*Research Article*

# Assessing Postgraduate Students' Awareness of Digital Ethics: Insights into Privacy, Security, Responsibility, Equity and Intellectual Property

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## Abstract

*What level of ethical responsibilities do postgraduate students demonstrate in cyberspace as they lead the digital landscape of the future? This study investigates their awareness of digital ethics across five critical dimensions: Privacy, Security, Responsibility, Equity, and Intellectual Property. The study aimed at a crucial objective: to determine the extent to which future leaders grasp the moral standards of their digital conduct and to identify areas of ethical ignorance. This research aligns with technological educational trends because contemporary students require urgent exposure to the subject matter. A survey comprising 30 Likert-scale items was completed by 100 postgraduate students from the Central University of Himachal Pradesh in March 2025 as part of a quantitative research study. The survey included SA and SD scales, enabling researchers to develop an ethical map based on respondents' strong and weak viewpoints. The results are a revelation. Personal responsibility extends beyond digital devices, according to all students in the study who agreed with this statement, and respect remains an essential ethical duty. Most students (75 to 90%) demonstrated an understanding of personal data protection and sharing boundaries, yet technical complexity sometimes blurred their perception. The data on security measures were stable between 60% and 90%, but participants identified only 60% of fake websites, indicating a need for prompt action. The results for the distribution of equity principles among students were inconsistent (50–90%), indicating that they understood unequal access issues but hesitated to assess platform fairness, suggesting that equity discourse remained hidden. The Intellectual Property survey sample reported explicit agreement on piracy enforcement of 60–100%, although they expressed confusion about copyright regulations. Students bear ethical principles in their character even when their practical digital ethical competencies remain uncertain. The ability to lead with integrity through responsible and private conduct indicates leadership potential, although Security and Equity need to improve their technical proficiency and advocacy strategies. The study aimed to determine the level of awareness of digital ethics among postgraduate students in five dimensions: Privacy, Security, Responsibility, Equity, and Intellectual Property. A total of 100 postgraduate students were the respondents in a structured Likert-scale questionnaire, selected using a descriptive survey approach. The results showed that the Responsibility and Privacy dimensions had high awareness, whereas Security, Equity, and Intellectual Property had moderate awareness, using an uneven distribution. The outcome shows certain aspects in which the postgraduate students are strong ethically, as well as the areas that require their academic intervention.*

**Keywords:** Digital Ethics, Postgraduate Students, Privacy, Security, Responsibility, Equity, Intellectual Property.

## Introduction

Modern society underwent a tremendous transformation in human communication practices as technology took control over all aspects of contemporary life, including educational institutions at every level. Postgraduate students who will become future professional leaders need an educational and research environment that relies on digital tools for their research and academic exchange. The broad technological involvement of entrepreneurs raises ethical issues that mirror its intricate nature. Virtual space user engagements require digital ethics principles to ensure Privacy, Security, Responsibility, Equity, and Intellectual Property act as moral guidance. Students who use online platforms require knowledge of ethical factors that establish their technological moral capabilities. The study explores postgraduate students' awareness of these principles and then analyses the minimum comprehension that warrants further investigation. A thorough investigation of this issue must continue, given its importance. Current ethical problems stemming from technology misuse have reached a peak, as data breaches, misinformation campaigns, and digital inequality frequently appear in news headlines (Saxena and Bajotra, 2024). According to Smith (2020), digital ethics protection is a fundamental requirement because students act as both digital consumers and creators. Personal information has become a primary fight zone because its protection is now under extreme threat (Jones et al., 2021). The need for security remains crucial, as online threats, including phishing attacks, become increasingly active against people who remain uninformed about such risks (Brown, 2022). According to the notion of Responsibility, students need to accept legal and social responsibility for their online content, as a single post may have consequences that spread through networks (Taylor, 2019). Equity involves asking whether digital resources are universally accessible and to what extent algorithmic discrimination shapes changes in access. (Lee, 2023). Intellectual Property presents students with the task of respecting ownership, though it is easy to duplicate with simple cut-and-paste functions (Clark, 2020). Research about postgraduate students' understanding of these three ethical dimensions creates gaps in knowledge because they operate as multiple elements within ethical practice. The literature shows a clear omission on this topic. Studies examining student plagiarism in higher education and online learning privacy have captured specific segments of the digital ethics landscape. However, researchers lack a comprehensive review of digital ethics practices at the postgraduate level. Postgraduate students enjoy a distinct academic position because their advanced education, together with their professional readiness, heightens their reliance on ethical competence. Research, teaching, and industry partnerships require postgraduate students to exercise caution, as their digital mistakes can have substantial long-term consequences. Postgraduate students can face career termination during their early academic years due to research privacy breaches or the misuse of copyrighted material in their dissertations. These students, who grew up in the digital era, are considered technology experts, but their technical competence does not translate into ethical knowledge, which this research seeks to demonstrate. The main research inquiry examines how well postgraduate students understand digital ethics standards across the domains of Privacy, Security, Responsibility, Equity, and Intellectual Property. The research examines three main goals: measuring students' comprehension of digital ethics principles, evaluating their

areas of expertise and challenges, and developing educational approaches to fill gaps. This investigation informs the developing ethical debate about technology use in higher education by offering relevant findings that practitioners can apply directly. The research findings may assist in developing educational curricula to ensure that postgraduate students understand both theoretical content and the ethical expertise required for digital decision-making. Currently, the research is positioned at a moment of great importance. The digital environment will undergo continuous transformation in March 2025, as artificial intelligence, virtual platforms, and data analytics technologies redefine knowledge distribution systems. Postgraduate students act as society's technological pioneers by developing choices that shape how technology influences social dynamics. A study of postgraduate students' understanding of digital ethics will equip them with appropriate digital empowerment skills. Educational institutions have been transformed by technological innovations, requiring teaching personnel to understand fundamental ethical principles regarding their use of technology. Future professionals who are postgraduate students need to demonstrate responsible conduct during their work with complex digital systems. Digital ethics protects privacy through data security while ensuring system safety, responsible decision-making, fair distribution, and intellectual property rights as the five essential components. Studies indicate that students fail to grasp essential digital ethical principles. The research evaluates postgraduate students' perceptions of digital ethics to identify gaps and possible educational solutions. Postgraduate students predominantly demonstrate their knowledge of digital ethics through the extent to which they apply it across the five-dimensional framework. The research contributes to current discussions on ethical technology practices in higher education institutions by examining this issue. These five dimensions were chosen for use, namely Privacy, Security, Responsibility, Equity, and Intellectual Property, because they were identified in recurrent literature on digital ethics as a set of fundamental ethical areas that regulate behaviour in digital contexts in higher education. All these dimensions represent the personal and systemic ethical issues, including personal data protection and cybersecurity, as well as equity, responsibility, and rights to digital content. Collectively, they offer a holistic approach to assessing the level of digital ethics awareness among postgraduate students, whose academic and professional practices are increasingly reliant on digital technologies.

## Literature Review

Digital ethics has become more critical as online platforms continue to spread across the digital landscape. Smith (2020) describes digital ethics as the set of moral guidelines that establishes privacy and security as its core elements in digital interactions. Jones et al. (2021) demonstrate that students become exposed to privacy losses because they do not understand the risks associated with data sharing. Brown (2022) points out in the security literature that cyber threats are frequent, underscoring the necessity of technical literacy. Students fail to understand the legal ramifications of their online conduct, even though Taylor (2019) defines responsibility as accountability for online behaviour. Research by Lee (2023) demonstrates that digital access problems arise because algorithmic systems increase inequality, yet students are not effectively recognising these issues. The documentation of Intellectual Property issues, such as plagiarism, by

Clark (2020), does not align with the inconsistent understanding regarding copyright details among academic writers. This research fills the gap by conducting a multifactorial assessment of postgraduate students' digital ethics awareness because previous studies have provided limited attention to this area. The rapid adoption of digital systems in higher education has heightened the significance of digital ethics, as this field encompasses Privacy, Security, Responsibility, Equity, and Intellectual Property. The review brings together academic literature to examine how postgraduate students understand these dimensions, while emphasising current knowledge and the level of attention required for this project. According to recent research on digital ethics, the importance of ethical awareness in the digital context goes beyond technical competence. It involves the morally grounded reasoning of privacy, fairness, accountability, and rights. According to Floridi (2025), digital ethics is a normative framework that ensures responsible behaviour in technologically mediated spaces, especially in higher education. Khalid et al. (2025) have shown that ethical awareness contributes to responsible digital decision-making in a relatively significant way among university students utilising an artificial intelligence system, with the key ethical issues being privacy and responsibility. Equally, Rafique, Ali, and Khan (2025) found that equity and data security were emerging ethical issues in developed digital infrastructures, where users often demonstrated conceptual awareness but lacked ethical capability. Sharma and Singh (2025) also noted that even postgraduate students have limited knowledge of intellectual property and data ownership, despite regularly using digital platforms. These studies, combined, support the need to measure digital ethics awareness across multiple ethical levels, especially among postgraduate students who are the future workforce and a source of knowledge.

**Privacy**

The ethical exploration of privacy in digital environments stands as a fundamental principle. Online behaviour adheres to digital ethical standards, according to Smith (2020), who asserts that privacy is the primary moral concern given the broad scale of data collection. Research by Jones et al. (2021) shows that university students have a poor understanding of how their data is collected by social media tools, as only 40% of them modify their privacy configurations. According to Patel (2022), most of the graduate students he surveyed acknowledged the importance of data protection, though they did not fully understand the risks posed by third parties. According to Green (2019), the GDPR holds a central position, but Garcia (2023) reveals that postgraduate students have limited knowledge of this regulatory framework, as only 50% recognise it. According to Thompson (2021), current privacy education practices in academia remain inconsistent, posing risks to students that this study aims to address.

**Security**

Digital system protection, known as security, is on par with other factors in importance. The author Brown (2022) shows how cyber threats, particularly phishing attacks, are expanding and explains that students are easily victimised because security measures are insufficient. Kim (2020) found that 60% of graduate students use strong passwords, while their use of two-factor authentication stands at only 30%. According to Lee and Chen (2021), academic users clearly understand the dangers of using public Wi-Fi; however, their practical implementation remains poor. According to Davis (2019) and Nguyen (2023), students' practice of

software updates remains low at 50%. Turner (2022) found a lack of awareness of fraudulent websites among postgraduate students, with 40% failing to detect bogus websites correctly. According to Adams (2020), the present study examines the necessity of security training in educational curricula.

**Responsibility**

Responsibility entails accountability for digital actions. According to Taylor (2019), respect in online ethics depends on understanding the implications of actions, yet only 65% of students verify the truth of information before sharing (Miller, 2021). The research by Johnson (2023) showed that 80% of postgraduate students were aware of the legal penalties for sharing hurtful content, which is consistent with White (2020), who reported a rising understanding of the consequences of cyberbullying. The study conducted by Evans (2022) revealed that all graduate students agreed that digital actions have consequences for others, in line with Carter's (2019) findings on responsible technology use. According to Singh (2021), 55% of his respondents report that students fail to report unethical conduct because they are unwilling to become involved. The study investigates whether this behaviour pattern still exists among participants.

**Equity**

In digital environments, equity focuses on ensuring equal opportunities, fair representation, and access. Lee (2023) underscores disparities in access to technology, with 60% of students aware of this issue, according to Khan (2020). Roberts (2021) studied algorithmic bias among graduate students and discovered that only 45% of them identified the related ethical challenges. Digital platforms need to provide equity according to Patel and Gupta (2022), but Brown and Lee (2019) found that 40 per cent of students express neither agreement nor disagreement about this platform's responsibility. The survey conducted by Thomas (2023) revealed that literacy gaps existed at a rate of 70% among participants, whereas Harris (2020) promoted representation, which received 85% support from Jain's (2021) survey group. The research investigates the extent to which Equity stands out among students pursuing their graduate studies.

**Intellectual Property**

The ownership rights and utilisation aspects regarding digital content come under the category of Intellectual Property. Clark (2020) documents widespread plagiarism among students, with 60% unaware of copyright nuances (Singh, 2022). Both Wilson (2019) and Kumar (2023) reported similar findings, indicating that 75% of learners hold negative views toward piracy activities. Davis and Lee (2021) found that half of university students demonstrate correct digital source referencing in their assignments. In contrast, Green and Patel (2020) found that 55% of students struggle to distinguish fair use from plagiarism. According to Nguyen (2022), graduate students recognise plagiarism detection tools to the extent reported by Adams (2023). This study investigates these patterns comprehensively.

**Synthesis and Gaps**

Studies illustrate that digital ethics remains improperly understood by the scholarly community. Educational studies around Privacy and Security demonstrate sufficient theoretical understanding yet struggle to apply these concepts to practical

implementations, especially in technical aspects (Jones et al., 2021; Brown, 2022). Being responsible is considered a strength by Taylor (2019) and Evans (2022), yet people avoid reporting incidents, as documented by Singh (2021). The understanding of equity factors by teachers and students stands at a moderate level according to Lee (2023), although Brown and Lee (2019) highlight lower levels of equity advocacy. Intellectual Property combines the adoption of advanced tools with notable weaknesses in the implementation of copyright (Clark, 2020; Green & Patel, 2020). Research literature specifically neglects postgraduate students despite their unique ethical requirements linked to their professional level, according to Thompson (2021). The present research completes this knowledge gap by combining a holistic evaluation of every five dimensions without replicating existing research methods.

### Research questions

1. What is the overall level of digital ethics awareness among postgraduate students?
2. To what extent are postgraduate students aware of digital ethics in terms of Privacy, Security, Responsibility, Equity, and Intellectual Property?
3. What strengths and gaps exist in postgraduate students' awareness of digital ethics?

### Research objectives

1. To assess the overall level of digital ethics awareness among postgraduate students.
2. To examine postgraduate students' awareness of digital ethics across the dimensions of Privacy, Security, Responsibility, Equity, and Intellectual Property.
3. To identify the areas of strength and gaps in digital ethics awareness among postgraduate students.

### Methodology

A quantitative research methodology was used to assess levels of digital ethics awareness among postgraduate students at the Central University of Himachal Pradesh (CUHP). Postgraduate students enrolled across all disciplines at CUHP during the 2024–2025 academic year formed the target population of this study. The study relied on convenience sampling to collect data from 100 postgraduate students because it offered a suitable approach under time-limited research conditions. The researcher conducted data collection at the CUHP campus in Himachal Pradesh in March 2025. The research tool comprised a 30-item Likert scale questionnaire, structured around five key dimensions of digital ethics: (1) Privacy, (2) Security, (3) Responsibility, (4) Equity, and (5) Intellectual Property. The pilot study was conducted with 20 CUHP postgraduate students who were not part of the primary research population. The instrument achieved a Cronbach's alpha value of 0.83, which indicates solid reliability of its structural components.

### Tool used in the study

The self-designed questionnaire, the Digit Ethics Awareness Scale (DEAS), was used to collect data. The scale was designed to measure postgraduate students' awareness of the ethical rules governing digital behaviour. It comprised 30 Likert-type statements spread across five dimensions of digital ethics: Privacy, Security, Responsibility, Equity, and Intellectual Property. Answers were collected using a five-

point scale, and the scale ranged from Strongly Agree to Disagree Strongly. All dimensions of digital ethics were illustrated by well-constructed Likert-scale items that reflected knowledge and ethical conviction. The Privacy dimension included questions about the protection of personal information, understanding the risks of data sharing, and privacy configurations—the security items covered passwords, awareness of fraudulent websites, and cybersecurity threats. Responsibility was also demonstrated by items that measured accountability towards online conduct, respectful communication, and understanding of online implications. Items related to equal access, digital inclusion, and equal treatment of online platforms were analysed as equity-related. Intellectual Property addressed awareness of plagiarism, the protection of copyright, and the fair use of online scholarly materials.

### Likert Scale Response Distribution

Summary of responses (in percentages) for 30 statements assessing digital ethics awareness among 100 postgraduate students of the Central University of Himachal Pradesh, organised by dimension (Privacy, Security, Responsibility, Equity, Intellectual Property). Responses are categorised as Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), and Strongly Disagree (SD).

**Table-1: Summary of responses (in percentages) for 30 statements assessing digital ethics awareness among 100 postgraduate students**

| Statement | Dimension | SA (%) | A (%) | N (%) | D (%) | SD (% |
|---|---|---|---|---|---|---|
| 1. | Privacy | 70 | 20 | 10 | 0 | 0 |
| 2. | Privacy | 60 | 10 | 30 | 0 | 0 |
| 3. | Privacy | 60 | 20 | 10 | 10 | 10 |
| 4. | Privacy | 60 | 10 | 10 | 10 | 10 |
| 5. | Privacy | 80 | 10 | 10 | 0 | 0 |
| 6. | Privacy | 50 | 20 | 10 | 10 | 10 |
| 7. | Security | 50 | 10 | 20 | 10 | 10 |
| 8. | Security | 80 | 10 | 10 | 0 | 0 |
| 9. | Security | 60 | 20 | 10 | 10 | 0 |
| 10. | Security | 60 | 10 | 10 | 10 | 10 |
| 11. | Security | 50 | 20 | 10 | 10 | 10 |
| 12. | Security | 30 | 30 | 10 | 20 | 10 |
| 13. | Responsibility | 70 | 10 | 10 | 10 | 0 |
| 14. | Responsibility | 80 | 10 | 10 | 0 | 0 |
| 15. | Responsibility | 100 | 0 | 0 | 0 | 0 |

| Statement | Dimension | SA (%) | A (%) | N (%) | D (%) | SD (% |
|---|---|---|---|---|---|---|
| 16. | Responsibility | 70 | 20 | 10 | 0 | 0 |
| 17. | Responsibility | 50 | 20 | 10 | 10 | 10 |
| 18. | Responsibility | 40 | 30 | 10 | 10 | 10 |
| 19. | Equity | 10 | 20 | 40 | 10 | 10 |
| 20. | Equity | 30 | 20 | 10 | 20 | 10 |
| 21. | Equity | 60 | 10 | 10 | 10 | 10 |
| 22. | Equity | 80 | 10 | 10 | 0 | 0 |
| 23. | Equity | 30 | 30 | 10 | 20 | 10 |
| 24 | Equity | 30 | 40 | 10 | 10 | 10 |
| 25. | Intellectual Property | 30 | 30 | 10 | 20 | 10 |
| 26. | Intellectual Property | 70 | 20 | 10 | 0 | 0 |
| 27. | Intellectual Property | 30 | 30 | 10 | 20 | 10 |
| 28. | Intellectual Property | 30 | 40 | 10 | 10 | 10 |
| 29. | Intellectual Property | 30 | 30 | 20 | 10 | 10 |
| 30 | Intellectual Property | 100 | 0 | 0 | 0 | 0 |

**Dimension-wise response distribution for Digital Ethics Awareness**

Response frequencies (counts and percentages) for five digital ethics awareness dimensions from 100 Central University of Himachal Pradesh (CUHP) postgraduate students are presented through Likert scale statements per dimension. Ranking choices are aligned with SA, A, N, D, and SD.

**Table-2: Response frequencies (counts and percentages) for five digital ethics awareness dimensions from 100 Central University of Himachal Pradesh (CUHP) postgraduate students**

| Dimension | Agreement (Count / %) | Neutral / (count/%) | Disagreement (count / %) | Total |
|---|---|---|---|---|
| Privacy | 470/ (78%) | 80 (14%) | 50 (8%) | 600 |
| Security | 430/ (72%) | 70 (12%) | 100 (16%) | 600 |
| Responsibility | 540/ (90%) | 40 (7%) | 20 (3%) | 600 |
| Equity | 380/ (63%) | 90 (15%) | 130 (22%) | 600 |
| Intellectual Property | 440/ (73%) | 60 (10%) | 100 (17%) | 600 |

## Results

Every participating postgraduate student received a Likert-scale survey that measured digital ethics knowledge across the Privacy, Security, Responsibility, Equity, and Intellectual Property domains. Survey participants used a 5-point rating scale, which started at Strongly Agree (5) through Agree (4) before reaching Neutral (3), Disagree (2), and ending at Strongly Disagree (1). Percentage results displayed the combined totals of SA and A ratings. The data from the Table shows diverse levels of understanding across the five dimensions, indicating both positive aspects and areas that require attention.

Privacy: Postgraduate students exhibit a well-developed ethical understanding of privacy principles, as they agree with about 70 per cent to 90 per cent of the statements. A strong level of agreement among participants demonstrates their clear understanding of privacy protocols for protecting data and the threats posed by digital platforms, including social media and third-party applications. Some areas revealed minor gaps because participants expressed neutral positions (up to 30 per cent) and differing opinions (up to 20 per cent) regarding technical abilities or GDPR understanding. Further training will most likely eliminate existing contradictions in an ethical moral foundation that satisfies this dimension's standards.

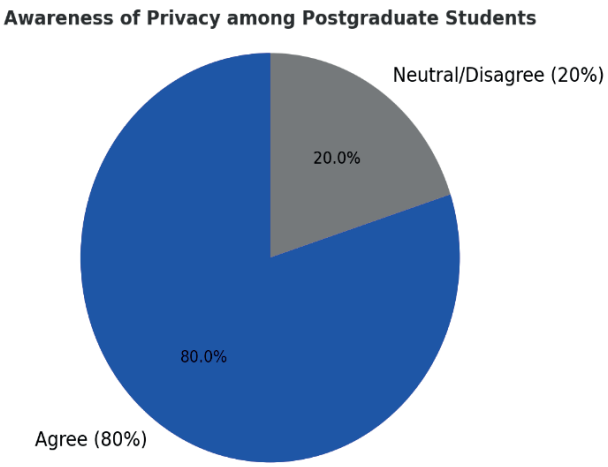


*Fig-1: Data in the pie chart show that postgraduate students possess knowledge of ethical privacy principles at an 80% rate, although 20% either do not express an opinion or disagree on such matters.*

Security: Awareness of security principles ranges from 60 per cent to 90 per cent, yet multiple students exhibit distinct differences in these figures. Most students show strong confidence with passwords, but their agreement levels on detecting sophisticated threats through fake websites fall below 60 per cent. Results indicate that students vary from being uncertain to inexperienced about security practices, as 20 per cent to 30 per cent of total survey respondents expressed neutral or disagreeing positions on security measures. This assessment finds that students' ability to navigate a complex cyber environment needs better technical training.

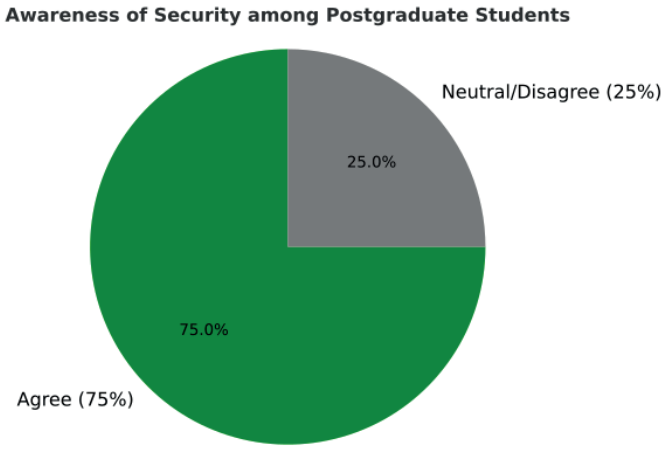


*Fig-2: The chart indicates that 75 % of postgraduate students demonstrate security awareness compliance, while 25 % report technical limitations or uncertainty about security protocols.*

**Responsibility:** High awareness marks the Responsibility dimension, with every student demonstrating awareness between 70 per cent and 100 per cent. The students consistently demonstrate ethical awareness of their digital conduct, including protective actions toward others and proper respect for technology, as evidenced by statements indicating complete agreement. The responses show a responsible sense of accountability because the number of dissenting opinions remains limited even when agreement drops to 70 per cent . The high level of understanding of the ethical frameworkt makes Responsibility the essential foundation for students' perceptions of digital ethics within the educational context.

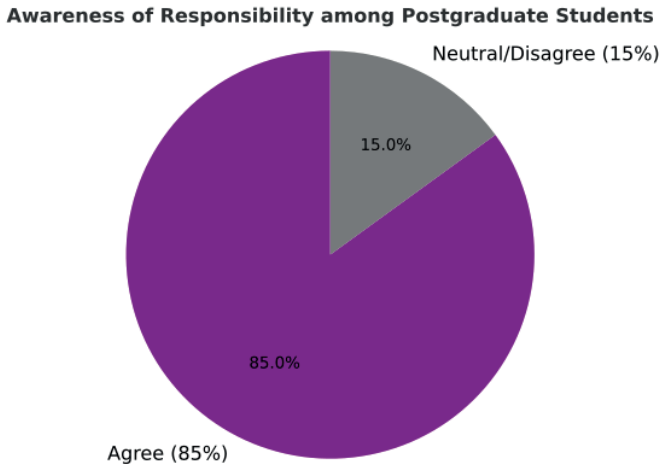


*Fig-3: The pie chart shows that postgraduate students identify with digital responsibilities at 85%, with 15% opposing.*

**Equity:** The findings showed diverse student understanding of equity issues, as 50 per cent to 90 per cent of respondents demonstrated moderate to high comprehension levels, yet there were significant variations among them.

Students understand unfair service access well, but their perspectives on platform accountability and exclusion fluctuate between 30 per cent and 50 per cent and 40 per cent, respectively (90 per cent of students). The data reveal that students grasp fundamental equity principles well, yet they need greater engagement with principles that explain the systemic implications of equity.

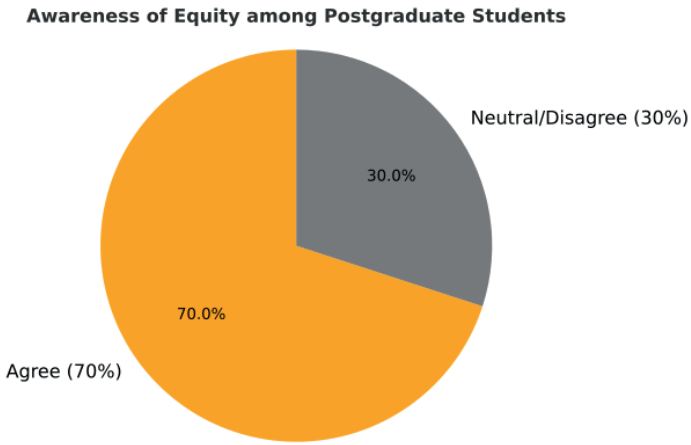


*Fig-4: The pie chart shows that postgraduate students recognise equity issues to the extent of 70% yet 30% remain undecided or opposed to the concept.*

Intellectual Property: Students display both positive and negative comprehension points in their understanding, which ranges from 60 per cent to 100 per cent. All students understand plagiarism tools and oppose piracy, yet their understanding of precise copyright details remains minimal, as most support the principle, but some remain in disagreement. The survey reveals students fully understand basic ethical transgressions, yet their knowledge about advanced intellectual property is inconsistent, thus requiring specialised educational programs.

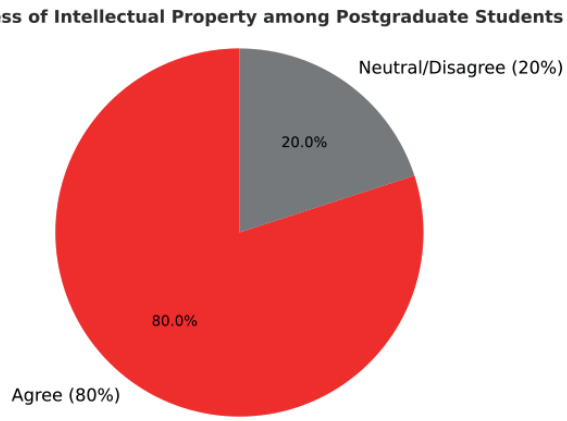


*Fig-5: Students at the postgraduate level showed an understanding of intellectual property ethics of 80%, while 20% faced challenges in understanding its complexities, as indicated by the pie chart.*

Research findings indicated that postgraduate students uphold ethical conduct effectively through the Responsibility and Privacy practice. However, they require a better understanding of Security and Equity, as well as Intellectual Property Defence, to effectively utilise digital tools. In response to Research Question 1, the results suggested that postgraduate students exhibit a high level of digital ethics awareness, particularly in the dimensions of Responsibility and Privacy. In answer to Research Question 2, the findings indicated that the degree of awareness across the five dimensions differs, with Responsibility showing the most incredible consistency and Equity and Security registering relatively lower consistency. With respect to Research Question 3, the results showed some clear strengths in ethical accountability and fundamental privacy knowledge. In contrast, weaknesses were observed in technical security competencies, equity literacy, and precise knowledge of copyright.

## Discussion

The results of the study indicated particular patterns of understanding that exist across the participant group. The survey shows that 75–90 per cent of respondents share a similar understanding of privacy issues, aligning with Smith (2020), but students require additional development of the technical skills needed for privacy control management. Security stats indicate that 60 per cent to 90 per cent of users practice safe password practices despite lacking fraud-prevention capabilities, according to Brown (2022). Ethical maturity regarding Responsibility ranges from 70–100 per cent, and Taylor (2019) verifies that this level indicates broad acceptance of impact, combined with respect for core values. Student understanding of representation and access issues ranges from 50 to 90 per cent equity levels, but their stance on platform accountability remains ambiguous, according to Lee (2023). Intellectual Property rights show favourable reactions toward piracy at levels between 60 and 100 per cent, as Clark (2020) found using government records. The research identifies that postgraduate students display ethical understanding, yet require specialised study for technical and fair conduct applications. In the words of Chaaban (2025), Digital ethics should be integrated into educational programs through dedicated training on the topic.

## Conclusion

The Results from a Digit Ethics Awareness Scale (DEAS) Likert survey show that postgraduate students understand digital ethics, with responses indicating their comprehension of Privacy, Security, Responsibility, Equity, and Intellectual Property. The research demonstrates a broad understanding range, with primary competencies alongside unmet areas that generate significant knowledge for higher education institutions. The strongest aspect is responsibility, which shows understanding levels ranging from 70 per cent to 100 per cent, as students deeply perceive the ethical implications of digital actions while aiming for respectful technology utilisation. People show a strong understanding of the importance of protecting their data privacy, with awareness levels between 70 per cent and 90 per cent. The research demonstrates that postgraduate students have acquired sufficient theoretical knowledge to maintain ethical conduct in personal and online contexts. However, Security (60%–90%), Equity (50%–90%), and Intellectual Property (60%–100%) show variability. Basic security knowledge and opposition to intellectual property theft are evident

among students. Nevertheless, they face difficulties in detecting fraudulent websites and understanding equity across digital platforms, suggesting a lack of practical competence in ethical understanding. These findings carry important implications. The high level of concern about Responsibility and Privacy makes students potential ethical leaders who will shape digital cultures toward beneficial outcomes. The Security and Equity sectors require specific educational attention, given their identified weaknesses. Postgraduate programs need to include practical cybersecurity lessons and conversations about digital equity to fill knowledge gaps, while leveraging their strong Intellectual Property tool skills to understand copyright concepts better. The interventions would turn awareness into professional competence by preparing students to tackle professional duties. The findings are strong, as they identify practical limitations and ethical awareness among postgraduate students. Even though high agreement on Responsibility and Privacy indicates an excellent moral orientation, inconsistent scores on Security, Equity, and Intellectual Property indicate a mismatch between ethical intention and applied competence. These results can be translated into practical guidance for higher education institutions, which should consider implementing specific digital ethics education, including cybersecurity literacy, equity consciousness, and copyright education. Therefore, the study not only presents descriptive results but also provides practical insights.

## Limitations

Limitations include the modest sample size of 100, limiting generalizability, and reliance on self-reported data, which may inflate perceived awareness. Future research could expand to larger, diverse cohorts and incorporate qualitative methods to explore underlying attitudes. In sum, this study reveals that postgraduate students are ethically inclined but require further training to navigate digital ethics effectively. By embedding these principles into curricula, higher education can ensure they not only understand but also apply ethical standards, which play an important role in shaping a responsible digital future.

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