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Self-Organization and Self-Efficacy as Predictors of Cheating Attitudes in Online Exams: A Self-Regulated Learning Perspective

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Abstract: This study aimed to examine the impact of self-organization and self-efficacy in predicting attitudes toward cheating in online exams among undergraduate students. Drawing on the self-regulated learning framework, a cross-sectional survey design was employed to collect data from 153 students at a Saudi university using three validated scales. The findings revealed that self-organization and self-efficacy were significant negative predictors of attitudes toward cheating, with higher levels of these attributes associated with less favorable attitudes toward cheating. Furthermore, moderation analysis showed that self-efficacy significantly moderated the relationship between self-organization and cheating attitudes, suggesting a complex interplay between the two constructs. The findings highlight the importance of fostering self-regulated learning skills to enhance academic integrity in online assessment contexts.

Keywords: *Academic integrity, cheating attitudes, online exams, self-efficacy, self-organization.*

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Introduction

Distance education—often referred to as e-learning- is defined as technology-mediated instruction in which instructors and students are physically separated. The COVID-19 pandemic triggered an unprecedented shift from traditional face-to-face instruction to distance education worldwide (Armstrong-Mensah et al., 2020). In higher education, the transition necessitated the rapid adoption of online learning platforms and assessments, which provided greater flexibility, reduced academic stress, and lower managerial expenses than traditional in-person learning (Aishath et al., 2023; Imran et al., 2023). However, online learning raised serious concerns about academic integrity (Ababtain, 2023; Al-Rasheed & Al-Mashari, 2022; Dawson, 2020; Quang et al., 2025). Studies have reported substantial increases in cheating during online exams, with rates ranging from 44% to 70% depending on the context and monitoring methods (Dyer et al., 2020; Jenkins et al., 2023; Newton & Essex, 2024; Pleasants et al., 2022).

Various individual and contextual factors contribute to cheating in online exams, including fear of failure, peer influence, the accessibility of resources, and the perceived ease of dishonesty (Baran & Jonason, 2020; Noorbehbahani et al., 2022). Additional predictors include ambiguous exam policies, limited awareness of academic misconduct, and weak consequences (Henderson, Chung, Awdry, Mundy et al., 2023; Javed, 2019). Broader ethical and emotional factors, such as anxiety and fairness concerns, also shape students' perceptions of online exam integrity (Maphalaa & Nkosi, 2025).

Within the Saudi context, several institutional efforts were implemented during the pandemic—such as redesigning exams and improving monitoring to safeguard integrity (Almossa & Alzahrani, 2022). However, these efforts have primarily focused on policy-level solutions, with limited attention to students' psychological factors.

To address this gap, the current study *draws* on two theoretical frameworks: *self-regulated learning theory* and *social cognitive theory*, which highlight the impact of self-efficacy on motivation and ethical decision-making (Bandura, 1997) and emphasize the learner's ability to organize, monitor, and manage academic tasks (Zimmerman, 2008). Furthermore, *social cognitive theory* (Bandura, 1997) states that, as self-efficacy influences personal agency, self-regulation skills, such

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as organization, do as well. Therefore, self-organization may serve as a *moderating* factor, enhancing or diminishing the influence of self-efficacy on behavior, including attitudes *toward* cheating in academic settings. Thus, this study aimed to understand how self-organization and self-efficacy affect students' attitudes *toward* cheating in online exams, thereby supporting ongoing initiatives to protect the academic integrity of online higher education, particularly in the Saudi context. Accordingly, the following research questions were addressed:

1. What are the most commonly used methods of cheating in online exams among students?

2. What are the primary reasons that drive students to cheat and to avoid cheating in online exams?

3. To what extent do self-organization and self-efficacy predict attitudes toward cheating? Does self-organization moderate the relationship between self-efficacy and attitudes toward cheating?

Literature Review

Factors Related to Cheating in Online Exams

There are several reasons students cheat on online exams. Studies have concluded that cheating cannot be attributed to a single cause (Henderson, Chung, Awdry, Mundy et al., 2023). For example, Barbaranelli et al. (2018) found that students who exhibited amoral, Machiavellian characteristics were more likely to cheat in settings where peer wrongdoing was ordinary. The study also found that moral disengagement and learning styles mediated the association between academic cheating and amoral manipulation. Additionally, Tremayne and Curtis (2021) indicated that self-control, students' desire for success, and demographic factors, such as gender, age, ethnicity, and study major, were significant predictors of academic dishonesty. Abu Oliem (2021) identified a range of student-related factors associated with cheating on online exams in the Arabic context, including poor preparation, low academic achievement, fear of failure, weak religious support, fear of parental punishment, and psychological pressure.

Regarding teacher-related factors, several factors have also been identified, including inadequate attention to students' individual differences during instruction. Henderson, Chung, Awdry, Ashford et al. (2023) highlighted the compound factors and incentives that drive cheating, including exam conditions, security measures, students' backgrounds, attitudes toward integrity, prior cheating experiences, and diverse motivational drivers. The findings indicated a strong relationship between students' self-reported cheating and their attitudes toward integrity, awareness of potential consequences, and familiarity with peers' cheating. Alsadoon (2022) found that moral obligation was the most significant predictor of cheating. The study also reported that male students were more likely than female students to cheat. Curtis et al. (2022) argued that contract cheating poses an increasing threat to academic integrity among college students. Their study showed that personality traits such as psychopathy and Machiavellianism indirectly predicted intentions to engage in cheating through several mediating pathways. In a related investigation, Henderson, Chung, Awdry, Ashford, et al. (2023) indicated an association between flexible time-window exams and high rates of cheating. The study also found that students with a high commitment to integrity were less likely to cheat.

Additionally, students who admitted to temptation or cheating were more likely to report awareness of misconduct by their classmates. Another study conducted by Jenkins et al. (2023) showed that academic stress and COVID-19 pandemic-related difficulties were the leading causes of cheating. Newton and Essex (2024) further found that individual cheating was more prevalent than collaborative misconduct. Students with greater opportunities were the primary reason for engaging in dishonest practices.

Depending on the exam structure, studies have shown that cheating incidents varied from 44% to 60% (Anitha & Sundaram, 2021; Newton & Essex, 2024). A variety of exam formats have documented cheating, including take-home assignments, online quizzes, and open-book tests, with some formats showing higher rates of misconduct than others (Harper et al., 2021; Henderson, Chung, Awdry, Ashford et al., 2023). Ng (2020) observed that placing strict time limits on online open-book exams can effectively protect students' academic integrity. Abu Oliem (2021) found that short assessment intervals, along with straightforward exam questions, discouraged cheating. In the Vietnamese context, a recent study (Quang et al., 2025) found that cheating increased during timed individual tests.

On the other hand, research has identified several factors that contribute to students' avoidance of exam cheating. Dendir and Maxwell (2020) used webcam recording software to compare student performance before and after online proctoring was implemented. The findings showed that cheating was widespread in the absence of proctoring and suggested that online proctoring is a valuable strategy for reducing academic dishonesty in online exams. Similarly, Gudiño Paredes et al. (2021) found that remote proctoring led to improved academic integrity, driven by a sense of obligation, concerns about privacy violations, and anxiety.

Attitudes, Self-Organization, Self-Efficacy, and Cheating

Recent research underscores the critical link between students' attitudes and their engagement in academic dishonesty. For instance, Henderson, Chung, Awdry, Ashford, et al. (2023) indicated a strong relationship between students' self-reported cheating and their attitudes toward integrity. Similarly, Quang et al. (2025) found an adverse association

between students' negative attitudes toward cheating and the perceived prevalence of cheating. Students who held more negative attitudes toward cheating perceived cheating as more prevalent among their peers, suggesting that social norms and personal beliefs mutually influence dishonest behaviors. These findings highlight the importance of psychological factors in shaping academic conduct.

Self-organization is an individual's ability to structure, plan, and manage time and resources effectively to achieve personal goals. It encompasses a range of skills, including time management, goal setting, task prioritization, and self-regulation. These skills are critical for academic success, as they enable students to manage their coursework efficiently, meet deadlines, and adequately prepare for exams (Zimmerman & Schunk, 2011). Several studies have explored the relationship between self-organization and academic integrity. Well-organized students are less likely to engage in academic dishonesty because they manage their time effectively, reducing the temptation to cheat under last-minute pressure or poor preparation (Williams et al., 2010). Moreover, self-organized students are more likely to adopt deep learning approaches, focusing on understanding and mastering the material rather than merely completing tasks, which further discourages cheating (Entwistle & Ramsden, 2015). Fida et al. (2018) found significant links between academic cheating and factors like poor self-organization, indicating that students with lower organizational skills were more prone to academic dishonesty.

Self-efficacy—a core construct within Bandura's (1997) Social Cognitive Theory—is defined as an individual's belief in one's ability to execute tasks successfully (Pintrich et al., 1991).

Many studies have repeatedly linked self-efficacy to ethical decision-making. For instance, Ghoni et al. (2025) examined the interplay between self-efficacy and peer pressure and found that both significantly predicted students' likelihood of engaging in academic dishonesty. Such evidence supports the view that students with low academic confidence may be more vulnerable to unethical practices, especially when under pressure or in environments with weak enforcement mechanisms.

Self-efficacy and self-organization are linked but distinct aspects of how learners can control their academic behavior, according to self-regulated learning theory (Zimmerman, 2008). While self-efficacy shows how confident students are in their ability to succeed academically, self-organization shows how they put that belief into practice through calculated behaviors. Students who are well-organized and have high self-efficacy are particularly well-equipped to resist the temptations of academic dishonesty. They possess the necessary skills to manage their academic workload effectively and the confidence to tackle academic challenges without resorting to cheating (Jaafar et al., 2014). Therefore, it is conceivable that self-organization moderates the effect of self-efficacy on academic attitudes, especially in morally ambiguous situations such as online exams.

In summary, although prior research has identified various contextual and psychological factors influencing academic dishonesty in online settings, few studies have systematically examined how students' self-regulatory skills, such as self-organization and self-efficacy, jointly shape their attitudes toward cheating. The existing literature often treats these constructs in isolation, lacking an integrative framework grounded in self-regulated learning or social cognitive theory. This study addresses that gap by exploring the predictive roles of these variables within a cohesive conceptual model, particularly in the under-researched context of Saudi higher education.

Methodology

Research Design

This study uses a quantitative cross-sectional survey design to investigate the most prevalent methods of online exam cheating, as well as the primary motivations for students to cheat and refrain from doing so. Additionally, the study examined factors associated with academic cheating in online exams, particularly self-organization and self-efficacy.

Sample and Data Collection

The target population consisted of undergraduate students in the Department of Social Work at Umm Al-Qura University during the first semester of 2025. The study employed a convenience sampling strategy, which limits the generalizability of the findings beyond this institutional and disciplinary context. Invitations to participate were sent to all eligible students immediately after they completed their online exams, and a total of 153 students completed the questionnaire. Data were collected online via a Google Forms survey that took approximately 25 minutes to complete.

For data collection, two self-report scales were developed through a comprehensive literature review, and a pilot study was conducted to ensure clarity and reliability, as no culturally appropriate, context-specific tools were available to evaluate students' attitudes toward cheating and self-organization in Saudi higher education. The survey's items were revised based on expert assessment and pilot feedback. The final version included the following four sections:

Demographic Factors. Students were asked to identify several types of information, such as age, gender, methods of cheating (eight items), reasons for cheating (eight items), and reasons for avoiding cheating (eight items).

Attitude Toward Cheating in Online Exams. The scale consisted of nine items developed by the author to capture students' attitudes toward cheating in online exams. The scale items were primarily guided by the existing literature on academic dishonesty, particularly in online contexts. Prior validated scales were reviewed and synthesized, including Onakoya and Alarape's (2003) Attitude Toward Examination Cheating (ATEC) and Gardner and Melvin's (1988) Attitude Toward Cheating (ATC). Items were then adapted and contextualized to specifically capture students' cognitive, emotional, and behavioral attitudes toward cheating during online exams. Expert feedback was also incorporated during item development.

Participants responded to each item using a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The total score ranged from 9 to 45, with higher scores indicating more favorable attitudes toward cheating. Internal consistency reliability was high (Cronbach's $\alpha = .90$), and item total correlations ranged from .630 to .801 ($p < .001$), suggesting substantial homogeneity. Construct validity was examined through exploratory factor analysis (EFA). The Kaiser-Meyer-Olkin (KMO) measure was .887, and Bartlett's Test of Sphericity was significant ($\chi^2(36) = 755.21$, $p < .001$), indicating data suitability for factor analysis. All items loaded above .50 on a single factor, supporting unidimensionality and construct validity.

Self-Organized Scale. Although no single standardized instrument explicitly labeled as a "self-organization scale" exists in educational psychology, prior research has operationalized self-organization through closely related constructs such as planning, time management, goal setting, and self-control. Several validated instruments and empirical studies have examined these dimensions within self-regulation frameworks among university students (Carey et al., 2004; Erdogan & Senemoglu, 2016; Zimmerman, 2008). Guided by this theoretical and empirical literature, the self-organization scale used in the present study was developed to assess students' ability to manage their study time, plan academic tasks, and organize learning efforts in preparation for online exams. The scale consisted of eight items reflecting key behavioral components of self-organization (e.g., setting priorities, planning, monitoring progress). Participants rated each item on a 5-point Likert scale ranging from 1 (*does not apply to me*) to 5 (*applies to me to a great extent*). Total scores ranged from 8 to 40, with higher scores indicating stronger self-organizational skills.

Experts in educational psychology and measurement reviewed the items. The scale demonstrated excellent internal consistency (Cronbach's $\alpha = .94$). Item–total correlations ranged from .566 to .787 ($p < .001$), indicating substantial item homogeneity and contribution to the overall construct. Construct validity was examined using exploratory factor analysis (EFA). Results supported a clear unidimensional factor structure, with all items loading substantially on a single factor (factor loadings > .50). The Kaiser–Meyer–Olkin (KMO) measure and Bartlett's Test of Sphericity confirmed the adequacy of the sample and the suitability of the data for factor analysis, supporting the construct validity of the scale.

Self-Efficacy Scale. Self-efficacy was measured using a seven-item scale that assessed self-appraisals of one's ability to master academic tasks. Self-efficacy encompasses judgments about one's capacity to accomplish a task and confidence in one's skills to perform it (Pintrich et al., 1993). Students rated themselves on a seven-point Likert scale from 1 (*not at all true of me*) to 7 (v*ery true of me).* The total score was computed as the mean of the item scores. The scale demonstrated excellent internal consistency ($\alpha = .93$), and item-total correlations ranged from .601 to .958 ($p < .001$).

Data Analysis

Before conducting inferential analyses, the data were examined for univariate normality. Skewness and kurtosis values were calculated for each item, and the results showed that all values fell within the acceptable range of ±2, indicating that the data met the assumption of normality (Sathyanarayana, 2026). Survey data were analyzed using descriptive statistics, correlation analyses, and multiple regression analyses to identify significant predictors of cheating behaviors. All statistical analyses were conducted using IBM SPSS Statistics (Version 30).

Results

Demographic Characteristics

Table 1 shows that, of the 153 participants who completed the survey, the majority were female (81.0%), while 19.0% were male. Most participants were between 18 and 23 years old (85.6%), with the remaining 13.1% aged 24 to 29 years. Regarding academic performance, 58.2% reported a GPA between 3.0 and 3.49, 32.0% between 2.0 and 2.99, and 9.8% below 2.0. In terms of study hours, more than half of the students (51.6%) reported studying between 13 and 17 hours per week, while 18.3% studied 18 or more hours, and 15.0% studied fewer than 8 hours or between 8 and 12 hours weekly.

Table 1. Demographic Characteristics of Participants (N=153)

Characteristic	n	%
Gender		
Male	29	19.0
Female	124	81.0
Age		
18-23	131	85.6
24-29	22	13.1
GPA		
< 2	15	9.8
2 ≤ 3	49	32.0
3 ≤ 3.5	89	58.2
Study hours/week		
< 8	23	15.0
8-12	23	15.0
13 -17	79	51.6
18 ≤	28	18.3

Methods of Cheating in Online Exams

Table 2 indicates that the most commonly used strategy for cheating during online exams was the use of prescribed reference materials (*M* = 3.35, *SD* = 0.84). This was followed by sharing answers through WhatsApp groups (*M* = 3.14, *SD* = 0.89). Phone calls and text messaging were also frequent (*M* = 2.91, *SD* = 1.02). Searching for answers on websites (*M* = 2.80, *SD* = 0.99) and sharing answers through Telegram (*M* = 2.69, *SD* = 0.96) were moderately practiced. Similarly, taking photos of the online exam and sharing answers (*M* = 2.69, *SD* = 1.07) appeared to be a moderately used tactic.

In contrast, the less frequently reported methods included gathering in cafés to exchange answers (*M* = 2.20, *SD* = 0.96) and having others take the exam on their behalf (*M* = 2.25, SD = 1.00). Overall, gathering in cafés to exchange answers was the least frequent method (*M* = 2.20, *SD* = 0.96).

Table 2. Means and Standard Deviation of Cheating Methods in Online Exams (N=153)

Method	M	SD	Item No.
Using Prescribed References (Books, Notes, Presentations)	3.35	0.84	1
Using phone calls and text messages	2.91	1.02	3
Sharing answers in WhatsApp groups	3.14	0.89	2
Sharing answers in Telegram groups	2.69	0.96	5
Gathering in cafes to share answers during the exam	2.20	0.96	8
Having others take online exams	2.25	1.00	7
Taking photos of the online exam and sharing the answers	2.69	1.07	6
Searching for answers on websites during the exam	2.80	0.99	4

Reasons for Cheating in Online Exams

Table 3 presents the reasons students reported for engaging in cheating during online exams. The most frequently endorsed reasons were the lack of monitoring procedures in online exams (*M* = 4.09, *SD* = 0.67) and the desire to maintain an excellent academic level (*M* = 4.09, *SD* = 0.67). Closely following this was the fear of failing the course (*M* = 4.07, *SD* = 0.62). These were followed by the desire to obtain high grades (*M* = 4.01, *SD* = 0.47). By contrast, peer pressure (i.e., following friends in cheating) emerged as the least influential factor (*M* = 3.62, *SD* = 1.22).

Table 3. Means and Standard Deviation of Reasons for Cheating in Online Exams(N=153)

Reason	M	SD	Item No.
Desire to obtain high grades in the exam	4.01	0.47	3
Fear of failing the course	4.07	0.62	2
Feeling stressed by using electronic exams	3.88	0.90	7
Desire to maintain an excellent academic level	4.08	0.69	1
Difficulty of detecting cheating in online exams	4.00	0.73	5
Lack of monitoring procedures for online exams	4.09	0.67	6
Students follow their friends in cheating	4.01	0.83	8
Searching for answers on websites during the exam	3.62	1.22	4

Reasons for Avoiding Cheating in Online Exams

Table 4 presents the reasons students reported for avoiding cheating during online exams. The most prominent factors were confidence in their ability to answer the exam questions (*M* = 4.09, *SD* = 0.67), feelings of guilt and self-reproach (*M* = 4.08, *SD* = 0.69), and the conflict between cheating behaviors and personal values and principles (*M* = 4.07, *SD* = 0.62). Fear of God Almighty (*M* = 4.01, *SD* = 0.47) and respect for the course instructor's trust (*M* = 4.01, *SD* = 0.83) also emerged as significant deterrents. By contrast, adherence to university rules and regulations regarding cheating in exams (*M* = 3.88, *SD* = 0.90) and ignorance of cheating methods (*M* = 3.62, *SD* = 1.23) were the least influential reasons.

Table 4. Means and Standard Deviation of Reasons for Avoiding Cheating in Online Exams (N =153)

Reason	*M*	*SD*	Item No.
Fear of God Almighty	4.01	0.47	4
Conflict of cheating behavior with values and principles	4.07	0.62	3
Adherence to university rules and regulations regarding cheating in exams	3.88	0.90	7
Feeling of guilt and self-reproach	4.08	0.69	2
Fear of being barred from the course and facing penalties for cheating	4.00	0.73	6
Confidence in one's ability to answer the exam	4.09	0.67	1
Respect for the trust of the course instructor and following their instructions	4.01	0.83	5
Ignorance of cheating methods and means in electronic exams	3.62	1.23	8

The Role of Self-Organization in Predicting Attitudes Toward Cheating

Table 5 presents descriptive statistics related to students' attitudes toward cheating in online exams. Overall, students reported high levels of disapproval of cheating across all items (*M* = 3.49, *SD* = 0.67), suggesting strong ethical standards among participants. The highest agreement was found for rejecting cheating even if the exam does not affect others' grades (*M* = 4.15, *SD* = 0.74), when given the chance to cheat (*M* = 4.10, *SD* = 0.83), and when the exam is difficult (*M* = 4.05, *SD* = 0.77). Participants also rejected cheating when they were graduating (*M* = 4.02, *SD* = 0.87) and when many peers were exchanging answers (*M* = 3.99, *SD* = 0.95), showing that ethical standards are relatively consistent even under peer influence or academic pressure. Lower mean scores were found for cheating due to personal study-related challenges (*M* = 3.90, *SD* = 0.94) or fear of failure (*M* = 3.86, *SD* = 1.01). Similarly, students reported cheating under instructor-related justifications such as poor teaching (*M* = 3.80, *SD* = 1.03) or unfair grading (*M* = 3.62, *SD* = 1.19). This suggests that perceived faculty shortcomings may slightly weaken some students' resistance to cheating.

Table 5. Means and Standard Deviation of Attitude Toward Cheating in Exams (N =153)

Items	*M*	*SD*	Item No.
Cheating in exams is unacceptable, even if it does not affect other students' grades.	4.15	0.74	4
Cheating in exams is unacceptable, even if I have a good opportunity to do so.	4.10	0.83	7
Cheating in exams is unacceptable, even if the exam is difficult.	4.05	0.77	1
Cheating in exams is unacceptable, even if I am about to graduate.	4.02	0.87	3
Cheating in exams is unacceptable, even if all other students are sharing answers.	3.99	0.95	9
Cheating in exams is unacceptable, even if I had personal circumstances that prevented me from studying.	3.90	0.94	8
Cheating in exams is unacceptable, even if the chances of failing are high.	3.86	1.01	2
Cheating in exams is unacceptable, even if the course instructor did not explain well.	3.80	1.03	5
Cheating in exams is unacceptable, even if the course instructor is unfair in grading.	3.62	1.19	6
Total	3.49	0.67	

Table 6 shows that students reported high levels of self-organization. The most endorsed behavior was studying to achieve high grades (*M* = 4.58, *S*D = 0.73), followed by reviewing their previous mistakes (*M* = 4.33, *SD* = 0.95). Then, prioritizing assignments (*M* = 4.25, *SD* = 0.98) and setting goals (*M* = 4.16, *SD* = 0.96). Next, paying attention to the lecture (*M* = 4.03, *SD* = 1.08) and working with a clear plan (*M* = 4.01, *SD* = 1.09). The lowest mean scores were for writing key ideas from the lecture (*M* = 3.90, *SD* = 1.17), creating a study schedule (*M* = 3.80, *SD* = 1.14), and preparing for exams early (*M* = 3.77), suggesting potential areas for improvement.

Table 6. Means and Standard Deviation of Self-Organization (N =153)

Item	*M*	*SD*	Item No.
I study for exams to obtain high grades.	4.58	0.73	8
I review the mistakes I made in previous exams.	4.33	0.95	9
I prioritize my assignments according to their importance.	4.25	0.98	2
I set realistic goals for myself.	4.16	0.96	4
I pay attention to the instructor's remarks during lectures and take notes.	4.03	1.08	6
I work toward my future with a clear plan.	4.01	1.09	3
I write down all key ideas related to the lecture topic.	3.90	1.17	7
I create a schedule to organize my study time.	3.80	1.14	1
I prepare for exams well in advance.	3.77	1.21	5
Total	4.09	0.75	

Table 7 presents a simple linear regression analysis examining whether self-organization predicts students' attitudes toward cheating. The assumptions of linearity, homoscedasticity, normality, and residual independence were examined and found to be satisfied before performing regression analyses. The results indicated that self-organization was a statistically significant negative predictor of cheating attitudes, $F(1, 151) = 20.26$, $p < .001$, accounting for approximately 13.2% of the variance in students' cheating attitudes ($R^2 = 0.132$). The unstandardized regression coefficient was $B = -0.321$, $SE = 0.071$, $t(151) = -4.79$, $p < .001$, indicating that a one-unit increase in self-organization was associated with a decrease of 0.321 units in students' cheating attitude score. The corresponding effect size was moderate ($f^2 = .15$; Cohen, 1988), suggesting that students who demonstrate stronger self-organizational behaviors tend to hold less favorable attitudes toward cheating.

Table 7. Regression Analysis Predicting Attitudes Toward Cheating from Self-Organization (N =153)

Predictor	B	SE B	*t*	*p*	CI 95% Lower	CI 95% Upper
Constant	4.561	0.389	11.726	<.001	3.790	5.333
Self-Organization	-0.321	0.067	-4.789	<.001	-0.453	-0.189

The Role of Self-Efficacy in Predicting Attitudes Toward Cheating

Table 8 displays the descriptive statistics for the Self-Efficacy Scale. The results indicated that students reported high levels of academic self-efficacy ($M = 4.35$, $SD = 2.29$). The highest-rated item was "If I study in the right way, I will be able to succeed in any course" ($M = 4.75$, $SD = 2.67$), reflecting students' strong confidence in the effectiveness of study strategies. Other highly rated items included "I am confident that I did excellent work in the assignments and exams" ($M = 4.56$, $SD = 2.63$), and "If I put in enough effort, I will understand this course" ($M = 4.45$, $SD = 2.62$) as well as "I believe I will get a high grade in this course" ($M = 4.42$, $SD = 2.63$). Additional highly endorsed items included, "I am confident in my understanding of this course" ($M = 4.39$, $SD = 2.65$), and "I am confident that I have learned the skills taught in this course" ($M = 4.35$, $SD = 2.48$). The item "It is my fault if I do not learn from this course" received the lowest mean score ($M = 3.52$, $SD = 2.13$), suggesting a relatively lower level of personal accountability for learning outcomes compared to other self-efficacy domains.

Table 8. Means and Standard Deviation of Self-Efficacy (N =153)

Item	*M*	*SD*	Item No.
If I study in the right way, I will be able to succeed in any course.	4.75	2.67	1
I am confident that I did excellent work in the assignments and exams in this course.	4.56	2.63	6
If I put in enough effort, I will understand this course	4.45	2.62	3
I believe I will get a high grade in this course.	4.42	2.64	4
I am confident in my understanding of this course.	4.39	2.65	5
I am confident that I have learned the skills taught in this course.	4.35	2.48	7
It is my fault if I do not learn from this course.	3.52	2.13	2
Total	4.35	2.29	

Table 9 presents a regression analysis testing whether self-efficacy predicts students' attitudes toward cheating. The results showed that self-efficacy was a significant negative predictor of cheating attitudes, $F(1, 151) = 20.26$, $p < .001$, accounting for approximately 13.2% of the variance in students' cheating attitudes ($R^2 = 0.132$). The corresponding effect size was moderate ($f^2 = .15$; Cohen, 1988), and the unstandardized coefficient for self-efficacy was $B = -0.295$, $p < .001$, indicating that for every one-unit increase in self-efficacy, students' cheating attitude score decreased by 0.295 units. The results suggest that students with higher levels of self-efficacy were less likely to endorse favorable attitudes toward cheating.

Table 9. Regression Analysis Predicting Attitudes Toward Cheating from Self-Efficacy (N=153)

Predictor	*B*	*SE B*	*t*	*p*	CI 95% Lower	CI 95% Upper
Constant	4.897	0.376	13.026	<.001	4.158	5.636
Self-Efficacy	-0.295	0.062	-4.758	<.001	-0.417	-0.173

Moderating Role of Self-Organization

Table 7 presents a moderation analysis testing whether self-organization moderates the relationship between self-efficacy and attitudes toward cheating. The interaction term between self-organization and self-efficacy was statistically significant ($B = 0.125$, $p = .001$), indicating that self-organization moderated the relationship. Specifically, at low levels of self-organization, the negative relationship between self-efficacy and attitudes toward cheating was stronger. Students with low self-organization but high self-efficacy were less likely to endorse favorable attitudes toward cheating. In contrast, at high levels of self-organization, the negative relationship between self-efficacy and cheating attitudes was weaker, suggesting that self-efficacy's protective effect may diminish as students become increasingly self-organized.

Table 7. Moderation Analysis of Self-Organization on the Relationship Between Self-Efficacy and Attitudes Toward Cheating (N =153)

Predictor	*B*	*SE B*	*t*	*p*	CI 95% Lower	CI 95% Upper
Constant	4.123	0.400	10.308	<.001	3.334	4.912
Self-Organization	-0.245	0.078	-3.141	.002	-0.399	-0.092
Self-Efficacy	-0.238	0.071	-3.352	.001	-0.379	-0.098
Interaction	0.125	0.037	3.378	.001	0.053	0.197

Discussion

The present study provides important insights into the psychological and contextual factors that influence cheating during online examinations at Umm Al-Qura University in Saudi Arabia. Several key findings emerged, each with theoretical and practical implications for higher education.

Cheating Methods

Results indicated that using prescribed reference resources and swapping answers via WhatsApp groups were the most popular ways for students to cheat, suggesting that students took advantage of open-book exam formats and that references were easily accessible via communication platforms. Phone calls and text messaging were also frequent, reflecting real-time coordination among students. Searching for answers on websites and sharing answers via Telegram were moderately practiced, perhaps due to the availability of online resources and familiarity with the platform. Similarly, taking photos of the online exam and sharing answers were moderately used tactics.

These methods may be appealing because they are easily accessible and unlikely to be discovered, consistent with previous research, such as Noorbehbahani et al. (2022), who indicated that common tactics include accessing unauthorized resources, using additional devices, and collaborating with peers. Results also align with Quang et al. (2025), who reported that the use of search engines and unauthorized materials was the most common cheating method. Research by Henderson, Chung, Awdry, Ashford, et al. (2023) showed that the accessibility and perceived risk of particular tactics frequently influence students' inclination to cheat. The widespread use of WhatsApp answer-sharing is also consistent with qualitative research indicating that students often view these behaviors as "sharing" rather than "cheating" (Harper & Prentice, 2024). The widespread use of WhatsApp answer-sharing is also consistent with qualitative research indicating that students often view these behaviors as "sharing" rather than "cheating" (Harper & Prentice, 2024). The findings emphasize the importance of institutional regulations and awareness campaigns that clearly distinguish academic misconduct from appropriate collaboration.

On the other hand, results showed that gathering in cafés, delegating others to complete exams, taking photos of exams, and sharing answers were the least frequent methods students reported using. Gathering in cafés or delegating exams to others involves greater logistical barriers and a higher risk of monitoring, which likely explains their limited use. The results are contrary to those of Bawarith et al. (2017), who found that having someone take an exam for one, using applications, copying test questions, and sending them to an expert were the most common forms of cheating in online exams among college students. Collectively, these findings underscore the need to adopt assessment formats that reduce opportunities for misconduct and address students' perceptions of integrity.

Reasons for Motivation and Avoiding Cheating

Results indicated that students' primary motivations for cheating in online exams were the lack of monitoring procedures, the desire to maintain an excellent academic record, the fear of failing the course, and the desire to obtain high grades. By contrast, peer pressure (i.e., following friends in cheating) emerged as the least influential factor. A sense of distance in online environments may weaken students' internalized moral norms. Moreover, the absence of real-time proctoring or technical observation may reduce students' psychological deterrence to cheat, suggesting that the online proctoring is an effective tool to mitigate academic dishonesty in online courses (Dendir & Maxwell, 2020). The perceived risk of being caught decreases when students believe online exams are less closely monitored, in line with the Fraud Triangle Theory, which posits that opportunity, pressure, and rationalization are key predictors of deviant behavior (Al Shbail et al., 2021; Jenkins et al., 2023). This is consistent with Maphalaa and Nkosi (2025), who emphasized the importance of strategically integrating proctoring tools into online assessments to balance security with inclusivity and ethical considerations.

When it comes to sustaining excellent academic performance, students frequently associate high grades with future achievement, parental approval, and confidence. Maladaptive perfectionism may cause some students to find any perceived decline in their academic performance unbearable. However, students who feel unprepared may engage in cheating out of frustration. For instance, some students experience academic difficulties that affect their readiness and increase their anxiety, leading to illicit behavior as a coping strategy. Previous research has indicated similar reasons, such as exam anxiety and educational stress (Abdelrahim, 2022; Eshet et al., 2022). Finally, regarding peer pressure, students may justify their cheating behavior as a personal choice instead of blaming peer imitation. This result was inconsistent with social capital theory, which emphasizes that social norms and social trust influence students' behavioral intentions to cheat (Al Shbail et al., 2021). It also contradicts the study by Awdry and Ives (2023), which showed a correlation between students' cheating on assignments and several situational characteristics, such as their knowledge of friends' cheating and their belief that cheating is acceptable. However, students typically take online exams independently, which may reduce the impact of peers as compared with in-person exams and assignments.

Predictors of Attitude toward Cheating in Online Exams

Results indicated that higher levels of self-organization significantly predicted less favorable attitudes toward cheating. In other words, self-organized students tend to hold stronger moral objections to cheating, regardless of situational pressures. Well-organized students are more likely to prepare in advance, distribute study time effectively, and reduce procrastination, which in turn decreases the perceived "need" or pressure to cheat. Self-regulated learning theory holds that well-organized students are better able to manage their academic workload and, as a result, feel less tempted to cheat (Zimmerman, 2008).

Furthermore, attitudes toward cheating were significantly negatively predicted by self-efficacy; students who felt more confident in their academic skills also held less positive opinions about cheating. Stronger planning and monitoring abilities reduce the likelihood of dishonest conduct, a psychological process that facilitates cheating, such as rationalization

or minimizing repercussions. This result is consistent with Bandura's (1997) notion that higher self-efficacy promotes persistence and resilience in academic contexts. Many studies also found that self-efficacy was a significant predictor of students' cheating behavior (Amelia & Usman, 2020; Ghoni et al., 2025).

Interestingly, the moderation test revealed that self-organization reduced the association between self-efficacy and cheating attitudes. According to Social Cognitive Theory, self-efficacy reflects students' belief in their capacity to succeed academically, while self-organization involves strategically applying this belief through planning, time management, and goal-setting. At low levels of self-organization, self-efficacy had a more substantial deterrent effect against cheating. However, self-efficacy showed a weaker effect when self-organization levels were high. Students are more likely to translate their confidence into moral behavior in the classroom when they are well-organized. Students with inadequate self-organization, on the other hand, might not have the behavioral means to enact their intentions, making them more susceptible to academic dishonesty when under pressure (Bandura, 1997; Zimmerman, 2008). The findings imply that self-efficacy and self-organization have complementary but indirect effects on academic integrity. Educational interventions, such as workshops on time management, goal setting, and study strategies, may improve self-organization and thus help reduce academic dishonesty. Programs that also provide mastery experiences, constructive feedback, and peer support could therefore enhance self-efficacy and indirectly reduce cheating.

Conclusion

This study underscores the critical role of self-organization and self-efficacy in shaping students' attitudes toward cheating in online examinations. The findings demonstrate that both attributes function as significant protective factors, with higher levels of self-organization and self-efficacy associated with less favorable attitudes toward academic dishonesty. Moreover, the moderation effect underscores the complexity of their combined influence, suggesting that fostering either alone may not be sufficient to deter cheating entirely. From a theoretical standpoint, the study extends

the literature on academic integrity by moving beyond descriptive accounts of cheating prevalence and examining psychological predictors within the framework of self-regulated learning theory. Practically, although the cross-sectional design and reliance on self-reported measures limit the strength of the conclusions, the practical implications should be interpreted cautiously. However, the results point to the need for targeted interventions aimed at improving students' organizational skills in higher education—such as time management, goal setting, and effective study strategies and initiatives designed to strengthen academic self-efficacy through mastery experiences and constructive feedback, which may provide a comprehensive approach to reducing cheating in online exams.

Recommendations

The findings of this study have important implications for educational practice and policy. Addressing cheating requires solutions that target not only actual behaviors but also the temptation to engage in cheating practices, such as modifying exam settings and strengthening monitoring systems (Henderson, Chung, Awdry, Ashford et al., 2023). For instance, instructors can reduce the potential for cheating in online exams by designing exams that emphasize critical thinking rather than rote memory, such as open-book and application-based formats. Misconduct can be further discouraged by using rotated questions, test versions, and time restrictions (Spiegel & Nivette, 2023). Moreover, proctoring strategies should be continuously adapted to address integrity and student experience, emphasizing transparency and ethical use of technology (Maphalaa & Nkosi, 2025).

Additionally, institutions should invest in implementing a supportive evaluation strategy that lessens the stress of a single, critical exam by utilizing a variety of assessment methods, including participation, projects, and performance tasks. However, educators and assessment specialists ought to collaborate to develop learning environments that provide students with academic and psychological skills, particularly self-efficacy and self-organization, which give them the confidence and skills they need to succeed with integrity. Instructors can incorporate self-regulation skill training into the classroom through activities, such as using planners, reflection logs, time management, goal setting, and study techniques (Anderman & Won, 2019).

Limitations

This study has several limitations that should be considered when interpreting the findings. First, the use of convenience sampling restricts the generalizability of the findings. Second, the reliance on self-reported data may have introduced response bias. Future research should replicate these findings with larger and more diverse samples, employ longitudinal designs, and incorporate objective measures of academic misconduct to validate self-reports. Third, causal inferences between factors are not possible with the cross-sectional design; future research adopting experimental or longitudinal methodologies will be needed to investigate the causal relationships between these conceptual frameworks.

Additionally, future studies could examine how cultural values, educational systems, and institutional norms shape students' attitudes and behaviors regarding academic integrity in online environments. Studies examining the effectiveness of targeted interventions—such as training in self-regulation and self-efficacy—are needed to determine whether these programs reduce actual cheating behavior. Exploring the role of contextual variables (e.g., assessment design, faculty-student trust, institutional policies) would also deepen understanding of the dynamics underlying academic dishonesty in digital learning contexts.

Ethics Statements

Ethical approval was obtained from the Human Research Ethics Committee at Umm Al-Qura University prior to data collection. Participants provided informed consent before responding to the survey. Students were assured that their responses would remain confidential and would be used solely for research purposes. They were also informed of their right to withdraw from the study at any time without penalty.

Generative AI Statement

As the author of this work, I used the AI tool [ChatGPT] for [paraphrasing]. After using this AI tool, I reviewed and verified the final version of my work. I, as the author, take full responsibility for the content of my published work.

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