

Undergraduate Student Cheating in Exams

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Abstract

The study aimed at studying cheating behaviors in exams at the college level. Cheating behaviors included: prevalence of cheating, common cheating methods, reasons for cheating, reasons for not cheating, and types of exams that experience more cheating incidences. A total of 928 students (33% males, 67% females) from the UAEU participated in this study by responding to a self-report questionnaire. Results indicated that more than 37% of students admitted to cheating in exams while in college. When comparing the two genders, more than 65% of male students admitted to have cheated against about 24% of females. Results also indicated that as student achievement increases, incidences of cheating decrease, but age was not a significant factor in cheating behaviors. The three most frequent cheating methods used by students were *looking at another's test paper*, *using a system of signals*, and *writing on hands, desks, etc.* While the most compelling reasons for cheating were *hard courses*, *hard exams*, *time pressure*, *improving one's chances*, and *fear of failure*, the strongest reasons for not cheating were: *religious beliefs*, *morality*, *personal pride*, *worthlessness of cheating*, and *shame to be caught*. Finally, results showed that students cheat more on multiple-choice exams than open-ended ones, and more on quizzes than midterms and finals.

Key words: Cheating, Cheating in exams, Cheating behavior, Undergraduate Cheating.

Introduction

Cheating in exams is a serious problem that has negative educational, social and psychological effects. Educationally, cheating is contrary to the spirit of higher education, especially in developing and promoting moral values and attitudes. Moreover, it violates institutional regulations, and it is an indicator of a school inability to provide an educational process that offers equal opportunities for all students to learn. In addition, cheating negatively affects the accuracy of the evaluation process by adding more sources of errors which decreases exams validity and reliability (Cizek, 1999). Socially, cheating is unacceptable behavior to get something with no right. Cheating not only affects students who cheated but also other students as it forces them to live in an unfair system. Perhaps most importantly, cheating behavior may carry over after graduation (Lupton & Chapman, 2002; Moffatt, 1990). Psychologically, cheating may cause an instability in a student's values, potentially resulting in serious psychological problems such as feelings of being guilty and with shame (Fileh, 1988; Livosky & Tauber, 1994). This, in turn, would have negative effects on a student's self-respect, self-esteem, level of motivation, and learning ability.

This study aims at studying cheating behaviors in exams by undergraduate students. Cheating behaviors included the prevalence of cheating in exams, common cheating types used by college students, reasons for cheating, reasons for not cheating, and types of exams that experience more cheating incidences.

Literature Review

Cheating in exams is a widespread problem in higher education, and it has been observed that the prevalence of this problem is increasing (Cizek, 1999; Evans, Craig, & Mietzel, 1993; Maramak & Maline, 1993; Nowell & Laufer, 1997; Schab, 1991). Although cheating may occur in any coursework (e.g., homework, assignments, papers, and labs), cheating in exams is a more significant problem. This is, simply, because exams are the most common method of evaluation in most educational systems worldwide. Additionally, the importance and use of exams have spread beyond schools. Many critical decisions that affect people's lives

are made based solely on specific exams. The term used to describe such exams is *high stakes* which means exams with severe consequences for students. This makes cheating in exams more of a problem than cheating on other coursework and more of a problem than it was before.

Undergraduate student cheating has been the subject of many studies especially in the last two decades. Most of these studies have been conducted in North America (e.g., Baired, 1880; Baty, 1997; Bowers, 1964; Bunn, Caudill, & Gropper 1992; Collison, 1990; Davis, Grover, Becker, & McGregor, 1992; Eble, 1988; Genereux & McLeod, 1995; Houston, 1983; Maramark & Maline, 1993; McCabe & Trevino, 1996; Moffatt, 1990; Nowell & Laufer, 1997; Roberts, Anderson, & Yanish, 1997; Schab, 1991; Singhal, 1982; Weber & McBee, 1983). Research in undergraduate student cheating revealed to several common findings:

1. Cheating is a widespread serious problem in schools and colleges.
2. The percentage of students who admitted to having cheated in their exams during college ranges from 40% up to 80%.
3. Cheating is more common in high schools than colleges.
4. Male students cheat more than females.
5. Students of lower academic achievement cheat more than students of higher academic achievement.
6. Cheating incidences increase in large and crowded classrooms.
7. Younger students cheat more than older ones.
8. Cheating occurs more in multiple-choice exams than in constructed-response exams.
9. Very few students are caught cheating and very little has been done by universities and individual professors to prevent cheating.
10. Stress, desire for good grades, and time pressure are the main reasons reported by students for cheating.

Few studies in the Arabic literature have investigated the phenomenon of undergraduate cheating (e.g., Abdelkhaleq & Suliman, 1993; AbedRaboh, 1994; Ibraheem, 1994; Jaber, 1980). Jaber surveyed

210 college students and found that 54% of male students admitted to cheating on at least one exam, whereas this percentage was 47% for females. High level of competition among students was the most significant reason for cheating. He also found that cheating in exams was uncorrelated with achievement.

AbedRaboh (1994) surveyed 636 college students (264 males and 372 females) and again found that cheating in exams is more widespread among male students than females (58% vs. 30%). It was also found that cheating occurred more in required courses than the elective ones, and that cheating incidences occur more in the final exams than in the midterms (91% vs. 69%). Using some signal systems to copy answers from another examinee was the most common cheating method in multiple-choice questions while the second common method was using written cheat cribs. Main reasons reported for cheating were fear of exams, desire to get high GPA, and lack of preparation. On the other hand, the main reasons reported for not cheating were avoidance of being guilty, fear of getting caught, self respect, and religious beliefs. Similar results were reported by Abdelkhaleq & Suliman (1993).

Although cheating in exams was not found to be as widespread by Ibraheem (1994), similar reasons for cheating were reported. Mainly, students cheat when they did not prepare well for exams especially with difficult materials and when they needed to pass exams to graduate. In contrast, students refrained from cheating because of religious/moral beliefs. Also non-cheaters were observed to be effective and active learners who showed more respect to themselves than cheaters.

Comparing with the western literature, many cheating behaviors were found to be common in the Arabic countries. For example, cheating in exams is a widespread problem in colleges: male students cheat more than females, more cheating occurs in final and multiple-choices exams, and students cheat because of the desire for high grades, competition, hard materials and exams, and time pressure.

Method

Research Questions

This study aims at studying cheating behaviors in exams. To achieve this main goal, the study will answer the following research questions with respect to undergraduate students cheating behaviors in exams:

1. What is the prevalence of cheating in exams?
2. What are the common cheating types used by college students?
3. What are the main reasons for cheating and the main reasons for not cheating?
4. What are the types of exams that experience more cheating incidences?
5. What are the differences between male and female students in cheating behaviors in exams? and,
6. What is the age influence on students' cheating behaviors in exams?

Research Hypotheses

This study aimed at studying the students' cheating behaviors in exams in general and to find the effects of some important variables such as gender, achievement, and age on this phenomenon in particular. There are three hypotheses that this study tried to test:

Research hypotheses 1: Male students cheat in exams more than their counterpart female students.

Research hypotheses 2: Achievement is negatively correlated with the incidences of cheating behavior in exams.

Research hypotheses 3: student's age is negatively correlated with the incidences of cheating behavior in exams.

Participants

This study was conducted at the United Arab Emirates University (UAEU). UAEU is a mid-sized four-year public university which has enrollment of approximately 15,000 students. Using cluster sampling, a random sample of 40 classes was selected from the University list of

classes. The average class size in the University is 25 students so the anticipated sample size was around 1000 students.

The actual number of students who participated in this study was 928 students (33% males, 67% females). Participants came from different colleges: Humanities (28%), Science (15.2%), Education (16.9%), Business & Administration (18.2%), Sharia & Law (5.5%), Food Systems (2.9%), Engineering (7.1%), and Information Technology (6.1%). Participants were representative of their respective university profiles on major demographic variables such as gender and college. Participants ranged in age from 18 to 25 years with an average of 21.2 years.

Questionnaire

A self-report questionnaire consisting of four sections was used to collect information from participants. The questionnaire was prepared by the author based on the related literature in students' cheating behavior in exams. The first section focused on 10 different cheating behaviors commonly used by students in exams. Respondents were asked to indicate whether they have cheated using any of the listed types while in college. The last two items in this section asked students to report whether they had cheated in high school and college. The second section consisted of 20 items that influence students to cheat on exams. Respondents were asked to determine the influence of each item using a five-point Likert scale that ranged from 1: *very small effect* to 5: *very big effect*. The third section consisted of 11 items that influence students *not* to cheat in exams. Respondents were asked to determine the influence of each factor using the same scale as in the second section. Finally, section four investigated where students cheat often while at college. Several types of exams or courses were listed. Respondents were asked to indicate whether they cheated in each. In addition, the questionnaire requested demographic information such as age, gender, GPA, and academic college major. Respondents were guaranteed confidentiality, and the questionnaire was filled in anonymously with no identification information.

The process of data collection was conducted with the help of a team of students (research assistants). The randomly selected classes were

listed and the corresponding faculty member of each class was contacted for his/her consent. Questionnaires were then distributed in classrooms at the end of each class time after the faculty member left the room.

Limitations

Studying a sensitive issue such as cheating behavior in exams is not without limitations. Cheating is unacceptable behavior that violates moral values, attitude, and institutional and social regulations. Thus, students who cheat try to hide their cheating behavior and even not to talk about it later. Based on that, studying such behavior using a self report questionnaire could be seen as one of the study limitations. Another limitation is using students or participants from only one University. So although conditions in other institutions could be similar to those of UAEU, the generalizeability of the results of this study is limited to this study population.

Results and Discussion

Respondents were classified based on their age into three groups: twenty years or less, between 21 and 22 years, and 23 years or above. As for achievement, student's GPA was used to classify respondents to three groups: 1 to < 2, 2 to < 3, and 3 to \leq 4. The three age groups, three achievement groups, and gender were used in the analysis of the results.

Prevalence of Cheating in Exams

Percentages of students admitted to have cheated in exams by gender, age, and GPA are shown in Table 1. The overall percentage of students admitted to cheating in exams while at college was 37.8%, indicating that cheating is widespread among these college students. However, this problem is less prevalent than what has been reported in North American universities. When gender is considered, a big difference in the percentage of cheating is quickly observed. More than 65% of male students admitted to have cheated against about 24% of females. This result is consistent with other studies common findings and supporting the first research hypothesis. Research indicated that females report less cheating than males. This difference was explained by some researchers by assuming that female university students are more intrinsically motivated than males and to the different moral reasoning between the

two genders (Newstead, et al, 1996). Male students in the UAE have more chances and options for higher education than their female counterparts. Because of several social and cultural factors, male students can study in any institution inside the UAE as well as in many other international institutions abroad. Additionally, employment opportunities for males are much better than those for females. All these factors affect students' interest and motivation in studying while in college. Female students need to work harder because of limited opportunities in schools and in jobs as compared with males. This affects them to study harder and to cheat less in exams.

Table 1

Percentage of Students Cheating in Exams by Gender, Age, and GPA

		Cheating in college	Cheating in high schools
Gender	Overall	37.8	41.8
	Males	65.9	56.7
	Females	24.1	34.5
GPA	1 to < 2	43.7	44.5
	2 to < 3	40.9	47.3
	3 to ≤ 4	31.0	28.8
Age	20 years or less	39.8	43.5
	21 to 22 years	36.4	40.1
	23 years or above	37.1	42.3

With respect to students' achievement and its effect on cheating, it can be observed that as student achievement increases, incidences of cheating decrease. The percentage of cheating decreases from 43.7 to 40.9 to 31.0 as GPA increases in the three achievement groups. This finding is also consistent with research in undergraduate cheating in North America, where GPA has been observed to be negatively correlated to cheating. A student with a high GPA has more to lose from cheating than a student with a low GPA (Bunn, et. al, 1992; Houston, 1983, Moffatt, 1990, Nowell & Luaf, 1997).

As for age, the percentage of students cheating in exams while at college in the three age categories was similar (39.8, 36.4, and 37.1). Also, there was no consistent change in this percentage with the increase in age. This indicates that age was not a significant factor for the students in this study. This result conflicts with what has been reported in the

undergraduate cheating literature and with the third research hypothesis, that cheating decreases by age during college. However, an age effect could be observed when comparing cheating percentages between college and high school. As shown in Table 1, all percentages of cheating in college are less than their counterparts in high school. This may occur because as students get older they become more mature (Nowell & Luaf, 1997) and more experienced. In addition, older students tend to be more intrinsically motivated than younger ones (Newstead, et al, 1996).

Common Cheating Methods

Respondents were asked to determine whether they have used any of 10 common cheating types or behaviors during college. The results of this section are shown in Table 2. The three most frequent cheating methods used by students were *looking at another's test paper* (29.4), *using a system of signals* (14.7), and *writing on hands, desks, ...*(8.8). These results are similar to what has been found in some other studies (e.g., AbedRaboh, 1994). An interesting finding was the high percentage of students who admitted to having helped other students to cheat (46.4). Research indicated that students commonly reported helping someone else to cheat more common than cheating for oneself. According to Genereux & McLeod (1995), this could happen because "Students have more positive attitudes toward the consequences of abetting cheating, perceive it as more normative, feel they have more control over performing it, and/or perceive it as more morally acceptable than cheating for oneself"(p. 702). Also, students might misunderstand some behaviors such as collaboration (Maramak & Maline, 1993).

Table 2
Percentages of Students Reporting Each Method of Cheating

Method of Cheating	Percentage	Method of Cheating	Percentage
Using sheet cribs	5.3	Using device (e.g., mobile, calculator,...)	3.1
Writing on hands, desks, ...	8.8	Using system of signals	14.7
Looking at another's test paper	29.4	Biasing instructor's grades	2.6
Helping another student to cheat	46.4	Taking unauthorized materials to the test	5.5
Going out of test room to cheat	3.7	Lying about medical circumstances	7.2

Reasons for Cheating in Exams

In the second section of the questionnaire respondents were asked to determine the effect of each of 20 items in cheating in exams while at college. The mean of each reason was calculated and the results summarized in Table 3.

Table 3
Reasons for Cheating in Exams

Reason	Mean	T-Test Results: Males vs. Females	F-Test Results: Ach. groups	F-Test Results: Age groups
Time pressure	3.38	0.80	7.45*	0.40
Hard courses	3.67	-1.14	9.39*	0.70
Laziness	2.90	3.26*	2.87	0.70
Competition with others	2.60	0.40	3.72	1.73
Coping with stress	2.80	2.85	9.43*	0.69
Hard exams	3.60	1.48	11.82*	1.47
Getting caught is minimal	2.70	0.77	2.05	1.47
Punishment is not serious	2.56	-0.17	8.20*	3.32
Improving one's grades	3.28	1.66	8.37*	0.77
Monetary (or other) rewards	2.27	1.59	3.20	0.08
Peer Pressure	2.28	3.76*	4.83	0.72
Fear of failure	3.11	-0.59	11.43*	0.26
Everybody does it	2.68	2.22	3.28	0.38
Course was useless	2.49	3.95*	2.98	2.88
Parents' pressure	2.15	2.90	4.21	0.06
Taking a chance	2.10	3.71*	3.40	0.15
Professor does not care	2.64	3.24*	4.47	1.62
Instructor vigilance is low	2.77	0.69	0.08	0.06
High course load	3.55	-0.57	7.24*	0.18
Not understanding questions	3.15	0.83	6.72*	0.87

*: Significant at .01

The most compelling reasons for cheating were determined by respondents as the following: *hard courses*, *hard exams*, *time pressure*, *improving one's chances*, and *fear of failure*. Two of these reasons (*time pressure* and *desire for good grades*) were identified as common reasons in the research of the undergraduate cheating. The least compelling reasons were *taking a chance* and *parents' pressure*.

Why courses and exams are hard on students (at least from their perspective)? Many students did not select their major wisely or based on their desire and interest. Some of them study several semesters without having a clear idea about what they are going to do with their degree after graduation. Another reason for making courses and exams hard is the fact that many students register a maximum load of courses (18 credit hours or more) each semester. Not only this load is above their ability within a semester time, but also it puts a lot of pressure on their schedule to successfully complete many papers, projects, assignments, field visits, and other academic requirements. Also with this high load, more than one exam is more likely to be on the same day. All these factors make some courses and their exams hard on students.

To compare between males and females on each of these reasons, independent t-tests were conducted on each. Because there were many t-tests and to control on Type 1 error, results were tested at .01 level of significance. As shown in the second column of Table 3, males were significantly different than females on 5 reasons: *laziness*, *peer pressure*, *course importance*, *taking a chance (try it)*, and *professor proctoring*. Each of these reasons was more compelling for male students than females.

When comparing based on students achievement, one way analysis of variance (ANOVA) was used at the same significance level (.01). *Time pressure*, *hard courses*, *coping with stress*, *hard exams*, *cheating punishment*, *improving grades*, and *fear of failure* were the reasons that found to be significantly different among the three groups. It is interesting to note that none of these reasons were significant between males and females. This means that gender and achievement are affecting students cheating in exams differentially. When age is considered as the base for comparison, age groups were not significantly different on any reason. This was expected for those respondents because percentages of cheating among the age groups were very close to each other.

This result could be partially interpreted because of the importance of tests results to University students. Tests worth most of the total grade in the majority of the University courses and academic requirements. Additionally, specific tests in English, Arabic, and mathematics are used

to place admitted students in studying levels of basic education. Also major tests such as midterms and finals are usually organized within a specific period of time which forces some students to take two or three tests on the same day. All these factors may affect students to cheat in their exams.

Reasons for Not Cheating

The third section contained the common possible reasons that influence students not to cheat in exams. Thirteen reasons were listed, and students were asked to determine the influence of each using the same Likert scale as in the second section. Results are summarized in Table 4. The first observation that could be seen from the results was the high effect of most of the listed reasons for not cheating (measured by the mean responses) as compared with reasons for cheating. In other words, reasons for not cheating had stronger effect than reasons for cheating. Second, all the 13 reasons had a big influence on students not to cheat (all means were above 3.40). The strongest reasons for not cheating were determined by respondents as the following: *religious beliefs*, *cheating is immoral*, *personal pride*, *cheating is useless*, and *shame to be caught*.

Table 4
Reasons for Not Cheating in Exams

Reason	Mean	T-Test Results:	F-Test	F-Test
		Males vs. Females	Results: Ach. groups	Results: Age groups
Devaluing my achievement	3.70	-1.53	1.77	0.27
Immoral	4.38	-7.77*	1.23	0.41
Personal pride	4.22	-5.18*	3.76*	0.32
Unnecessary/pointless	3.97	-6.74*	3.80*	0.85
Shame at being caught	3.92	-3.85*	0.10	1.55
Never thought of it	3.44	-4.41*	2.55	0.19
Fear of punishment	3.81	-3.01	0.58	2.76
Do not know how to do it	3.47	-4.52*	0.45	0.63
Unfair to other students	3.71	-6.30*	2.76	0.36
Instructor's vigilance is high	3.41	-2.59	2.61	0.19
Value of course materials	3.56	-3.71*	0.30	1.29
Fair exams	3.72	-4.20*	3.41	0.11
Religious beliefs	4.47	-7.03*	3.10	1.22

*: Significant at .01

When comparing males with females, significant differences were observed on most of the reasons for not to cheating. This was expected because it was previously found that males and females are different on their incidence of cheating as well as on the reasons for cheating. Reasons for not cheating affected female students more than males. With respect to achievement, significant differences were observed only on two reasons: *personal pride* and *usefulness of cheating*. As for age, there was no significant difference among the three age groups.

Where Cheating Occurs?

Students were asked to determine the exams in which cheating occurs often. Five types of exams were listed: open-ended exams, multiple-choice exams, mid-term exams, final exams, and quizzes. As shown in Table 5, students admitted that they have cheated more on multiple-choice than on open-ended ones. This result is consistent with other research findings. As reported in the second section, *looking at another's test paper* and *using system of signals* were found to be the most common types of cheating used by students. These methods fit more with multiple-choice questions where a student can get one or more answers by quick glance at his/her neighbor test paper. Also multiple-choice questions are appropriate to any system of signals that can be used among students to copy their answerers. Therefore, it was expected that cheating occurs more in multiple-choice exams than other types of questions, especially open-ended questions, where it is difficult to get answers by glancing quickly at another's paper.

Quizzes were found to have a higher percentage of cheating than midterms and finals. Cheating incidences were observed to be affected by the credit awarded or the weight of the exam (Weber & McBee, 1983). Although quizzes do not, usually, have a large weight in the final course grade, less restricted proctoring conditions during quizzes as compared with midterms and finals could be the reason for this difference. Midterms are usually administrated by at least two proctors in each class or section. This could also be the reason why cheating occurs in midterm exams more than finals. Final exams are administrated under strict conditions, especially when several sections sit together under the

proctoring of several faculty members, administrators, or teaching assistants.

Table 5
Percentage of Cheating by Exam Type

		Open-ended	Multiple-choice	Midterm	Final	Quiz
Gender	Overall	10.8	28.1	16.1	12.5	21.7
	Males	18.0	30.5	27.9	21.0	36.1
	Females	7.3	26.9	10.2	8.2	20.4
GPA	1 to < 2	9.4	36.2	24.1	14.5	21.4
	2 to < 3	12.4	31.2	18.7	15.8	30.0
	3 to ≤ 4	9.2	20.2	8.8	6.1	20.6
Age	20 years or less	8.3	20.3	14.6	10.3	28.0
	21 to 22 years	11.8	31.8	16.6	12.6	24.8
	23 years or above	13.9	35.3	18.0	16.8	23.1

Similar results were observed when breaking the percentage based on gender or age. When comparing students with different GPA, the only difference was the high percentage of cheating in midterm exams (24.1) for the group (1 to < 2 GPA) as compared with percentage in finals (14.5) and percentage in midterms (21.4).

Preventing Cheating in Exams

The present study supports other research findings that undergraduate cheating in exams is widespread, serious problem. Research also indicated that very few students are caught cheating and very little has been done by universities and individual professors to prevent cheating. Therefore it might be useful to finish this study by paying attention to what can be done to prevent cheating in exams.

Cheating harms not only the cheaters but all members of the academic community, including students, instructors, the university, and the society at large (Todd-Mancillas & Sisson, 1987). Even though cheating is widespread, it has been observed that faculty rarely discuss rules of academic dishonesty with their students. It is often said, "An

ounce of prevention is worth a pound of cure". This is very true with respect to the problem of cheating in exams. But before taking any practical action to prevent cheating, students should first understand an important base line. They should "understand that cheating is offensive to all a teacher stands for and that our basic motivation for going into teaching as a profession is offended when students cheat" (Moss, 1984, p.2). In addition, students should know the institutional rules and policy regarding academic dishonesty and the consequences of cheating. They should know also that it is very likely that their professor will strongly react to any kind of cheating.

Having made all that clear to students, several things could be done to reduce the chances of cheating. First and most importantly is creating an environment where cheating or academic dishonesty is unacceptable. Creating good relationships with students reduce cheating drastically (Ebell, 1988). Writing fair exams and grading students fairly also has a significant effect (Genereux & McLeod, 1995). Reducing test anxiety, using serious and effective proctoring systems, and using multiple evaluating tools and methods rather than depending only on exams can reduce cheating (Moffatt, 1990). As for the circumstances surrounding exams, it is important to make cheating as difficult as possible and to make the punishment of cheating severe (Genereux & McLeod, 1995). It is also important to take appropriate action against the offender *every time* a student is caught. In addition, all students' action should be reported to a central record-keeping agency to help identify repeated offenders (Todd-Mancillas & Sisson, 1987). During exams, providing a seating arrangement which inhibits cheating is necessary especially in big classes.

Another approach to preventing cheating is through improving student test-taking skills. Test-taking skills and strategies must be taught in the classroom as part of the curriculum (Nearine, 1985). Studies indicated that students with appropriate test-taking strategies have: 1) improved attitudes toward tests, 2) reduced levels of test anxiety, and 3) better grades (Vattanapath & Jaiprayoon, 1999).

Recommendations

In the light of the study results and the previous discussion about preventing cheating behavior with undergraduate students, the following are some recommendations:

First, students need to be oriented, when they start their study, about the University policy regarding academic cheating in general and cheating in tests in particular. Second, proctoring conditions during quizzes should be strengthened to control and prohibit any cheating behaviors. More concern should be considered to multiple-choice tests especially with male students. Third, students should know that cheating behaviors will not be tolerated by their professors and the University administration. Professor should strongly react to any kind of cheating.

References

- Abdelkaleq, R., & Suliman, R. (1993). Cheating in exams: Reasons and methods. The 7th of April University, Zleteen, Libya.
- Abedraboh, A. (1994). Cheating phenomenon among university students: Effects on academic level and educational system. Journal of Educational Studies, 63, Cairo, Egypt.
- Baired, J. S., Jr (1980). Current trends in college cheating. Psychology in the School, 17(4), 515-522.
- Baty, P. (1997). Prospering cheats on the up. Times Higher Education Supplement, 50 (3).
- Bowers, W. J. (1964). Student dishonesty and its control in college. New York, NY: Columbia Bureau of Applied Research, U.S.A.
- Bunn, D., Caudill, S., & Gropper, D. (1992). Crime in the classroom: An economic analysis of undergraduate student cheating behavior. Journal of Economics Education, 23, 197-207.
- Cizek, G. J. (1999). Cheating on tests: How to do it, detect it, and prevent it. Mahwah, NJ: Erlbaum Associates, U.S.A.
- Collison, M. (1990). Apparent rise in students' cheating has college officials worried. Chronicle of Higher Education, 36, 34-50.
- Davis, S. F., Grover, C. A., Becker, A. H., & McGregor, L. N. (1992). Academic dishonesty: Prevalence, determinates, techniques, and punishments. Teaching of Psychology, 19 (1), 16-20.
- Eble, K. E. (1988). The craft of teaching. San Francisco: Jossey-Bass, U.S.A.
- Evans, E., Craig, D., & Mietzel, G. (1993). Adolescent's cognitions and attributions for academic cheating: A cross-national study. The Journal of Psychology, 127(6), 585-602.
- Fileh, F. (1988). Cheating in exams, Alnahdah Publications, Cairo, Egypt.
- Franklyn-Stokes, A., & Newstead, S. E. (1995). Cheating: Who does what and why? Studies in Higher Education, 20, 159-172.

- Genereux, R., & McLeod, B. A. (1995). Circumstances surrounding cheating: A questionnaire study of college students. Research in Higher Education, 36(6), 687-704.
- Houston, J. P. (1983). College classroom cheating, threat, sex, and prior performance. College Student Journal, 17, 229-235.
- Ibraheem, A. (1994). Cheating in exams and its relationship with some psychological variables and learning styles. Journal of Educational Studies 63, Cairo, Egypt.
- Jaber, A. (1980). Studies in Educational Psychology, Book World, Cairo, Egypt.
- Livovsky, M., & Tauber, R. (1994). Views of cheating among college students and faculty. Psychology in the School, 31, 72-82.
- Lupton, R., & Chapman, K. (2002). Russian and Americans college students' attitudes, perceptions, and tendencies toward cheating. Educational Research, 44(1), 17-27.
- Maramark, S., & Maline, M. B. (1993). Academic dishonesty among college students. Department of Education, Washington, DC: U.S.A.
- McCabe, D. L., & Trevino, L. (1996). What we know about cheating in college: Longitudinal trends and recent developments, Change, 28(1), 28-33.
- Moffatt, M. (1990). Undergraduate cheating. (ERIC Document Reproduction Service NO. ED 334921).
- Moss, B. (1984). Notes on cheating for the busy classroom teacher. (ERIC Document Reproduction Service NO. ED 243 203).
- Nearine, R. J. (1985). Cheating: What can we do about it? Paper presented at the Annual Meeting of the National Council on Measurement in Education. Chicago, IL. U.S.A.
- Newstead, S. E., Franklyn-Stokes, A., & Armstead, P. (1996). Individual differences in student cheating. Journal of Educational Psychology, 88, 229-241.

- Nowell, C., & Laufer, D. (1997). Undergraduate student cheating in the field of business and economics. Journal of Economics Education, 28 (1), 3-12.
- Roberts, P., Anderson, J., & Yanish, P. (1997). Academic misconduct: Where do we start? Paper presented at the Annual Conference of the Northern Rocky Mountain Educational Research Association.
- Schab, F. (1991). Schooling without learning: Thirty years of cheating in high school. Adolescence, 26 (104), 839-848.
- Singhal, A. C. (1982). Factors in student's dishonesty. Psychological Reports, (51), 775-780.
- Todd-Mancillas, W., & Sisson, E. (1987). Cheating among engineering students: An analysis. Paper presented at the Annual Meeting of the American Association for the Advancement of Science. Chicago, IL, U.S.A.
- Vattanapath, R., & Jaiprayoon, K. (1999). An assessment of the effectiveness of teaching test-taking strategies for multiple-choice English reading comprehension test. Occasional Papers, 8, 57-71.
- Weber, L. J., & McBee, J. K. (1983). Cheating: A problem with take-home exams. (ERIC Document Reproduction Service NO. ED 242730).

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