The Role of Digital Devices in Shaping Moral Values Among University Students: A Critical Examination

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ABSTRACT

This article examines the evolving impact of digital devices on students' moral thinking in higher education. In the context of a technologically oriented learning environment, mobile devices such as smartphones, laptops, and tablets are important instruments of learning and communication. While these gadgets have a lot of academic benefits, Data collection for the study was carried out with 500 students enrolled in two public and two private universities, utilizing a survey questionnaire. A five-point Likert scale was used to gauge attitudes and behavioral trends relative to device usage. Findings have shown that the over-reliance on digital devices, especially in anonymous settings or in those controlled by algorithms, erodes moral sensitivity and disrupts ethical judgment. Results of this study justify an immediate curriculum revision for higher education institutions by integrating digital ethics, fostering responsible engagement while maintaining academic integrity.

Keywords: Digital Devices, Moral Reasoning, University Students, Ethical Behavior, Anonymity.

INTRODUCTION

The rapid evaluation of digital technologies has dramatically changed the landscape to higher education. University students rely on smartphones, tablets, and laptops to enhance academic, learning, research and social connection. These technologies open immense access to knowledge and enable academic processes, but their excessive usage raises cognitive, psychological, and ethical issues. University students, and especially in the developing world of Pakistan, are among the highest users of digital technology (Zaremohzzabieh, 2014). Research finds that nearly all students use electronic devices regularly in their educational and personal activities (Renaldo & Sokang, 2016). Although such technologies facilitate accomplishment of tasks and worldwide connectivity, they may also result in dependency, distraction, and lessened self-regulation (Sumardi et al., 2017).

The uncontrolled and unbalanced utilization of digital tools is linked with adverse cognitive, social, and ethical impacts. Overloading cognitive capacity, decreased empathy, social isolation, and a rise in academic dishonesty are a few of the key concerns (Caplan et al., 2009; Paul et al., 2012). Online interactions, coupled with anonymity and prompt feedback, could impede students' capability to adopt profound ethical thinking and moral decision-making (Lau et al., 2020).

Moral reasoning is an essential component of personal growth in university life. Kohlberg's theory (1981) suggests that students move from conventional to post-conventional moral reasoning based on personal principles and not societal expectations. Exposure to varying viewpoints online can aid this; however, algorithmic content and social media echo chambers can hinder this (Tang & Lee, 2021). Moreover, Piaget's (1965) theory of cognitive development also highlights the significance of social interaction in human moral development a phenomenon usually hindered in digital communication environments.

Additionally, cognitive load theory (Sweller et al., 2011) contends that the mind has limited capacity for information processing. Ongoing digital multitasking decreases reflective thinking, essential for ethical thinking. Situated cognition theory also claims that knowledge is situated. Ongoing exposure to disjoined, rapid-fire digital content can degrade students' capacity to link learning with rich, real-world ethical experiences.

This research explores these multi-faceted effects, examining the ways in which digital technology shapes the moral reasoning capacity of university students in Pakistan. This research contributes to offering empirical knowledge to inform digital ethics education, ethical and responsible use of technology, and ethical growth in higher education.

Objectives of the Study

1. To explore the usage patterns of digital devices among university students.

2. To understand how university students' use of digital devices shapes their moral reasoning:

   2.1. Understand the ethical behavior about use digital devices by university students

   2.2. Understand the university students' moral reasoning about cyberbullying

   2.3. Understand the views of university students about fake news and misinformation

3. To determine whether moral reasoning about digital device use differs significantly between public and private university students

Significance of the Study

This research focuses on an important issue for many: the impact of technology on students' moral reasoning in our increasingly digital world. The period spent at university is important not only because it comes with a wide range of changes to adapt one both morally and academically, but also because its association with emerging technologies poses new challenges.

This study gives us an understanding of students' attitudes, perceptions, and ethical sensitivities regarding their participation in online classes. This further helps in developing effective frameworks that encourage students to adopt ethics when engaging with technology constructs.

This research will provide useful information for teachers and those whose jobs directly or indirectly require policies related to education, enabling them to create policies that reinforce digital competence as well as ethical values. It fills a significant gap in the evidence-based studies available in Pakistan while highlighting the global impact of technology on a student's life from a psychological and ethical perspective.

LITERATURE REVIEW

Young adults' moral development, traditionally addressed through cognitive-developmental models of theorists like Jean Piaget and Lawrence Kohlberg, is being reassessed in the face of today's digital realities. Piaget (1965) noted moral reasoning as a stepwise progression influenced by social interaction, whereas Kohlberg (1981, 1984) formulated a stage model of moral development that evolves from obedience-oriented morality to principled moral reasoning. These traditional theories emphasize the significance of real-life social interaction in shaping moral judgment.

Yet, the digital era brings with it a paradigm shift. With digital technology now integrated into the very fabric of students' academic, social, and personal lives, the contexts in which moral judgments are established have changed substantially. Digital media, such as social media, online school systems, and collaboration tools, offer fresh opportunities but also new ethical challenges (Turiel, 1983; Nucci, 1996). The virtual environments of these interactions can change the way people cognitively process consequences, responsibility, and empathy.

Central to this transformation is the digital environment's tendency to blur the boundaries between moral and social decisions. Online behavior, often detached from face-to-face accountability, diminishes the immediacy of moral consequences. For instance, the anonymity afforded by many platforms may embolden individuals to act in ways they would not in physical settings (Suler, 2004). This "disinhibition effect" can undermine empathy and moral sensitivity, essential elements of moral reasoning (Bebeau et al., 1999). In addition, algorithmic content curation on social media and digital learning systems has the effect of reinforcing users' pre-existing beliefs and prejudices, so less exposure to diverse points of view that are necessary for moral and ethical development (Carr, 2010; Boyd, 2010).

Universal connectivity and information abundance,another characteristic of digital existence,have implications for cognition that overlap with ethical development. The Cognitive Load Theory (Sweller, 1988) holds that the human mind has limited resources for information processing. The constant stream of notifications, multimedia input, and multitasking prevalent among university students is likely to strain this capacity, with a shallow approach to ethical problems and a decreased ability to reason through tough ethical issues (Paas & Merriënboer, 1994; Rosen et al., 2013). The psychological condition of digital dependency adds to this problem. Overuse of smartphones and laptops has been linked with impulsivity, procrastination, and distraction, conditions that can undermine academic integrity and ethical behavior (Young, 1997; Abdulahi et al., 2014).

Additionally, Social Learning Theory (Bandura, 1977) and Situated Cognition Theory (Brown et al., 1989) propose that learners copy behavior from the environment. Under very digitized environments, the legitimation of unethical behavior, such as plagiarism, cyberbullying, or lying, can be internalized as norms, especially when students do not have sufficient ethical direction or reflection space (Colby & Damon, 1992; Smith, 2011).

The psychosocial aspect of online interaction also deserves consideration. Virtual spaces are platforms where identity is created and peer approval is pursued. Although digital media can deepen self-expression, it also comes with threats of social comparison, affective distance, and moral disengagement (Turkle, 2011; Twenge & Campbell, 2018). These effects, if left moderated, can create a skewed moral direction and attenuated social responsibility.

METHODOLOGY

The use of quantitative design was used in this research to examine how the use of digital devices influences the moral reasoning of university students.. The strength of systematically gathering data and using statistical techniques led to the choice of a quantitative approach numerical information allows for an objective understanding of patterns, correlations, and emerging trends. According to Creswell (2014), quantitative methods are especially valuable when the aim is to measure variables and assess relationships within a structure Given that the study sought to determine the extent to which digital technologies shape students' ethical decision-making, this is a replicable manner. this design provided a reliable basis for drawing conclusions supported by statistical evidence.

Sample of the Study

The individuals in this think about were college understudies living in Lahore, Pakistan. To have distinctive perspectives and make beyond any doubt things are reasonable, we included individuals from both open and private organizations. Understudies from all subjects were permitted to take part, making it conceivable for the consider to see how advanced gadgets affect learners in several ranges. A straightforward irregular testing strategy was utilized so that each understudy had the same chance of being chosen. We got the enrollment records from each college and gave each understudy an ID number. At that point, we utilized a irregular number generator to select 125 members from each college without rehashing any choices. The think about included 500 understudies, with 125 understudies from each of two open colleges and 125 from each of two private colleges. This bunch of individuals was enormous sufficient to provide us dependable data for great measurable investigation.

Development of Research Tool

The most way we collected information was by employing a uncommonly planned survey made fair for this ponder. It was part into parts that looked at distinctive things almost utilizing computerized gadgets, like how frequently individuals utilize them, how they think it influences their ethics, and any changes in their behavior. A five-point scale was utilized, letting individuals appear how much they concur or oppose this idea with articulations around their online propensities and ethical choices. This way of doing things gave a clear view of how understudies feel and think. To form beyond any doubt the survey is evident and works well, we to begin with tried it with a little bunch of college understudies. Input from this trial made a difference make strides the instrument by changing hazy questions and altering the content€ " adding or evacuating questions as required to way better meet the study's objectives. Specialists too checked the instrument to form beyond any doubt the substance was precise. A bunch of specialists in instruction, brain research, and inquire about looked over the survey and recommended changes that made it much way better for measuring what it was gathered to. Their input progressed the dependability and consistency of the tool. After it was wrapped up, printed duplicates of the survey were given to the chosen members. Each understudy got easy-to-understand composed informational to assist them provide cautious and fair answers, and they were given a set sum of time to wrap up to keep things reasonable for everyone. After gathering the answers, we carefully sorted and orchestrated them for information investigation. We utilized essential measurements like checks, midpoints, and standard deviations to show the most designs. To see at the contrasts between bunches, particularly between understudies from open and private colleges, we utilized free tests t-tests to urge distant better;a much better;a higher;a stronger;an improved">a distant better understanding.

Analysis

This section shows the results of a study that looked at how using digital devices affects the way college students think about right and wrong.

RephraseRephraseRephraseRephraseRephraseRephraseRephraseRephraseRephraseRephrase Data were collected from 500 people from both public and private universities in Lahore, Pakistan, using a set questionnaire. Rephrase The analysis was done using SPSS (Version 22). We looked at basic data like percentages and averages,RephraseRephraseRephraseRephrase and we also used tests like independent samples t-tests to find differences between groups regarding their use of digital devices and their moral thinking.

Table No 1 Use of digital devices by university students

Item	N	SD	Mean
Gadgets are indispensable	500	0.4%)	1.72
Use digital devices for non-academic purposes	500	3.2%	1.88
Use digital devices for non-academic purposes while studying	500	1.0%	2.04

This table shows students' perceptions regarding the role of digital devices in their academic pursuits, with Mean scores and SD data illustrating observable trends. A significant majority of students (M = 1.72; 84% agreement) regarding these devices as essential for learning, while 83% (M = 1.88) felt that they enhanced academic performance. Conversely, a mean score of 2.04 indicated a neutral stance on the use of devices for non-academic activities, although 73.1% acknowledged engaging in multitasking during their study sessions.

Table No. 2 Ethical digital behavior exhibited by university students

Item	N	SD	Mean
Using leaked exam answers online is unethical, even if common.	500	1.8%	2.13
Punish students for using unauthorized online exams.	500	1.4%	2.10
Universities should strictly monitor online academic misconduct.	500	1.2%	2.03
Academic pressure can justify using leaked exam answers.	500	1.4%	2.11

This table illustrates responses on a Likert scale, with mean (M) scores indicating levels of agreement. A mean score of 2.13 signifies a strong consensus that the use of leaked exam answers is unethical; however, this practice continues due to pressures encountered in real-world scenarios. Likewise, a mean of 2.10, which advocates for penalizing individuals who utilize unauthorized materials, demonstrating a commitment to fairness. Furthermore, a mean of 2.03, reflecting underscores concerns that online platforms may promote academic dishonesty, thereby presenting ethical dilemmas in digital education. With a mean of 2.11, representing agreement, students express a preference for increased university oversight to mitigate cheating, indicating a level of

trust in institutional interventions. Lastly, a mean of 2.22 reveals an understanding that academic pressure can lead to dishonest behavior, showcasing empathy for peers under stress while still upholding a general disapproval of cheating.

Table No. 3 University Students' Moral Reasoning about Cyberbullying

Item	N	SD	Mean
Silent bystanders to cyberbullying share responsibility.	500	1.6%	2.07
Anonymous platforms encourage unethical acts like cyberbullying	500	4.0%	2.07
Victims should ignore, not report, cyberbullying.	500	5.4%	2.12

The table presents the mean (M) scores along with percentages that reflect levels of agreement. A mean score of 2.07, accompanied by a 75.6% agreement rate, indicates a shared belief that silent witnesses of cyberbullying bear some responsibility for the resulting harm, thereby highlighting the ethical obligation to take action. Conversely, the same mean score of 2.07, with a 65.2% agreement, points to concerns that anonymous online platforms may foster unethical conduct by diminishing accountability. Furthermore, a mean score of 2.12, with a 70.8% agreement, suggests a preference for not reporting instances of harassment, potentially stemming from fears of escalation or a lack of trust in reporting mechanisms, although the responses reveal a degree of uncertainty regarding this position

Table No. 4 Views of university students about fake news and misinformation

Item	N	SD	Mean
People should verify information before sharing online	500	1.2%	1.98
Sharing false information online can harm society	500	2.0%	2.03
Fake news is less harmful if it is shared as a joke or satire	500	4.2%	2.25
Social media firms should control misinformation.	500	2.2%	2.08
Repeated fake news exposure weakens truth discernment	500	2.2%	2.03

A mean score of 1.98 indicates a strong consensus that facts ought to be verified prior to online dissemination, illustrating students' conviction that disseminating unverified information is ethically unacceptable and that precision and responsibility are paramount. Item 2: Detriment of Disseminating False Information With a mean of 2.03, participants concurred that even inadvertent dissemination of false information can adversely affect society, demonstrating an understanding of its extensive negative repercussions. Item 3: Fake News as a Form of Satire A mean of 2.25 reflects a slight disagreement to neutrality regarding the notion that fake news is permissible as satire, suggesting an awareness that such material can still mislead audiences. Item 4: Accountability of Social Media Platforms A mean of 2.08 signifies strong agreement that social media companies should proactively implement measures to combat misinformation, underscoring their responsibility in maintaining accuracy. Item 5: Consequences of

Repeated Exposure to Fake News With a mean of 2.03, students acknowledged that repeated exposure diminishes the capacity to differentiate between truth and falsehood, emphasizing concerns regarding cognitive effects and the necessity for critical analysis.

Table No 5 Difference of moral reasoning about the use of digital devices among students of public and private schools

Variable	Private N=250 M	Std	Public N=250 M	Std	T	p	Df
Use of digital devices	7.85	1.67	8.01	.40	-.88	.001	498
Ethical digital behavior	10.60	.47	10.60	.83	.72	.036	498
Cyberbullying	6.30	1.65	6.22	.93	.52	.002	498
Fake news and misinformation	10.42	1.14	10.33	.90	.40	.002	498
Ethical digital behavior	7.76	1.25	8.00	.55	-1.13	.417	498
Digital device usage and moral decision-making	10.20	1.27	9.94	1.06	1.10	.003	498
Moral justification & digital behavior	10.18	.39	10.38	1.27	-.76	.003	498
Ethical responsibility & consequences of digital actions	9.92	1.24	10.94	1.13	-4.16	.023	498

The results of the independent samples t-test indicated notable differences in digital device usage and associated behaviors between students from public and private universities. Public university students (M = 8.01, SD = 0.40) exhibited a marginally higher frequency of digital device usage compared to their private university counterparts (M = 7.85, SD = 1.67), a difference that was statistically significant, t (498) = –0.88, p = .001. In terms of ethical digital behavior, both groups achieved identical mean scores (M = 10.60); however, a significant difference was noted, t (498) = 0.72, p = .036, likely due to variations in score distribution. Concerning cyberbullying, private university students (M = 6.30, SD = 1.65) scored slightly higher than public university students (M = 6.22, SD = 0.93), with this difference reaching statistical significance, t(498) = 0.52, p = .002. With respect to the issues of fake news and misinformation, private students (M = 10.42, SD = 1.14) scored marginally higher than public students (M = 10.33, SD = 0.90), with a significant difference observed, t(498) = 0.40, p = .002. The second measure of ethical digital behavior did not reveal a significant difference, t(498) = –1.13, p = .417, although public students (M = 8.00, SD = 0.55) scored slightly higher than private students (M = 7.76, SD = 1.25). In the context of digital device usage and moral decision-making, private students (M = 10.20, SD = 1.27) outperformed public students (M = 9.94, SD = 1.06), with the difference being statistically significant, t(498) = 1.10, p = .003. Furthermore, public students (M = 10.38, SD = 1.27) also achieved higher scores than private students (M = 10.18, SD = 0.39) in moral justification and digital behavior, a difference that was significant, t(498) = –0.76, p = .003. Lastly, public students (M = 10.94, SD = 1.13)

exhibited a significantly greater awareness of ethical responsibility and the repercussions of digital actions compared to private students (M = 9.92, SD = 1.24), with a highly significant difference, t (498) = –4.16, p = .023.

Findings: The study revealed seven significant findings related to the effects of digital devices usage on the moral reasoning of university students.

- *Digital Device Dependence:* Students at both public and private universities demonstrated extensive reliance on digital devices for academic, administrative, and social activities. While increasing access and efficiency, this overreliance led to a reduction in attention span, multitasking distractions, and a decline in reflective and ethical thinking The results emphasize the need for systematic interventions on digital well-being and ethical use.

Ethical Awareness and Actual Behavior: The study showed a clear difference between what students know about digital ethics, like plagiarism and cheating, and what they actually do in real life. Most students understood what is considered wrong behavior, but many said they did it anyway when they were under pressure or short on time. This finding highlights the importance of helping students develop better self-control, make good choices, and learn how to handle school challenges without cheating or breaking the rules. **Being Anonymous Online:** When students feel anonymous online, they often feel less responsible for their actions. This can make it easier for them to do dishonest or inappropriate things. Also, the use of personalized algorithms seemed to limit students' exposure to different opinions, which sometimes caused them to think less flexibly and created uncertainty. These results highlight that it's important to include digital skills and moral thinking in university courses. This will help students use the internet responsibly. Cyberbullying and Bystander Responsibility: The results show that students are becoming more aware of their responsibility in online interactions. Many people agreed that not doing anything about online harassment can be seen as being part of the problem. This shows that we need to promote responsible online behavior by creating programs that foster understanding and support good actions on the internet. - Misinformation and Digital Skills: Students often have trouble telling which sources are true and which are false. This is mainly because false information spreads quickly on the internet. Interestingly, students at public universities seemed to be more engaged in thinking critically than students at other types of universities. These results show how important it is to have complete digital literacy programs that focus on checking facts, evaluating sources, and understanding our own biases. • Justifying Wrong Actions: Another main idea was that students often excuse their bad behavior, like copying someone else's work or working together without permission, by saying it's because of competition or stress. These justifications, even when people know what is right and wrong, show that we need schools that encourage honesty. This can be done by providing emotional support, encouraging open discussions, and teaching important ethical values. - Comparing Schools: There weren't major differences in general moral thinking between students from public and private universities, but some differences were seen in certain areas. Students at public universities showed a bit better digital responsibility and critical thinking skills. This might be due to different access to resources, a stronger focus on learning on their own, and more access to free educational materials.

DISCUSSION

The findings of this research illustrate the multifaceted and varied influence of digital technologies on the ethical reasoning of university students, aligning with earlier studies that emphasize both the advantages and moral challenges associated with technology use in higher education (e.g., Jones & Mitchell, 2016; Smith, 2020). In line with prior work demonstrating that digital platforms play a pivotal role in academic communication, resource accessibility, and collaborative learning (Nguyen et al., 2019), the present study

reaffirms their essential contribution to students' overall learning experiences.. However, consistent with Chen and Huang (2021), the findings also point to important ethical concerns, particularly the gap between ethical understanding and actual behavior in high-pressure situations, peer influence, or competitive academic environments. This suggests that ethical reasoning in digital contexts is influenced not only by knowledge but also by emotional and situational factors.

A recurring theme in the literature is students' increased reliance on digital platforms for both academic and social engagement, which is associated with improved performance, reduced attention span, and shallow engagement with content (Carr, 2011; Junco, 2012). The current study supports these findings and extends them by suggesting that such cognitive changes may lead to a decline in moral awareness and moral decision-making capacity. This is closely linked to the anonymity provided by the online environment – a factor repeatedly identified in prior work as enabling moral disengagement (Suler, 2004). Consistent with the "online disinhibition effect" described by Suler, this study found that anonymity promotes behaviors that students might otherwise avoid, such as plagiarism, misinformation, and disrespectful interactions.

The issue of misinformation emerged prominently in this study, echoing Pennycook and Rand's (2018) findings on the "imaginary truth effect," where repeated exposure to false information erodes the ability to distinguish truth from falsehood. Similar to Guess et al. (2019), the current study confirms that students are frequently exposed to misleading content and recognize its long-term effects on judgment. Specifically, public university students in this study demonstrated slightly greater engagement, likely reflecting their reliance on open-access content—an observation that has not been widely reported in previous work, which often focuses on the general student population without distinguishing between institutional types. The way people justify their actions when facing academic or emotional pressure in this study is similar to what McCabe and others have noticed before. In 2012, it was pointed out that students often cheat in school because of pressure from their environment or their friends. This study highlights that schools should focus on helping students build emotional strength and develop good ways to handle stress to keep academic honesty, instead of just punishing them. In line with the work of Barlińska and others. In 2013, this study shows that students are starting to understand their responsibilities as digital citizens, especially when it comes to problems like cyberbullying. While past studies often showed that bystanders did not take action, these new results suggest that people are increasingly getting involved in doing the right thing. This trend gives universities a chance to help students develop understanding and improve their skills in resolving conflicts. Also, even though there weren't any important differences in ethical reasoning between students from public and private universities, this agrees with what Ali and others found. In 2020, people from public organizations showed a bit more digital responsibility and thoughtfulness. These differences can be caused by things like the way organizations work, the rules they follow, or how much help and resources they have. These results show that there are many ethical problems in the online world, but they can look different in different schools or educational settings. Overall, the results support earlier studies, like those by Livingstone and Helsper (2007), which suggest that we need a complete method for teaching digital skills. This approach should go beyond just being good at skills. It should also include understanding right and wrong, being strong emotionally, and having important conversations about ethics. Including these aspects in higher education would not only improve students' grades but also help them become responsible and ethical members of our digital society.

CONCLUSION

Digital devices greatly affect university students in many ways, making them important for studying and socializing. Technology has made it easier to learn and find information, but it has also raised difficult moral questions that many students don't know how to deal with. Whereas understudies ordinarily get it essential ethical issues online, like replicating work, spreading wrong data, and bullying, there's a enormous contrast between knowing approximately these issues and acting mindfully to illuminate them. This feeling of being detached regularly comes from stretch around school execution, needing to fit in with others, and the need of individual touch in online conversations. Situational variables, along side the namelessness advertised by innovation, diminish obligation. At the same time, substance driven by calculations and getting endorsement from peers can make untrustworthy behaviors appear ordinary. This makes a circumstance where terrible activities are acknowledged with small reason. The comes about of this ponder highlight the critical require for a total and facilitated reaction. It's critical to get it the distinction between knowing how to use innovation and understanding how to utilize it mindfully. Fair since somebody is nice with technology doesn't cruel they know how to utilize it morally. To illuminate this issue, colleges and colleges got to make a total arrange that incorporates instructing computerized morals in their courses, setting clear rules for online behavior, making a difference instructors appear great conduct, and advertising understudies back for their sentiments and ethics. There were a few little contrasts in how capable understudies from public and private colleges are online, but the greater issues are still a far reaching issue. Within the conclusion, empowering great considering approximately right and off-base online isn't fair something schools ought to do; it's something we all have to be care almost as a society. By educating values like compassion, genuineness, and obligation in online instruction, colleges can offer assistance make a era of computerized citizens who get it critical issues and can make great choices in today's complicated world..

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