year 2012/2013, Foundation Program in Qatar University started using this website to test the students for Math and English courses. All exams and quizzes are implemented through the MyMathLab site, the instructor can choose lessons, questions from each section, number of the questions and duration of the test. All tests are carried out in laboratories and have a different order of the questions in the order from one student to another, and even the values used in the questions are different from one student to another, and the student can know his mark immediately upon completion of the test.

By using this method, we are guarantee that no student will cheat during the test, where each student has a special computer with a sufficient distance between the student and the other, also there is at least an invigilator in the laboratory. In addition, all the computers addressed to the wall where the student can't look at his neighbor or in front of him.

VI. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The following conclusions may obtained:

- 1. 73% of students agreed that the fear of failure is a reason of cheating, while 60% of them thought that Scolding parents for their children lead them to cheat in exams.
- 2. 67% of students agreed that the moral weakness of the student deterrent him/her to cheat.
- 3. Students had also a diverse opinion regarding the statement about the role of the community in this phenomenon. 18.5% strongly agreed, 30.1% agreed, 22.6% disagreed and 4.1% strongly disagreed, while 24.7% didn't have opinion about it.
- 4. Over 86% of students believed that students will cheat in exams if they didn't study well, and more than 77% of students believed that "do not understand and absorb the subject is reason for cheating in exams".

- Over 70% of students believed that indulgence invigilator during the exam make it easier for students to cheat.
- 6. Over 80% of students believed that "The difficulty of test questions leads to cheating in exams of that course", while 53% of students agreed that "the teaching method, and the student's hating for the academic material lead them to cheat in exams of that course".
- 7. 65% of students believed that increasing number of the students per classroom leads them to cheat in exams, 56% of them believed that the high rates of admission to enroll in universities leads students to cheat in exams, and 71% of students agreed with the statement "raise the educational institutions of the minimum mark of success leads to cheating in exams".
- 8. Some of used methods of cheating by the students during the exam can be summarized as the following: using mobiles, small piece of paper, writing on the stationary like ruler, writing on the chair, table or the desk, writing on the hand or clothes, writing on the wall beside the student, cheating from his/her neighbor, using some of wrist watches or asking to go to bathroom during the exam to cheat from paper or other things he/she write some information on them.
- 9. 72% of students believed that "If you cheat as a student then you will cheat as an employee".
- 10. 74% of students believed that "Cheating in exams leads to a lack of a sense of responsibility in the future".
- 11. 76% of students believed that "Cheating in exams leads to kill the spirit of competition among students".
- 12. 75% of students believed that "Cheating in exams reduce the importance of the tests in the evaluation of school achievement for students" 95% of students believed that the student must be given enough time between tests to properly prepare for exams.

Recommendations

The following recommendations are introduced:

- 1. Educating students the negative effects of cheating on the individual and the community by holding seminars that promote moral deterrent to them.
- Activating the role of the media to increase students' awareness of the need for self-reliance, also telling them that they are the pillar of the community and the hope of tomorrow.
- 3. Spread the spirit of competition between students and motivate them not to cheat through all possible methods.
- 4. Using Technology like MyLabsPlus or other packages as possible to reduce cheating cases.
- 5. Guiding students for optimal ways to study and prepare for exams by the teacher or family.

- Reducing the number of students in the classroom, if possible, and raising the level of readiness of students for tests.
- Lack of focus on the written tests as the sole measure to evaluate the student and finding other methods to assess students such as oral tests and classroom and homework activities.

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REFERENCES

- Acheson, K. A. & Gall, M. D. (1980). Techniques in the Clinical Supervision of Teachers: Pre-service and In-service Applications. New York: Longman Inc.
- [2] C. A. Maher, & N. Noddings (Eds.), Constructivist Views on the Teaching and Learning of Mathematics. Reston.VA: National Council of Teachers of Mathematics.
- [3] Anderman, E. M., Griesinger, T., & Westerfield, G. (1998). Motivation and cheating during early adolescence. Journal of Educational Psychology, 90, 84–93.
- [4] Rettinger, D. A. & Kramer, Y. (2008). Situational and Personal Causes of Student Cheating. Research in Higher Education, 50, 293-313.
- [5] Shu, L., Gino, F., & Bazerman, M. (2011). Dishonest deed, clear conscience: When cheating leads to moral disengagement and motivated forgetting. Personality and Social Psychology Bulletin, 37, 330-349.
- [6] West, T., Ravenscroft, S., & Shrader, C. (2004). Cheating and Moral Judgment in the College Classroom: A Natural Experiment. Journal of Business Ethics, 54, 173-183.
- [7] Williams, K., Nathan son, C., & Paulhus, D. (2010). Identifying and profiling scholastic cheaters: Their personality, cognitive ability, and motivation. Journal of Experimental Psychology: Applied, 16, 293-307.
- [8] Cheating in exams, viewed 25 January 2013 http://www.ask.com/question/cheating-in-exams
- [9] The site of MyMathLab, viewed 15 September 2012 http://www.mymathlab.com>



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