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# Study of the Impact of Academic Integrity Interventions on Student Behaviours and Attitudes in Higher Education Institutions

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**Abstract:** Academic integrity is the cornerstone of quality education, ensuring fairness, honesty, and trust in learning environments. However, upholding academic integrity has become increasingly challenging and complex in recent years due to advances in AI. Technology has made it easier for academic misconduct to occur at all levels of education, raising serious concerns about the credibility of academic qualifications, the quality of teaching, and the reputation of the educational institution. Intentional or inadvertent, academic misconduct often results from a lack of knowledge, external influences, or insufficient classroom guidance. Despite institutional policies, many educational practices fail to promote academic integrity actively. Policy alone cannot transform students' attitudes and behaviours toward ethical scholarship. Meaningful change requires systematic investigation into misconduct patterns, the implementation of well-designed intervention programs, and the restructuring of assessment methods. This research examines the impact of academic integrity intervention programs on student attitudes and behaviours at the University of Technology and Applied Sciences – Shinas, Oman. Findings of integrity awareness sessions indicate measurable improvement in students' understanding, behaviour, and commitment to ethical academic conduct. The paper concludes by outlining practical strategies and educational practices to nourish a culture of honesty and ethical scholarship in higher education.

**Keywords:** Academic Intervention; Honesty and Awareness; Academic Misconduct; Academic Ethics; Academic Integrity; Policies and Procedures; Empowering People; Academic Dishonesty.

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## 1. Introduction

The core value of education lies in empowering people with moral values, ethical knowledge, and skills required to build a sustainable and equitable society. Educational institutions, especially higher education institutions, play a vital role in achieving this vision through academic excellence, driven by quality in education, research, and innovation [1]; [2]. Ensuring and maintaining the quality of education depends on academic integrity [3]. Academic integrity, which includes honesty, fairness,

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trust, and responsibility in all academic activities, serves as the cornerstone for meaningful learning and professional development. It prevents academic dishonesty, which can be understood as gaining undeserved opportunities related to learning and success [4]. Academic dishonesty can have serious consequences for both students and educational institutions. From the students' perspective, violations of the institution's academic integrity policy can result in academic penalties, including failing grades, suspension, or dismissal [14]. They can severely damage their credibility and future career prospects. Such actions hinder the very purpose of the educational environment. On the other hand, breaches of academic integrity within educational institutions can severely damage institutional reputation, reduce public trust, undermine the credibility of the degrees they award, and negatively affect global rankings and accreditation status [6]. Over the past few years, upholding academic integrity has become increasingly challenging for academic institutions due to the rise of generative AI. Tools like ChatGPT, Gemini, DeepSeek, and other platforms help students complete their academic tasks on time. On the one hand, these tools have made our lives much easier by assisting with our daily routine and helping us complete tasks more easily. On the other hand, overreliance on them can undermine our students' actual learning, their understanding of concepts, and the development of creative and critical thinking skills.

This growing reliance raises concerns about the integrity of education and the credibility of students' academic achievements. Even before GenAI became widespread, many students struggled to maintain the integrity of their work due to academic pressure, stress, external stimuli, and a limited understanding of academic misconduct. Past research shows that academic misconduct often occurs when students feel overwhelmed or uncertain about proper academic practices [5]. It may occur intentionally or unintentionally, due to a lack of understanding of academic integrity, outside pressures, or insufficient classroom support and guidance [20]. In this AI era, students under pressure may use these AI tools to meet their scheduled deadlines or manage their academic workloads without realising the consequences [21]. Thanks to their free and widespread accessibility, AI tools enable students to complete coding tasks, write paperwork, and solve assignment problems [17]. Traditional plagiarism software often fails to recognise AI-produced text, since it is technically new and not copied from existing sources. Modern AI detection systems are still developing, and many produce inconsistent results or false alarms. Some advanced prompting techniques challenge the AI detector software, making this problem more complex than ever before. This uncertainty adds to the pressure on both students and educational institutions [7]; [8]. The roots of academic misconduct often lie in factors such as stress, performance pressure, and a lack of awareness of ethical standards. To address this, educational institutions should organise regular awareness programs and provide proper counselling [18]. Helping students understand ethical academic behaviour and manage academic stress will be key to protecting integrity and trust in education [16].

## 2. Method

### 2.1. Types of Academic Misconduct and its Intervention Methods

The research focused on three major types of academic misconduct, as shown in Figure 1 below. The study focuses on awareness and guidance sessions on academic integrity and different forms of misconduct, which can help change students' attitudes and behaviours. When students are more aware of the impact of academic misconduct and the true purpose and meaning of academic integrity, they are more likely to make responsible choices, thereby lessening misconduct and promoting a healthier learning environment. These three main kinds of academic misconduct were selected because they are among the most common practices among students, especially as academic pressure, new technologies, and changing learning environments continue to create new risks [22].

#### 2.1.1. Contract Cheating

Contract cheating is the act of having someone else complete academic tasks on a student's behalf. This includes paying essay mills, hiring online freelancers, using ghostwriters, outsourcing coding tasks, having someone take online exams, misusing study help sites for ready-made answers, relying on AI tools to generate complete assignments, and using social media groups to buy completed work. Before the rise of online platforms and generative AI, this type of cheating happened on a smaller scale and often involved informal peer support. Today, it has grown rapidly because free AI tools and commercial online services make it easy for students to outsource work. Many of these services provide essays, reports, coding solutions, and completed papers, making it difficult for teachers to identify students' genuine work [24].

Walker and Townley [9] explain how contract cheating has become a growing threat to academic honesty, with students paying others to complete their work. They show that this problem is more complex to detect than traditional plagiarism because the work looks original. The authors discuss why students turn to outsourcing, including pressure and confusion about academic expectations. They argue that universities need stronger policies and more precise guidance to protect academic integrity. Another study by Awdry and Ives [10] shows that situational and social context play a vital role in cheating rather than individual personality traits. Students often cheat because of academic pressure, when opportunities are easy, or when they see others doing it.

The authors suggest that more explicit guidance and supportive learning environments can help reduce these behaviours. Guruge and Kadel [11] explain that contract cheating is more challenging to detect in academic institutions worldwide. It requires multifaceted solutions that include prevention, detection, staff training, student education, and clear institutional policies. This research emphasises the need for staff and student education to prevent academic cheating. Researchers also highlight the importance of using technology alongside human judgment to identify suspicious patterns. A study conducted by Ellis et al. [5] found that even well-designed "authentic" assessments do not entirely prevent contract cheating among university students. Their data showed that some students still outsourced their work when they felt stressed, unprepared, or unsure about the task. The study highlighted that assessment design alone cannot protect academic integrity [25]. It argued that students also need guidance, ethical awareness, and supportive learning environments to reduce cheating.

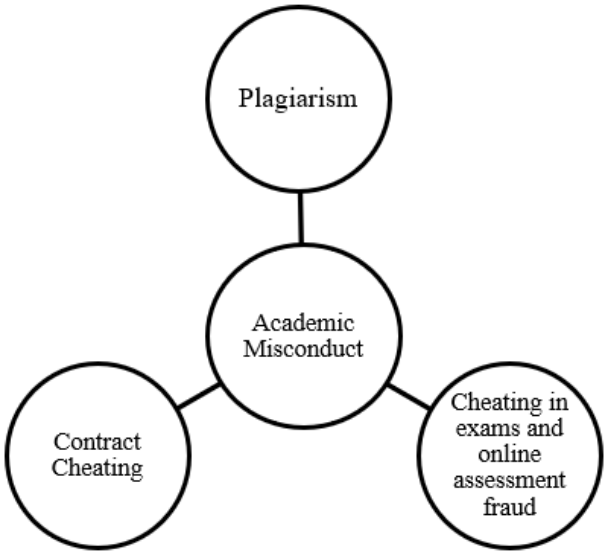


**Figure 1:** Types of academic misconduct

### 2.1.2. Plagiarism

Plagiarism means using someone's work or ideas without giving proper permission or credit [13]. It is a form of academic dishonesty because students are taking credit for work that is not their own. Reasons for plagiarism in the academic community include academic stress, exam pressure, confusion about plagiarism, language difficulties, and unclear institutional policies [17]. In the early days, plagiarism often occurred by copying others' books, papers, images, diagrams, charts, Tables, and ideas. Recently, students have been deliberately copying content from online sources, books, and papers without providing proper citations. Modern AI tools like QuillBot and Grammarly help students paraphrase or rephrase sentences to avoid plagiarism detection. Transformer-based AI models such as ChatGPT, Copilot, Gemini, and DeepSeek can even generate complete answers, essays, or code. When students use generated content without disclosure or permission, it may contain original ideas or works of others, making it harder to protect academic integrity. Miranda-Rodríguez et al. [8] presented a systematic review of interventions to reduce plagiarism.

The report states that training combined with practical exercises and feedback reduces plagiarism more than punishment alone. The review presented by Park [12] synthesises research on university student plagiarism, highlighting its prevalence, varied motivations, and the amplifying role of digital technologies. The author also pointed out that students often misunderstand or downplay plagiarism, while institutions rely too heavily on detection rather than education. This review emphasises the need for a balanced framework that includes prevention, clear guidance, consistent penalties, and a stronger culture of academic integrity. Bretag [15] presents the issue of addressing Plagiarism in Education. Researcher argues that plagiarism is a symptom of deeper issues in academic integrity, including unclear policies, insufficient skill development, and institutional pressures. Also highlights how overreliance on detection tools distracts from teaching students' ethical scholarship. Researcher concludes that only a holistic, education-focused approach can meaningfully address plagiarism in higher education.

### 2.1.3. Cheating in Exams

Another primary concern in maintaining academic integrity is cheating in examinations, both online and offline. This practice undermines academic integrity by undermining the trust, fairness, and purpose of assessments. In traditional classroom-based

exams, students may use hidden materials such as small slips of paper containing key answers, copying answers from peers, sharing answer scripts, communicating answers to questions covertly, or accessing hidden folders or USB drives that contain prepared code. Such activities directly affect honest students, leading them to lose hope in the examination process and leaving them feeling discouraged and undervalued. In online exams during the AI era, detecting cheating becomes even more complex than in classroom-based offline assessments. Students may obtain answers from various online sites, use chatbots or generative AI tools such as ChatGPT, collaborate secretly, or even have someone else take the exam on their behalf. These practices seriously raise concerns about whether the submitted work genuinely reflects individual learning. This kind of cheating practices tends to intensify when students face academic pressure, stress, or uncertainty about what constitutes misconduct. Technology-supported cheating makes it difficult for institutions to uphold trust in grades and course outcomes. When assessment results no longer align with actual learning, the reputation of academic programs is weakened, and students may carry dishonest habits into future studies and in professional environments.

That is why academic institutions must pay closer attention to controlling cheating, which directly affects the quality, credibility, and fairness of higher education. During COVID-19, universities and colleges struggled to conduct regular examinations online, which amplified the space for cheating. Orok et al. [19] presented a study on the challenges associated with online examinations during COVID-19. The study's findings indicate that no single solution, whether online proctoring, redesigned assessments, or other measures, can fully ensure academic integrity. The researchers emphasise the need to blend pedagogy with technology by teaching students about academic honesty, diversifying assessment types, and prioritising higher-order thinking. Rendhy et al. [20] conducted a study on Kuwaiti EFL college students' attitudes toward cheating, finding that although most disapprove of standard cheating methods, many remain tolerant of practices such as using leaked exams or sharing information. Students attribute cheating to weak English proficiency, social and familial pressure, and problematic instructor behaviour.

The authors call for clearer academic integrity policies, improved teaching standards, and better language preparation to reduce cheating. A growing body of research shows that many instances of academic cheating stem not from deliberate dishonesty, but from students' limited understanding of what constitutes academic misconduct. Both intentional and unintentional violations often arise when learners lack adequate knowledge, face external pressures, or receive insufficient guidance on academic integrity. Orok et al. [19] found that many of the 335 healthcare students surveyed in Nigeria had only a limited understanding of academic misconduct, often overlooking the seriousness of dishonest behaviours.

Their lack of knowledge, combined with heavy workloads, competition, fear of failure, and weak institutional support, increased the likelihood of cheating. The study highlights that students may slip into misconduct unintentionally or justify it when guidance is unclear. The authors emphasise the need for stronger education on integrity, clearer policies, and consistent enforcement to help students make honest academic choices. Sbaffi and Zhao [23] surveyed 205 English-major students in Vietnam to assess their awareness of plagiarism and their attitudes toward it. The study found that although students could recognise some forms of plagiarism, their overall understanding remained limited. Many instances of plagiarism were unintentional, often stemming from a misunderstanding of citation rules or insufficient instructional guidance. The author concludes that more explicit teaching, consistent support, and improved academic writing training are essential to reduce both accidental and intentional plagiarism.

The literature clearly indicates that most academic misconduct is not simply a moral failing but a reflection of insufficient knowledge, limited awareness, and a lack of structured academic integrity education. When students lack clear guidance or feel overwhelmed by academic demands, they can easily slip into dishonest behaviour, sometimes unknowingly. Strengthening academic integrity, therefore, requires not only punishment but proactive teaching, transparent policies, and supportive learning environments that help students understand how to uphold integrity and why it matters. This research examines the impact of an Academic Integrity Awareness Session on students' knowledge, attitudes, and behavioural intentions.

## 3. Results and Discussion

To determine whether an academic integrity awareness session leads to measurable improvements in students' understanding of major misconduct types and fosters more positive attitudes toward ethical academic behaviour.

### 3.1. Research Questions

- Does the awareness and guidance session increase students' knowledge of the three targeted types of academic misconduct?
- Does the session produce more positive attitudes toward academic integrity?

This study used a pretest-posttest experimental design to examine how an academic integrity awareness session influences students' knowledge and attitudes toward academic misconduct. A single awareness session was delivered to all participants, and the same questionnaire was given before and after the session to measure any changes. This design enabled the study to capture immediate differences in students' understanding and attitudes toward contract cheating, plagiarism, and exam cheating. The intervention consisted of a 90-minute interactive awareness and guidance session focused on Academic integrity in general, misconduct, experiences, integrity policies, and the consequences of misconduct, followed by a focused session on each topic, such as contract cheating, plagiarism, and exam cheating. The session includes theoretical definitions, examples, a discussion of Institutional policies for academic integrity, practical activities, a short conversation, and a survey. The session was designed to be simple, relatable, and highly practical, helping students understand not just the rules but also the reasoning behind them. A total of 150 diploma students from different academic programs participated in the study. Students were invited by mail, participation was voluntary, and all students provided informed consent before taking part.

### 3.1.1. Study #1: Student Knowledge of Academic Integrity Policies, Misconduct, and Consequences

The first study examined students' understanding of academic integrity policies, their awareness of misconduct, and their perceptions of the consequences of violating these policies. The results showed that overall familiarity with academic integrity policies was moderate. Only a small group of students felt very familiar with the policies (16.67 percent), while the largest group reported a neutral level of familiarity (31.33 percent). Another 28.66 per cent were slightly familiar or not at all familiar, suggesting that many students may not fully understand the policies that govern ethical academic behaviour, as shown in Table 1.

**Table 1:** Familiarity with academic integrity policies

| Familiarity Level | Frequency | Percentage |
|---|---|---|
| Very Familiar | 25 | 16.67 |
| Somewhat Familiar | 35 | 23.33 |
| Neutral | 47 | 31.33 |
| Slightly Familiar | 20 | 13.33 |
| Not Familiar at all | 23 | 15.33 |

When students were asked about different forms of academic misconduct, cheating on exams was the most commonly recognised behaviour (37.33 percent), followed closely by fabrication or falsification of data (36 percent) and plagiarism (30.67 percent). Awareness of unauthorised use of AI tools and unapproved collaboration was also present, but at a slightly lower level. These findings indicate that while students are aware of major misconduct types, there may still be uncertainty about the discussed behaviours, as shown in Table 2.

**Table 2:** Familiarity with academic misconduct

| Misconduct Type | Frequency | Percentage |
|---|---|---|
| Plagiarism | 46 | 30.67 |
| Cheating on Exams | 56 | 37.33 |
| Unauthorised use of AI tools for assignments | 39 | 26.00 |
| Collaborating without permission | 35 | 23.33 |
| Fabrication or falsification of data | 54 | 36.00 |

Understanding the importance of academic integrity was another key point in this study. More than half of the students agreed or strongly agreed that integrity is essential for their future careers. Only a small number disagreed. This shows that students generally understand the long-term value of honest academic work, as shown in Table 3.

**Table 3:** Significance of academic integrity

| Academic integrity is essential for my future career | Frequency | Percentage |
|---|---|---|
| Strongly Agree | 37 | 24.67 |
| Agree | 55 | 36.67 |
| Neutral | 40 | 26.67 |
| Disagree | 11 | 7.33 |
| Strongly Disagree | 7 | 4.67 |

The study also explored how well students felt supported by their institution. Most students felt either supported or very supported, while a smaller group felt neutral or only slightly supported. A few students felt not at all supported. This indicates that while institutional support is visible, there is still room to strengthen guidance and resources, as shown in Table 4.

**Table 4:** Institution support for academic integrity

| How supported do you feel by your institution in upholding academic integrity? | Frequency | Percentage |
|---|---|---|
| Very Supported | 33 | 22 |
| Supported | 49 | 32.67 |
| Neutral | 43 | 28.67 |
| Slightly Supported | 12 | 8 |
| Not Supported | 8 | 5.33 |

Finally, students identified the main factors that shape their adherence to academic integrity. Personal ethics was the most decisive influence, followed by awareness of policies and peer influence. Fear of penalties also played a role, although less strongly. Ease of cheating was the least influential factor, suggesting that most students do not base their decisions on opportunities to cheat but rather on internal values and knowledge, as shown in Table 5.

**Table 5:** Influencing factor

| What factors most influence your adherence to academic integrity? | Frequency |
|---|---|
| Awareness of policies | 74 |
| Personal ethics | 86 |
| Peer influence | 58 |
| Fear of penalties | 41 |
| Ease of cheating | 15 |

Results of this study show that students understand the importance of academic integrity, but many still lack full awareness of policies and types of misconduct. Educational support and clear communication can help strengthen ethical behaviour and reduce misconduct across the institution.

### 3.1.2. Study #2: Misconduct Awareness Session

The second stage of the research study was more focused on implementing an awareness session targeting three significant forms of academic misconduct, as shown in Figure 1. The session was planned to address the gaps identified in survey study 1 and to help students better understand contract cheating, exam cheating, and plagiarism. A pretest–posttest approach was used to measure changes in knowledge, attitudes, and behavioural intent. The same questionnaire was used before and after the awareness session to clearly record any differences in responses. To evaluate the intervention's reliability and effectiveness, several statistical measures were included in the analysis plan. Cronbach's Alpha was calculated for both the pretest and posttest responses to assess the questionnaire's internal consistency stability. Changes in student understanding were evaluated by comparing pre- and post-session mean scores. A paired t-test was used to determine whether these changes were statistically significant at the 0.05 level. Effect size was measured using Cohen's d to understand the strength of the improvement. For questions with categorical responses, agreement between pretest and posttest responses was assessed using Cohen's Kappa.

Observed and expected agreement values were also recorded to determine the extent to which the agreement was genuine and how much might have occurred by chance. Before the awareness session began, students completed a pretest questionnaire that measured their initial understanding of academic integrity and common misconduct behaviours. They then attended a series of interactive sessions that explained the three misconduct types, using examples and discussions to make the content practical and easy to understand. After the training session, students filled out the posttest questionnaire using the same set of items. Each student was assigned an anonymous code so that their pretest and posttest responses could be matched without revealing their identity.

All data were later analysed using a Python statistical program. The survey was conducted in accordance with ethical standards. Students were first informed of the study's purpose and provided written consent. Students were reminded that participation was voluntary and that they could stop at any time without consequences. No personal identifying information was collected, and all data were stored securely. The study did not influence academic grades, and the information gathered was used only for research purposes.

### 3.2. Contract Cheating Awareness Session

The purpose of this study was to improve knowledge of contract cheating, its impact, and the extent of cheating behaviour among them and their peers. It also checks the reliability of their responses. Because the survey was anonymous, students could share their honest views without fear of judgment. The questionnaire comprised eight items, grouped into sections. Each section was designed to help us understand specific aspects of contract cheating. Table 6 shows that the survey was structured, covering both personal behaviour and peer influence.

**Table 6:** Structure of the questionnaire for the contract cheating awareness session

| Question | Type | Focus |
|---|---|---|
| Q1 | Yes/No | Baseline awareness of "contract cheating" before the session |
| Q2 | Likert (1–5) | Understanding of contract cheating after the awareness session |
| Q3 | Likert (1–5) | Ethical perception of the seriousness of contract cheating |
| Q4 | Yes/No/Prefer not to say | Self-reported involvement in contract cheating |
| Q5 | Yes/No | Exposure to contract cheating offers (being approached) |
| Q6 | Yes/No | Awareness of peers engaging in contract cheating |
| Q7 | Multiple choice (select up to 3) | Identification of perceived causes/motivations for contract cheating |
| Q8 | Open-ended | Strategies and ideas for preventing contract cheating |

Table 7 shows the main findings of the study. The result indicates that the awareness training session had a substantial impact, with a significant jump in students who felt fully aware of contract cheating. Even though most students now understand the seriousness of cheating, some still admit involvement, and many students have been exposed to cheating opportunities. The reasons for this misconduct are stress, confusion about assignments, and time pressure.

**Table 7:** Summary of contract cheating awareness session

| Category | Result |
|---|---|
| Awareness (Before vs After) | Fully aware, students increased from 17 % to 77 % |
| Perceived Severity | Mean rating 4.33 out of 5 |
| Self-reported Involvement | 8 % admitted cheating, 7 % preferred not to say |
| Exposure to Cheating Offers | 30% were known essay mills/peers/AI Tools |
| Peer Observation | 23% saw others engage in contract cheating |
| Common Reasons | Heavy workload 53%, lack of understanding 43%, poor time management 40%, easy access 37% |

The statistical results shown in Table 8 indicate that the awareness session worked exceptionally well. The questionnaire demonstrated strong internal consistency, as evidenced by a Cronbach's Alpha of 0.84, indicating that the items worked well together to measure awareness reliably. The paired t-test revealed an apparent, statistically significant increase in awareness after the training session ($t(149) = 23.52$, $p < 0.001$), with participants' scores increasing by an average of 2.20 points. This improvement was further supported by a large effect size (Cohen's $d = 2.44$), highlighting the substantial impact of the training. The moderate Kappa value suggests that students may not fully report their own cheating, but they do notice it in others. The confidence intervals indicate that changes in awareness, questionnaire reliability, and agreement are stable.

**Table 8:** Statistical results of the contract cheating awareness session

| Test | Result | Description |
|---|---|---|
| Cronbach's Alpha | 0.84 | The questionnaire is reliable and consistent |
| Paired t-test | t(149) 23.52, p less than 0.001, Mean difference 2.20 | great improvement in awareness |
| Effect Size (Cohen's d) | 2.44 | A very large effect of the training session |
| Cohen's Kappa | 0.40 | Moderate agreement between self and peer reports |
| 95% Confidence Intervals | Awareness changes 2.00 to 2.40; Alpha 0.79 to 0.87; Kappa 0.25 to 0.55 | Results are stable and meaningful |

The main challenge is that even with improved awareness, a small number of students still admit to cheating. This means knowledge alone is not enough. Stress, pressure, and confusion continue to influence behaviour.

### 3.3. Plagiarism Awareness Session

The purpose of this study was to evaluate how diploma students' understanding of plagiarism improved after an awareness session, how confident they felt about academic honesty, and how reliably the survey captured their responses. The 10-item survey used Likert-scale questions to measure knowledge, attitudes, and self-reported behavioural intentions. Question 6 was reverse-coded to ensure that higher scores consistently reflected better understanding or stronger integrity. The questions were organized into three conceptual categories: Knowledge & Awareness (Q1–Q5), Attitudes & Confidence (Q8–Q10), and Behavioral Intent (Q6–Q7). This structure enabled the survey to comprehensively capture the cognitive, attitudinal, and behavioural dimensions of academic integrity (Table 9).

**Table 9:** Structure of the questionnaire plagiarism awareness session

| Question | Type | Focus |
|---|---|---|
| Q1 | Likert | Self-reported knowledge of what plagiarism means |
| Q2 | Likert | Awareness that plagiarism includes copying text without citation |
| Q3 | Likert | Understanding of patchwriting |
| Q4 | Likert | Recognition that using website ideas without citation is plagiarism |
| Q5 | Likert | Confidence in proper paraphrasing |
| Q6 | Likert (reverse-coded) | Acceptability of reusing one's own previous assignments |
| Q7 | Likert | Ability to identify examples of plagiarism |
| Q8 | Likert | Understanding of college penalties for plagiarism |
| Q9 | Likert | Confidence in using citations and references correctly |
| Q10 | Likert | Overall value placed on academic honesty |

Table 10 results show that academic integrity awareness, particularly during the plagiarism training session, had a substantial, statistically significant impact on all measured aspects of student knowledge, attitudes, and behavioural intentions. The questionnaire demonstrated exceptionally high reliability, with Cronbach's alpha values of 0.9816 (pretest) and 0.9818 (posttest), confirming strong internal consistency across items. Results from the paired t-test showed a highly significant improvement in participants' knowledge, attitudes, and behavioural intentions following the awareness session, reflected in a mean increase of approximately 1.67 ($t(149) \approx 41.08$, $p < 0.001$). This substantial change was further supported by a huge effect size (Cohen's $d = 3.35$), indicating a powerful impact of the intervention. Rater agreement was also strong, with an average Cohen's Kappa of 0.935, demonstrating highly consistent scoring across evaluators. The narrow 95% confidence intervals for the mean difference (1.64–1.72), reliability ($\alpha = 0.981$–$0.982$), and agreement ($\kappa = 0.926$–$0.948$) further confirm the stability of the findings.

**Table 10:** Statistical results of plagiarism awareness session

| Test | Result | Description |
|---|---|---|
| Cronbach's Alpha | 0.98 | The questionnaire is highly reliable and consistent |
| Paired t-test | $t(149) \approx 41.08$, $p < 0.001$, Mean difference $\approx 1.67$ | great improvement in knowledge, attitudes, and behavioural intentions |
| Effect Size (Cohen's d) | 3.35 | Huge effect of the awareness session |
| Cohen's Kappa | 0.935 (average across questions) | Substantial agreement between raters; reliable scoring |
| 95% Confidence Intervals | Mean difference: 1.64–1.72; Alpha: 0.981–0.982; Kappa: 0.926–0.948 | Results are stable, meaningful, and highly reliable |

### 3.4. Cheating in Exams and Online Assessment Fraud Session

This study aimed to assess students' knowledge, attitudes, and behavioural intentions regarding cheating in offline and online examinations, before and after an academic integrity training session. A 10-item Likert-scale survey, as shown in Table 11, was used to measure knowledge, attitudes, and behavioural intentions related to academic dishonesty. Reverse-coded items (Q4, Q5, Q8, Q9) ensured that higher scores consistently reflected stronger integrity. The questionnaire consisted of three sections: Offline Exam Cheating Awareness and Attitudes (Q1–Q5), focusing on understanding and perceptions of cheating,

Online Assessment Fraud Awareness (Q6–Q10), addressing knowledge of online cheating methods and views on misconduct, and Behavioural Intention (Q11), assessing the likelihood of cheating.

**Table 11:** Structure of the questionnaire for cheating in exams and online assessment fraud session

| Question | Type | Focus |
|---|---|---|
| Q1 | Likert | Understanding of cheating behaviours in offline exams |
| Q2 | Likert | Perception of copying as serious academic misconduct |
| Q3 | Likert | Knowledge of institutional procedures for offline cheating |
| Q4 | Likert (reverse-coded) | Acceptability of using hidden notes or devices |
| Q5 | Likert (reverse-coded) | Likelihood of cheating under extreme pressure |
| Q6 | Likert | Awareness of academic dishonesty in online assessments |
| Q7 | Likert | Ability to identify online cheating (screen sharing, impersonation) |
| Q8 | Likert (reverse-coded) | Acceptability of using friends' help / external websites |
| Q9 | Likert (reverse-coded) | Perception of ease of cheating online without detection |
| Q10 | Likert | Support for institutional monitoring and proctoring |
| Q11 | Binary (Yes/No) | Self-reported intention to cheat if undetected |

Table 12 presents the reliability and agreement measures for the 10-item academic integrity survey. The questionnaire showed solid internal consistency, with Cronbach's Alpha values ranging from 0.821 to 0.847, indicating reliable and coherent measurement across items. The paired-samples t-test ($t(149) = 6.28$, $p < 0.001$) shows a statistically significant increase in total integrity scores, with a mean difference of 2.46, indicating that the intervention effectively improved students' understanding of and commitment to ethical academic behaviour. Cohen's d, calculated as 0.512, indicates a medium practical effect size, reflecting meaningful improvements in knowledge, attitudes, and behavioural intentions. Cohen's Kappa ($\kappa = 0.511$) assesses pre-post agreement on the binary cheating-intention item (Q11), revealing moderate agreement while also capturing positive shifts in ethical intentions. The 95% confidence interval for the mean difference (approximately 2.07–2.85) further confirms that the observed improvement is robust.

**Table 12:** Statistical analysis of cheating in exams and online assessment fraud sessions

| Measure | Result | Interpretation |
|---|---|---|
| Cronbach's Alpha | 0.834 | Confirms high reliability of the survey instrument pre- and post-training |
| Paired t-test | $t(149) = 6.28$, $p < 0.001$, Mean Difference = 2.46 | The session effectively improved knowledge, attitudes, and behavioural intentions. |
| Effect Size (Cohen's d) | 0.512 | Medium practical impact of the intervention, indicating meaningful improvements in ethical orientation and understanding of academic integrity |
| Cohen's Kappa (Cheating Intention) | 0.511 | Moderate agreement showing that a notable proportion of students shifted toward honest intentions after training |
| 95% Confidence Intervals | Mean Difference: 2.46 - 0.39 (approx. 95% CI: 2.07–2.85) | Confirms that the observed improvement in total integrity scores is statistically robust |

Students were also asked about their interest in attending academic integrity workshops. Most students rated these sessions as neutral to effective, with 38 percent rating them neutral and more than half rating them effective or very effective. Only a small portion viewed them as ineffective. This suggests that students see educational sessions as applicable, especially when designed to clarify rules and raise awareness, as shown in Table 13.

**Table 13:** Interest in attending the session

| Workshops/Courses | Frequency | Percentage |
|---|---|---|
| Very effective | 35 | 23.33 |
| Effective | 41 | 27.33 |
| Neutral | 57 | 38.00 |
| Ineffective | 10 | 6.67 |
| Very Ineffective | 7 | 4.67 |

## 4. Conclusion

This research emphasises significant improvements in students' understanding of academic integrity and favourable changes in their attitudes following an academic intervention aimed at fostering honest practices. The results show how important it is to do these kinds of things every semester. Ongoing efforts help promote ethical decision-making and slowly lower the number of cases of academic dishonesty. Instead of relying on one-time sessions, long-term treatments ensure students consistently think about integrity and apply it in their schoolwork. The research also shows that moderate concordance between self-assessments and peer evaluations suggests that a single awareness lesson may not be sufficient to change students' behaviour completely. Initial sessions can help people learn, but they need to be followed up with more training and reinforcement to turn that information into consistent ethical behaviour. Students' comprehension and dedication to academic integrity notions are strengthened by constant exposure to these ideas. The report also emphasises the necessity of a multifaceted institutional strategy to protect academic integrity. This includes regular training on integrity, ensuring that policies are clear, and changing how monitoring and assessment systems operate to make it harder for people to cheat. Adding ethics and academic integrity across all levels of courses helps build a strong institutional culture grounded in honesty and responsibility.

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| | | |
|---|---|---|
| **C:** Conceptualisation | **I:** Investigation | **Vi:** Visualisation |
| **M:** Methodology | **R:** Resources | **Su:** Supervision |
| **So:** Software | **D:** Data Curation | **P:** Project administration |
| **Va:** Validation | **O:** Writing - Original Draft | **Fu:** Funding acquisition |
| **Fo:** Formal analysis | **E:** Writing - Review & Editing | |

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