The Use of Online Cheating Tools during Online Assessment in Philippine Private Higher Education Institutions

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Abstract

The transition to online learning has introduced significant challenges regarding academic integrity, as students utilize various online tools to circumvent traditional monitoring mechanisms. This study investigates the prevalence and types of online cheating tools used by Computer Studies education students during assessments in private higher education institutions in the Philippines. The primary purpose is to determine the relationship between online cheating tools and the respondents' demographic, academic, and technological profiles. Utilizing a descriptive-correlational design, data were collected from third and fourth-year students via a self-administered survey questionnaire distributed online. The questionnaire included sections on demographic information, technological profile, and online tool usage during assessments. The results revealed that students admitted to engaging in various forms of online cheating, with the most common tools being search engines, digital calculators, AI tools, and other software to access unauthorized online resources. The analysis revealed that students with higher technological proficiency were more likely to cheat, indicating a significant correlation between familiarity with online tools and the tendency to engage in dishonest practices. Additionally, students who perceived online assessments as less engaging and challenging reported higher instances of cheating. The implications of these findings suggest a critical need for institutions to reassess and redesign their online assessment policies to combat academic dishonesty. Enhancing monitoring mechanisms, revising academic policies, and increasing student engagement through interactive and meaningful online activities are essential. Furthermore, promoting a culture of academic integrity by clearly communicating policies and consequences and providing support systems for students facing challenges in online learning is crucial. These measures could significantly mitigate the

prevalence of cheating and enhance the overall quality and credibility of the online education system.

Keywords: Academic Honesty, Online Cheating, Online Tools, Computer Studies Education, Technological Proficiency

Introduction

Online cheating in higher education institutions is a growing concern, particularly in the digital era of online distance learning. The Commission on Higher Education (CHED) in the Philippines has acknowledged that online distance learning presents several challenges for students. One of the most significant impediments is a lack of access to technology and a dependable internet connection, especially for individuals from poor families. This can complicate taking online classes, submitting homework, and engaging in online discussions. The shift to online learning has raised concerns about academic integrity, with some students resorting to plagiarism and unauthorized collaboration (Commission on Higher Education, 2020).

According to a study by Bain (2015), online cheating is defined by college students as "using technology to gain access to unauthorized information," a form of academic dishonesty. Liu and Ma (Liu & Ma, 2020) emphasize that one possible reason students cheat online is the increased pressure to perform well and achieve high grades, especially in highly competitive academic environments. Online distance learning (ODL) has enabled students to engage and collaborate with others from different places and backgrounds. Colleges can ensure academic integrity and prevent cheating by implementing proctoring software, plagiarism detection software, secure online testing platforms, and innovative methods of online learning, such as gamification and adaptive learning (Moten et al., 2013).

This study was conducted among selected private higher education institutions (HEIs) in the Philippines that offered online distance learning during the pandemic. This study examines and identifies the various tools used for online cheating among third-year and fourth-year Computer Studies students during the school years 2020-2022 at selected private universities or institutions.

The Problem Statement

Online assessments have become a component of modern education, particularly with the rise of digital learning platforms. However, this

transition has introduced significant challenges regarding academic integrity. The ease of access to online resources and communication tools has provided students with numerous ways to engage in academic dishonesty. This study addresses the critical issue of online cheating during assessments, focusing on the tools students use to bypass traditional monitoring mechanisms. The results indicate that using the internet to download files, AI tools, digital tools, and software such as calculators that accept input for replies, search engines like Google, and browser extensions are the most utilized tools for online cheating among third-year and fourth-year IT students.

The Research Goal

The primary goal of this research is to identify and analyze the online cheating tools used by Computer Studies education students during assessments in private higher education institutions in the Philippines. By gaining insights into the prevalence and types of these tools, the study aims to propose effective measures to combat academic dishonesty and enhance the credibility of online assessments. The study's ability to provide insight into the tools used for online cheating behaviors among third-year and fourth-year Computer Studies students in higher education institutions during the pandemic of online distance learning is particularly interesting. This study can provide insights into the factors contributing to online cheating activities in online learning settings by examining the demographic, academic, and technological profiles of the respondents. This research can also help improve online education by identifying the elements that contribute to online cheating and providing actions to decrease such activities. Finally, this study has the potential to enhance the legitimacy and integrity of online education while also promoting ethical behavior among third-year and fourth-year Computer Studies students in higher education institutions.

Challenges of Online Distance Learning

The transition to ODL has introduced significant challenges, particularly in the Philippine context. The Commission on Higher Education (CHED) (2020) notes that limited access to technology and reliable internet connectivity is a major barrier, especially for students from low-income households, hindering participation in online classes, assignment submission, and virtual discussions. Armstrong-Mensah et al. (2020) highlight that the abrupt shift to ODL during the pandemic has logistical challenges, such as

adapting to new learning platforms and maintaining motivation. Hargittai and Shafer (2006) emphasize that disparities in access to technology, such as computers and the internet, create inequities in digital skills and engagement, potentially leading students to engage in dishonest practices to cope with academic demands. Coman et al. (2020) further note that the lack of effective integration of Learning Management Systems (LMS) in some institutions can limit student engagement, compounding ODL challenges.

Definition and Nature of Online Cheating

Online cheating is defined as the use of technology to access unauthorized information during assessments, constituting a form of academic dishonesty (Bain, 2015). Liu and Ma (2020) explain that online cheating leverages the ease of accessing digital resources and the anonymity of virtual environments, making it more covert than traditional cheating. Clarke and Lancaster (2013) highlight that online cheating ranges from simple acts, such as copying and pasting from websites, to more sophisticated methods, including real-time collaboration. Curran et al. (2011) note that technological advancements have made cheating more complex and more challenging to detect, as students exploit digital tools to bypass monitoring mechanisms. Understanding the scope and nature of online cheating is critical for addressing its prevalence in ODL settings.

Technological Tools Used for Cheating

Advancements in technology have enabled a variety of tools for online cheating. Noorbehbahani et al. (2022) categorize these tools, including search engines (e.g., Google), virtual private networks (VPNs), AI tools, digital calculators, and browser extensions. Subin (2021) highlights advanced methods, such as AI-driven answer generation and browser extensions, for real-time assistance. Smartphones and secondary devices are commonly used during exams (Nyamawe & Mtonyole, 2014; Topîrceanu, 2017), while remote desktop control allows external access to a student's computer (Korman, 2010). Kasliwal (2015) describes the use of virtual machines to hide activities from proctoring software. Devices such as smartwatches, smart glasses, and tiny earpieces enable discreet cheating (Wong et al., 2017; Bawarith et al., 2017; Armstrong-Mensah et al., 2020). Boot et al. (2013) note that proficiency in using search engines facilitates access to unauthorized resources, while group chats on social platforms are used to share answers (Noorbehbahani et al., 2022). These tools exploit the

accessibility of digital resources, posing significant challenges to academic integrity.

Factors Contributing to Cheating Behavior

Several factors drive online cheating. Liu and Ma (2020) identify academic pressure to achieve high grades in competitive environments as a primary motivator. Janke et al. (2021) find that low engagement in online assessments, perceived as uninteresting or unchallenging, correlates with increased cheating. Parks et al. (2018) highlight the role of peer norms, where students may view cheating as acceptable if it is prevalent among their classmates. Link and Day (1992) suggest that dissatisfaction with assessment policies or lack of interest in learning can push students toward dishonest practices. Clarke and Lancaster (2013) note that the ease of accessing cheating tools and low perceived risks of detection exacerbate these behaviors. Yaokumah et al. (2018) add that gender differences in tool preferences may influence cheating patterns, with females showing a higher tendency to use online services. Jonnatan et al. (2022) emphasize that students with higher software proficiency are more likely to use online tools, potentially for cheating, due to their familiarity with technology.

Preventive Strategies and Academic Integrity Measures

Institutions have implemented various strategies to combat online cheating. Moten et al. (2013) advocate for the use of proctoring software, plagiarism detection tools, and secure online testing platforms to ensure academic integrity. Creative approaches, such as gamification and adaptive learning, can enhance engagement and reduce cheating incentives (Moten et al., 2013). Sabbah (2017) suggests technical solutions, such as securing webcams to prevent manipulation, while Asmatulu (2014) emphasizes the importance of robust exam system designs to deter post-exam tampering. The Commission on Higher Education (2020) emphasizes the importance of clear policies, honor codes, and disciplinary consequences in fostering a culture of academic integrity. Adeyemi and Samuel (2011) highlight the role of deterrent measures in reducing cheating behaviors among undergraduates. Raturi et al. (2011) suggest that improving students' access to technology and training in digital tools can promote ethical use. Mukoyama (2003) supports this by noting that technology diffusion, when guided by proper training, can enhance learning outcomes. The ICT-TPACK framework (Angeli & Valanides, 2009) emphasizes the integration of technology,

content, and pedagogy to design engaging, cheat-resistant assessments.

Theoretical Backgrounds

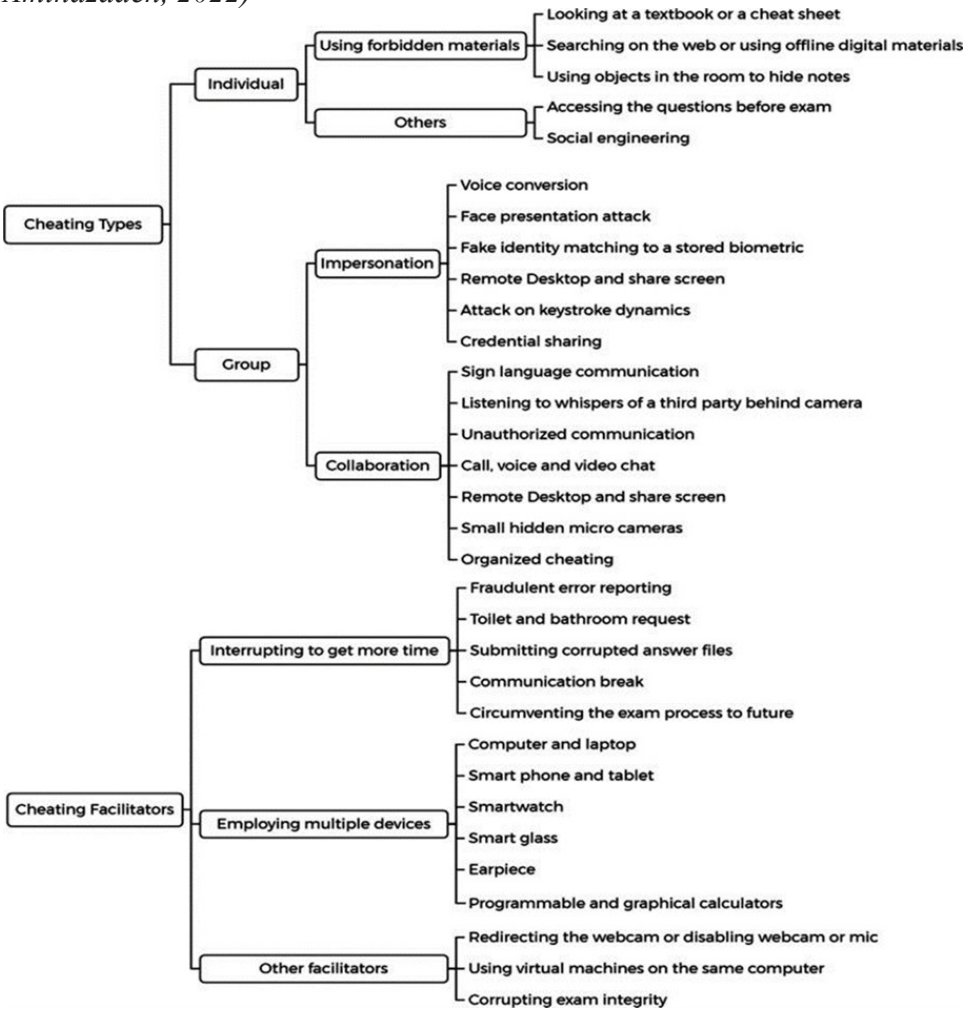
ICT integration in learning is a crucial component of a high-quality education system. The technological pedagogical content knowledge (TPACK) is described as the ways knowledge about tools and their affordances, pedagogy, content, learners, and context are synthesized into an understanding of how particular topics that are difficult to understand by learners or difficult to be represented by teachers can be transformed and taught more effectively with technology in ways that signify its added value. The basic framework to utilize and understand is the TPACK framework where there is an interplay of the three primary knowledge forms, namely content, pedagogy, and technology (www.tpack.org), and then the ICT-TPACK, where "tools and their pedagogical affordances, pedagogy, content, learners, and context are synthesized into an understanding of how particular topics that are difficult to be understood by learners, can be transformed and taught more effectively with ICT, in ways that signify an added value of technology" (Angeli & Valanides, 2009).

The study is grounded in the Theory of Planned Behavior and the Theory of Motivated Cheating. The Theory of Planned Behavior suggests that individuals' behavior is driven by their intentions, which are influenced by their attitudes, subjective norms, and perceived behavioral control (Ajzen , 1991). In the context of cheating, this theory helps explain how students' attitudes towards cheating, the perceived norms among peers, and their perceived ability to cheat without getting caught drive their cheating behavior. The Theory of Motivated Cheating posits that students cheat when they believe the benefits outweigh the risks, often influenced by low interest in learning, pressure to achieve high grades, and dissatisfaction with assessment policies (Link & Day, 1992).

To mitigate cheating behaviors effectively and efficiently, various types of cheating and their facilitators were identified (Noorbehbahani, Mohammadi, & Aminazadeh, 2022). The whole classification of cheating types is displayed in Figure 1.

Figure 1

Cheating Types and Facilitators (Noorbehbahani, Mohammadi, & Aminazadeh, 2022)



Several types of devices could be employed as the second device, such as computers and laptops (Moten et al., 2013), smartwatches (Wong et al., 2017), smart glasses such as Google glasses (Armstrong-Mensah et al., 2020), smartphones and tablets (Korman, 2010), and tiny earpieces for remote voice support during the exam (Bawarith et al., 2017). Other facilitators accessing online tools for cheating during assessment include redirecting the webcam to hide something from its field of view (Sabbah, 2017) or disabling the webcam or microphone completely, which are other tricks used to facilitate cheating (Asmatulu, 2014). By using virtual machines on a computer, users can run a virtual operating system on top of

the primary one. This technique would hide the activities done on the second operating system from the software or the human proctoring the primary operating system (Kasliwal, 2015). Corrupting the exam system's integrity to alter exam results after they have been administered (e.g., changing scores or answers after the examination) is another notable case (Korman, 2010). Lastly, Parks et al. (2018) state that social media and channels operating on them can act as facilitation environments for cheating.

Research Methods

Research Design

This study employed a descriptive-correlational design to investigate the prevalence and types of online cheating tools used by third- and fourth-year Computer Studies students in private higher education institutions (HEIs) in the Philippines, during the school years 2020–2022, when online distance learning (ODL) was widely implemented due to the COVID-19 pandemic.

Research Setting

The research was conducted in seven private HEIs in the Philippines, known for their educational institutions. These HEIs offered ODL during the pandemic, making them suitable for studying online cheating behaviors.

Research Participants

The study focused exclusively on Computer Studies students (third- and fourth-year) due to their high digital fluency and experience attending online classes, which likely increases opportunities for using sophisticated online tools for cheating, given their familiarity with technology (Boot et al., 2013). This focus includes other disciplines, such as Education, where digital proficiency and online resource usage may differ. Future research could include diverse academic programs to enhance the applicability of findings across fields. A total of 150 students, actively enrolled juniors and seniors who began their college journey in the 2020–2021 school year, participated. A complete enumeration was used to ensure a representative sample from the target population.

Research Instrument

The research instrument for this study was a self-administered survey questionnaire that was distributed to the selected respondents. Data were collected using a self-administered online survey distributed via Google Forms, designed to capture students' online cheating practices, technological profiles, and demographic information.

Data Analysis

Data analysis involved the use of percentage, weighted mean, standard deviation, and chi-square tests of independence to identify significant relationships. Questions for the Technological Profile were derived from "Learners' Access to Tools and Experience with Technology" by Raturi et al. (2011) and reformulated to suit the current technological setting. The questionnaire follows a five-point Likert scale for evaluating students' proficiency in using digital applications and software: 1 – least, 2 – fair, 3 – good, 4 – very good, and 5 – excellent. Items on Ownership and Software Proficiency and the Usage of Software Applications were adapted from the questionnaires by Raturi, Thaman, and Hogan (2011). Another part of the survey uses a five-point Likert scale to assess how often students used tools for online cheating: 4 – always, 3 – often, 2 – sometimes, 1 – rarely, and 0 – never. The statements in the questionnaire were modified from Adeyemi and Samuel (2011).

Ethical Considerations

The study adhered to ethical research standards, with approval obtained from the University Research Ethics Committee. Informed consent was provided through a digital form embedded in the Google Forms survey, which explained the study's purpose, procedures, and participants' right to withdraw at any time without consequences. Participation was voluntary, and no incentives were offered to avoid coercion. Data confidentiality was ensured by anonymizing responses, storing data on secure servers, and restricting access to the research team. Personal identifiers (e.g., names, student IDs) were not collected to protect participants' privacy. The survey was anonymous, with no identifying information collected, to encourage honest responses. Questions were phrased neutrally to reduce judgment. The survey introduction emphasized that responses would be used for research purposes only and would not affect academic standing, fostering a safe

environment for truthful reporting.

Results and Discussions

Table 1 below presents the demographic profile of the respondents. The study had 150 student respondents from the selected Private Colleges and Universities in the Philippines. Notably, most respondents, comprising nearly 67% of the total population, fall within the 20- to 25-year age range. Additionally, approximately 30% of participants fall within the 12- to 19-year-old age group, indicating a diverse age distribution. The sex distribution reveals a notable imbalance, with approximately 69% identifying as male and 31% identifying as female.

Regarding academic courses, a significant 61.33% are enrolled in the BS Information Technology program, suggesting a predominant presence from this course; 27.33% are Computer Science students, while 8.67% of the respondents are taking Information Systems, and 2.67% are enrolled in Library Science, making it the lowest percentage among other computer programs. The sex distribution reveals a higher proportion of male respondents compared to females, which could impact the diversity of perspectives represented in the study. Furthermore, the dominance of students enrolled in technology-related courses, particularly those in BS Information Technology, indicates a specialized focus within the study population, which likely influences the applicability and relevance of the research findings to the field of technology.

Table 1
Profile of the Respondents in Terms of Demographics

Age	f	%
12 to 19	44	29.33
20 to 25	100	66.67
26 to 64	6	4.00
Total	150	100.00
Sex	f	%
Male	103	68.67
Female	47	31.33
Total	150	100.00
Course	f	%
BS Computer Science	41	27.33

BS Information System	13	8.67
BS Information Technology	92	61.33
BS Library Science	4	2.67
Total	150	100.00

Table 2 presents information about the technology use by the participants. The data shows that 70.67% of the participants had computers at home, which means many of them can access digital content and online resources from their own computers. Almost all respondents, around 99%, have a mobile phone, indicating that mobile phones are widely used for communication and accessing information. Moreover, 91% have internet access at home, indicating a strong connection to online resources. Another interesting point is that 83% mentioned the presence of Learning Management Systems in their schools, which are digital platforms for learning. The widespread adoption of technology among respondents (as shown in Table 2) aligns with the principles of the Theory of Technology Diffusion, which emphasizes the process by which technology is adopted and accepted by individuals or groups, showcasing that the respondents in the study are evident and actively engaged with technological tools (Mukoyama, 2003). These findings suggest that our participants are well-connected digitally, and this could impact how they engage with digital content and learn online.

Table 2

Technological Profile of the Respondents in Terms of Ownership

I have computer at home.	f	%
Yes	106	70.67
No	44	29.33
Total	150	100.00
I have a mobile phone.	f	%
Yes	148	98.67
No	2	1.33
Total	150	100.00
I have internet access at home.	f	%
Yes	137	91.33
No	13	8.67
Total	150	100.00
Is there any Learning Management System such us (Moodle, Edmodo, Blackboard, Canvas, etc) used in your institution?	f	%

Yes	124	82.67
No	26	17.33
Total	150	100.00

Table 3 presents the participants' proficiency in various software applications measured on a scale where higher values indicate greater proficiency. Participants rated their skills in various tasks, including word processing, spreadsheets, email, social networking platforms, and others. Respondents reported a relatively high level of proficiency (3.72) in word processing, indicating a good understanding and usage of this fundamental skill. Similarly, they demonstrated proficiency in email usage, with a score of 3.93. The use of search engines, such as Google, received the highest rating (4.06), indicating very good proficiency. The study by Boot et al. (2013) reveals that respondents' use of search engines (e.g., Google) indicates advanced experience in assessing basic computer proficiency. Social networking platforms, such as Facebook and Twitter, were at a high of 4.03. The findings suggest that the surveyed population was adept at using highly acclaimed software applications for communication, information retrieval, and collaboration. Their high proficiency levels across these multiple software applications reflect preparedness for digital engagement in a diverse array of social contexts. The average proficiency score of 3.59 across all the software applications combined suggests that the surveyed population has above-average technology-related skills. However, lower proficiency levels in software applications, such as blogs (mean of 3.21) and Learning Management Systems (mean of 3.27), signal opportunities for improvement in those areas of technology or indicate a need for additional training in those specific areas.

Table 3

Technological Profile of the Respondents in Terms of Software Proficiency

Statements	WX	s	VD
Word Processing	3.72	0.96	Very Good
Spreadsheets	3.38	1.03	Good
Paint, Publisher, etc	3.31	1.12	Good
Email	3.93	0.90	Very Good
Class shares	3.37	1.05	Good
Moodle, Nicenet, WebCT or other LMS	3.27	1.18	Good
Online Library Searches	3.33	1.08	Good

Search Engine e.g., Google, Yahoo, online dictionary, etc.	4.06	0.93	Very Good
Online Services e.g., registration, pay fees, etc.	3.56	1.12	Very Good
Social Networking Platforms e.g., Facebook, Twitter, Instagram	4.03	0.90	Very Good
Video Conferencing Platform e.g., Zoom, Gmeet, WebEx, Lark, Skype	3.85	0.98	Very Good
Blogs	3.21	1.16	Good
Composite	3.59	0.82	Very Good

**1.00-1.79: Least (L); 1.80-2.59: Fair (F); 2.60-3.39: Good (G); 3.40-4.19: Very Good (VG); 4.20-5.00: Excellent (E)

It was noted that cheating tools commonly in use, such as smartphones, search engines, and collaborative tools, scored mostly as "Never" (1.00). The findings support the study by Topîrceanu (2017), which suggests that students cheat in higher education by using social network analysis, specifically smartphones and other digital tools to facilitate cheating. Thus, the study by Nyamawe and Mtonyole (2014) also discusses the use of smartphones as one of the tools students employ to cheat on exams. Similarly, practices like downloading files from the internet or utilizing AI tools for answers are reported as extremely rare, with mean scores below 2.00. However, it is crucial to note that these findings are based on self-reported practices of the respondents, which may introduce biases or underreporting of actual cheating instances. The results indicate a strong commitment to academic integrity among the surveyed respondents, with cheating practices perceived as highly uncommon or nonexistent within their academic environments.

The aggregate mean score of 1.11, which shows the rarity of cheating practices during assessments in higher education institutions, reinforces the positive trend towards upholding academic honesty and integrity. On the contrary, participating students reported cheating more frequently in online exams than in on-site exams. When cheating occurs, it may not be pervasive across all assessment types (Janke et al., 2021). This suggests that while online exams might experience higher rates of cheating compared to on-site exams, the extent of cheating varies across different types of assessments. It implies that certain assessment formats or conditions may be more conducive to cheating behavior, leading to higher reported incidents of cheating in online exams. However, it also suggests that not all online assessments are affected by pervasive cheating; some types of online

assessments may still maintain academic integrity despite the overall trend of increased cheating in online settings.

Table 4
Tools for Online Cheating during Assessment

Statement	WX	s	VD
Using a smartphone while taking exam.	1.06	1.24	Never
Using search engine such as Google during exam.	1.16	1.25	Never
Using virtual private networks.	1.00	1.16	Never
Utilizing internet to download a file.	1.59	1.44	Never
Utilizing digital tools and software, such as calculators that accept input for replies.	1.29	1.35	Never
Work with a second monitor.	1.00	1.24	Never
Using the class group chat to spread answers	1.06	1.24	Never
Using remote desktop control to allow someone to access computer.	1.00	1.10	Never
Using collaborative tools for group assignments.	1.19	1.27	Never
Using transcription software to transcribe audio and video content.	1.00	1.26	Never
Using AI Tools	1.58	1.44	Never
Using browsers extensions	1.10	1.33	Never
Aggregate	1.11	1.04	Never

**1.00-1.79: Never (N); 1.80-2.59: Rarely (R); 2.60-3.39: Sometimes (S); 3.40-4.19: Often (O); 4.20-5.00: Always (A)

Table 5 displays the results of the analysis conducted to determine whether a significant relationship exists between each pair of variables included in the respondents' demographic profile and technological profile, which were subjected to correlational analysis. Thus, this examines the connection between the frequency of participants' online tool use and their demographics. The results show that there is no significant relationship between tool usage and age ($\chi^2 = 9.55$, $p = 0.30$), suggesting that people of different ages use online tools similarly. While this result supports the study by Hooyman (2021) on tool usage, it finds that older adults took longer to complete a timed upper extremity task due to changes in the duration and quality of the fine motor phase, rather than the gross motor phase. The

relationship between tool usage and sex is also not significant ($\chi^2 = 2.37$, $p = 0.67$), indicating that both males and females use online tools at comparable rates. Likewise, the association between tool usage and academic course is not significant ($\chi^2 = 8.15$, $p = 0.77$), suggesting participants from different academic courses have similar patterns of tool usage. The preferences for ICT Tools and devices among females are supported by the claim of Yaokumah et al. (2018), which aligns with findings that show significant differences in the use of online tools. Conversely, females used and preferred online services and tools than males. The study also finds that smartphones and laptops are the most frequently used ICT tools, and social networking platforms are the most preferred online services. Gender studies in ICT help understand sex differences and proclivities, informing policy direction towards efforts to bridge the gender gap. The frequency of online tool usage appears to be consistent across various demographic and academic profiles among the participants. This means that regardless of age, sex, or academic course, participants tend to use online tools at similar rates. It is worth noting that students have valued the equitable access to technology and emphasize the importance of utilizing online tools effectively for academic purposes, irrespective of individual profiles.

Table 5

Relationship between the Frequency of Use of Online Tools and Demographic and Technological Profiles of the Respondents

Variables	χ^2	P	Remarks
Frequency of Use and Age	9.55	0.30	not significant
Frequency of Use and Sex	2.37	0.67	not significant
Frequency of Use and Course	8.15	0.77	not significant

Table 6 examines the relationship between the frequency of using online tools and the respondents' technological profiles. The results show that having a computer at home is not significantly related to the frequency of tool usage ($\chi^2 = 4.74$, $p = 0.32$). Similarly, owning a mobile phone ($\chi^2 = 2.20$, $p = 0.70$) and having internet access at home ($\chi^2 = 1.10$, $p = 0.89$) had no significant correlation with the frequency of tool usage. In contrast, this result supports the study by Hargittai and Shafer (2006) on the importance of access to technology, such as owning a computer at home or having internet connectivity, which did not necessarily correlate with increased usage of online tools. The existence of a Learning Management System in the institution did not reveal a significant relationship with the tool usage

frequency ($\chi^2 = 3.87$, $p = 0.42$) and is congruent with the study of Coman et al. (2020), emphasizing that learning management systems in the context of educational institutions did not significantly impact their use during learning by learners. The data reveals a software indeed that has a Spearman's rho value of 0.10 with a statistical significance below 0.000001. This implies that participants demonstrating greater expertise in software are more inclined to use online instruments on a regular basis, which is similar to the study of Jonnatan et al. (2022), where there is emphasis on a positive correlation between online tool usage frequency and software proficiency, stating that individuals with higher software proficiency tend to utilize online tools more frequently.

While the findings indicate that students with higher technological proficiency have greater opportunities to engage in online cheating tools, the low levels of self-reported cheating may reflect social desirability bias or fear of judgment when disclosing dishonest practices. This contradiction suggests that technological skill alone does not directly translate to academic misconduct; instead, it interacts with individual attitudes, perceived behavioral control, and institutional policies. Thus, students may underreport actual cheating behaviors even as their digital competence increases the likelihood of access to such tools.

Table 6

Relationship between Frequency of Use of Online Tools and Technological Profile of the Respondents

Variables	χ^2	P	Remarks
I have computer at home.	4.74	0.32	not significant
I have a mobile phone.	2.20	0.70	not significant
I have internet access at home.	1.10	0.89	not significant
Is there any Learning Management System such us (Moodle, Edmodo, Blackboard, Canvas, etc) used in your institution?	3.87	0.42	not significant
Variables	rs	P	
Frequency of Use of Online Tools and Software Proficiency	0.10	<.000001	significant

Conclusions and Prospects for Further Research

The shift to online learning has opened new avenues for academic dishonesty, particularly online cheating. The study provides valuable insights into the dual role of online tools in the academic environment. While students primarily view these tools as valuable supplements that enhance their learning experiences and facilitate the production of high-quality work, the research also emphasizes the importance of academic integrity. The results indicate that students generally demonstrate a strong commitment to ethical conduct during online assessments. This reflects students' dedication to upholding the principles of honesty and fairness in their academic pursuits. However, it is also acknowledged that some students may resort to limited online cheating, such as using smartphones, search engines, virtual private networks, and AI tools during online assessments as a coping mechanism in response to overwhelming stress or feelings of inadequacy. The findings show the importance of addressing inconsistencies in online learning experiences and ensuring equitable access to resources for all demographics. By improving access to technology and enhancing digital literacy, educational institutions can help mitigate gaps in the online learning environment. Students who have better access to digital tools and resources tend to attend classes regularly and use these tools diligently, demonstrating a constructive approach to online assessments.

The findings are grounded in the Theory of Planned Behavior, which posits that students' engagement with cheating tools is shaped by three interrelated determinants: attitudes toward academic dishonesty, perceived behavioral control over technological tools, and subjective norms reinforced by peers and institutional enforcement. This framework supports why even students with high awareness of academic integrity may still resort to misconduct when they perceive lenient policies or observe peers normalizing such practices. This study's reliance on self-reported data and focus on Computer Studies students limits its findings. Self-reports may underestimate cheating due to social desirability bias, and the IT-focused sample may not apply to disciplines such as Business or Education (Janke et al., 2021). Future studies should employ mixed-methods approaches, such as interviews, to explore motivations and include diverse academic programs for broader applicability (Liu & Ma, 2020). Grounded in TPB, the study underscores that online cheating is not a random occurrence but a predictable outcome of intentions shaped by psychological, social, and institutional influences. Therefore, interventions must go beyond surveillance and punishment. Strengthening integrity education, redesigning assessments to emphasize

authentic learning, and reinforcing consistent institutional policies are essential strategies to counteract misconduct. The study reveals that, despite occasional use of online tools for unethical purposes, students overall present a positive outlook concerning their reasons for using these tools, prioritizing constructive perspectives over potential challenges. This positive stance encompasses diverse demographic backgrounds, underscoring the need for supportive interventions to ensure equitable and effective online learning experiences. Online digital tools and ways can support and enhance students' academic endeavors; institutions must foster an environment that upholds academic integrity and addresses the underlying causes of academic dishonesty. It is recommended that a further qualitative study be conducted to explore why students cheat, their perceptions of fairness, motivation, and pressure. By doing so, educators can support students in their pursuit of honest and meaningful learning experiences, ultimately benefiting the broader educational landscape.

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