

Digital Information Overload and Fact-Checking Practices of College Students in Batangas City

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Abstract

In the digital age, college students are frequently exposed to large volumes of online information from social media, academic platforms, and other digital sources, which can support learning but also cause digital information overload that impairs focus and comprehension. In Batangas City, where digital tools are widely integrated into higher education, this concern has become notable among first-year college students.

This study determined the extent of digital information overload and examined its relationship with students' fact-checking practices. It assessed overload in terms of exposure to digital content, perceived difficulty in managing information, ability to judge relevance and credibility, and cognitive and emotional effects such as stress and mental fatigue. It also evaluated how often students verify information through source checking, comparison of references, and use of verification tools, and identified challenges affecting these practices.

A descriptive quantitative design was employed, involving 343 first-year college students selected through purposive sampling from selected colleges in Batangas City. Data were gathered using a validated questionnaire and analyzed using weighted mean, composite mean, ranking, and Pearson's r correlation.

Findings revealed that students often experience digital information overload, particularly due to frequent notifications, use of multiple platforms, and large amounts of online content during study time, leading to difficulty concentrating, mental exhaustion, and increased stress. Students also reported frequent engagement in fact-checking practices, although these are not consistently performed thoroughly because of limited time, fatigue, and reliance on easily accessible information. A significant relationship was found between digital information overload and fact-checking practices, indicating that higher overload levels lessen the effectiveness of verification.

Digital information overload thus directly affects how students process and verify information, reducing the quality of their learning. Institutions may consider integrating fact-checking activities into courses, offering digital literacy training, and promoting better information management habits to foster more critical and responsible digital information use.

Keywords: *digital information overload, fact-checking practices, digital literacy, cognitive fatigue.*

I. INTRODUCTION

The rapid expansion of digital technologies has transformed how information is produced, accessed, shared, and consumed in the 21st century. For higher education students, digital platforms such as social media, online learning management systems, search engines, and multimedia applications have become essential tools for academic learning and communication. These technologies provide immediate access to educational resources, collaborative opportunities, and interactive learning experiences that can enhance academic performance and engagement. However, the overwhelming volume, speed, and complexity of digital information have also created a growing concern known as digital information overload.

Digital information overload occurs when the amount of information available exceeds an individual's cognitive capacity to process and manage it effectively (Eppler & Mengis, 2024). This condition often results in mental fatigue, distraction, confusion, anxiety, reduced concentration, and difficulty in making informed judgments. In educational settings, students who experience information overload may struggle to distinguish credible sources from misinformation, thereby affecting their learning behaviors and fact-checking practices. The issue became even more evident in the post-pandemic period, when online learning and increased digital engagement significantly intensified students' exposure to digital content.

Globally, researchers have identified digital information overload as a major challenge among college students. Tafesse (2024) emphasized that excessive exposure to digital platforms contributes to technostress, emotional exhaustion, and decreased academic engagement. Similarly, Arnold (2023) explained that constant digital interruptions reduce students' concentration and weaken their ability to critically evaluate online information. Studies by Sharma et al. (2025) further revealed that students exposed to overwhelming digital content often rely on superficial processing strategies, such as skimming headlines instead of conducting deeper analysis.

Related studies also highlighted the relationship between information overload and fact-checking behavior. Pennycook et al. (2020) found that cognitive overload encourages individuals to rely on heuristic thinking and familiar sources rather than carefully verifying information. Likewise, Shao et al. (2022) explained that prolonged exposure to rapid information streams decreases motivation to engage in detailed fact-checking activities. Conversely, Delaney and Madani (2024) noted that digital literacy interventions and AI-assisted fact-checking tools can help students manage cognitive load and improve verification practices.

In the Philippine context, the problem of digital information overload is increasingly evident among college students. Filipino learners spend several hours daily on social media platforms such as Facebook, TikTok, YouTube, and X, often blending academic activities with entertainment and social interactions (We Are Social & Meltwater, 2024). Garcia and Lee (2024) observed that Filipino students frequently experience anxiety,

distraction, and cognitive fatigue due to nonstop notifications and fragmented digital content. Furthermore, Panuayan and Baguio (2025) reported that many students depend on algorithm-driven information sources that reinforce misinformation and reduce exposure to diverse perspectives.

Recognizing these concerns, the Philippine government and educational institutions have strengthened programs promoting digital literacy and information management. The Department of Information and Communications Technology (DICT), through the National Broadband Plan, continues to promote digital connectivity and responsible information use in education (DICT, 2023). Likewise, the Commission on Higher Education (CHED), through Memorandum Order No. 20, Series of 2013, integrated digital competencies and information literacy into outcomes-based education. These initiatives aim to equip students with the necessary skills to critically evaluate information and responsibly navigate digital environments.

In Batangas City, where colleges and universities continue to expand digital learning initiatives, students increasingly rely on online platforms for research, communication, and academic collaboration. However, inconsistent internet access, financial limitations, and heavy academic workloads contribute to students' difficulties in managing digital information effectively. Observations from local academic settings indicate that students often experience distractions from social media notifications, difficulty concentrating on academic tasks, and challenges in verifying the credibility of online sources.

Moreover, first-year college students are particularly vulnerable to digital information overload because they are still adjusting to the demands of higher education and independent learning. Their limited experience in evaluating digital content and managing multiple online resources may affect their academic engagement and fact-checking practices. Without proper intervention, these difficulties may contribute to poor study habits, reduced critical thinking skills, and increased susceptibility to misinformation. Several studies emphasized the importance of digital literacy and fact-checking skills in reducing the negative effects of information overload. Delima (2022) argued that information literacy programs strengthen students' abilities to filter, organize, and evaluate digital content effectively. Similarly, Bode and Vraga (2022) highlighted that collaborative fact-checking and peer-supported verification activities improve students' critical thinking and resistance to misinformation. These findings suggest that educational institutions must develop interventions that promote responsible digital consumption and effective information management.

This study is anchored on several interrelated theories that explain the impact of digital information overload on the learning behaviors and fact-checking practices of college students in Batangas City. Cognitive Load Theory, proposed by Sweller (1988), explains that individuals possess limited cognitive capacity when processing information. When students are exposed to excessive or highly complex digital content, their ability to concentrate, critically analyze, and retain information becomes significantly reduced,

resulting in stress, mental fatigue, and weaker academic performance. Supporting this perspective, Wang and Chen (2017) explained that cognitive overload negatively affects students' comprehension and decision-making in digital learning environments.

Information Literacy Theory further provides a framework for understanding the competencies necessary for navigating digital environments effectively. According to Eshet-Alkalai (2009), digital literacy involves the ability to search for information, evaluate the credibility of sources, and distinguish accurate content from misleading information. These competencies are essential for students who are constantly exposed to large volumes of digital information. Drisya (2025) further emphasized that strong information literacy skills enable learners to manage digital overload more effectively and engage in responsible fact-checking practices.

Additionally, Agenda-Setting Theory by McCombs and Shaw (1972) explains how digital and social media platforms influence the information students prioritize and consume. Although media platforms may not directly dictate what individuals think, they significantly shape what individuals think about by repeatedly emphasizing certain topics and narratives. In digital environments, this creates selective exposure and filter bubbles that reinforce misinformation and increase students' vulnerability to information overload, making it more difficult to critically evaluate online content.

Social Constructivist Theory, developed by Vygotsky (1978), also supports this study by emphasizing the social nature of learning and knowledge construction. This theory posits that students develop digital literacy and fact-checking skills through interaction with peers, educators, and digital communities. Collaborative learning environments, peer discussions, and socially mediated learning activities can therefore help students cope with digital overload and improve their information verification practices.

Together, these theories provide a comprehensive framework for understanding the effects of digital information overload on students' learning behaviors and fact-checking practices. Cognitive Load Theory explains the mental and emotional consequences of excessive information exposure, while Information Literacy Theory highlights the essential skills needed to manage and evaluate digital content effectively. Agenda-Setting Theory clarifies the role of media platforms in shaping students' information environments, whereas Social Constructivist Theory emphasizes the importance of collaboration and social interaction in developing digital competencies.

Despite the growing body of international and local research on digital information overload, limited studies have specifically examined its effects on the learning behaviors and fact-checking practices of first-year college students in smaller colleges in Batangas City. Existing studies primarily focus on broader digital literacy concerns or social media use without directly investigating how overload influences students' ability to verify information and engage meaningfully in academic learning.

This study aims to address this research gap by examining the extent of digital

information overload experienced by first-year college students in Batangas City and determining how it affects their learning behaviors and fact-checking practices during the Academic Year 2025–2026. Specifically, the study investigates students' exposure to digital information, subjective perception of overload, assessment of information relevance and credibility, and cognitive and emotional impacts. It also evaluates the usefulness of students' fact-checking practices in terms of verification strategies, use of digital tools, and critical evaluation of online sources.

Furthermore, this study seeks to determine whether a significant relationship exists between digital information overload and the effectiveness of fact-checking practices among students. It also identifies the major challenges encountered by students in managing digital information and proposes intervention activities that may improve digital literacy and information management competencies.

By exploring these concerns, the study hopes to contribute to the development of evidence-based educational interventions that will help students become more critical, responsible, and resilient digital learners. Ultimately, the research supports the broader goals of Philippine higher education in promoting digital literacy, responsible technology use, and informed participation in an increasingly digital society.

Research Questions:

This study investigates how digital information overload relates to the learning behaviors and fact-checking practices of first-year college students in selected colleges in Batangas City. Specifically, the study seeks to answer the following questions:

1. What is the extent of manifestation of digital information overload experienced by first-year college students in terms of:
 - exposure to digital information
 - subjective perception of overload
 - information relevance and credibility assessment
 - cognitive and emotional impact?
2. How do the respondents assess the level of usefulness of fact-checking practices of students in the context of digital information overload, relative to:
 - strategies for verifying information accuracy
 - students' use of digital tools and platforms
 - critical evaluation of online sources?
3. Is there a significant relationship between the extent of digital information overload and the perceived usefulness of students' fact-checking practices?
4. What challenges do college students face related to digital information overload during their fact-checking practices?

5. Based on the results, what intervention activities may be proposed to enhance students' digital literacy and information management?

Hypothesis of the Study

Ho: There is no significant relationship between the assessments on the extent of manifestation of digital information overload and on the level of usefulness of fact-checking practices of the students.

II.METHODOLOGY:

Research Design

This study used a descriptive quantitative research design to measure the extent of digital information overload, the perceived usefulness of fact-checking practices, and the challenges experienced by first-year college students in Batangas City. The design described existing conditions and relationships without manipulating any variables.

Participants

The participants were 343 first-year college students from selected colleges in Batangas City during the 2024–2025 academic year. They were drawn from a population of 2,383 first-year students using Slovin's formula at 5% margin of error, with stratified random sampling by school; colleges were chosen purposively based on their active use of digital technologies and willingness to participate.

Research Instrument

Data were collected using a researcher-made, validated Likert-type questionnaire. It had three parts: (1) digital information overload (exposure, subjective perception, relevance and credibility assessment, cognitive and emotional impact), (2) fact-checking practices (verification strategies, use of digital tools and platforms, evaluation of online sources), and (3) challenges related to digital information overload. Items were based on related literature, validated by experts, pilot-tested, and answered on four-point scales with clear verbal descriptions.

Data Collection Procedure

Permission from school authorities and ethics clearance were secured before data collection. Informed consent was obtained from all student-respondents, and data privacy and confidentiality were strictly observed. The questionnaire was administered online (via a secure survey link) and through printed copies for students with limited internet access. Completed questionnaires were collected within a set period, encoded, and anonymized for analysis.

Data Analysis

Descriptive statistics (weighted mean, composite mean, and ranking) were used to summarize levels of digital information overload, perceived usefulness of fact-checking practices, and reported challenges. Pearson's r correlation coefficient was applied to determine the relationship between the extent of digital information overload and the perceived usefulness of students' fact-checking practices, which then informed proposed intervention activities.

III.RESULTS

1.Extent of Manifestation of Digital Information Overload.

This section discusses the extent of manifestation of digital information overload experienced by college students in Batangas City in terms of exposure to digital information, subjective perception overload, information relevance and credibility assessment, and cognitive and emotional impact.

1.1.Exposure to Digital Information. Table 1 shows how the students are immersed in terms of wide volume of digital content.

Table 1

Extent of Manifestation of Digital Information Overload in terms of Subjective Perception of Overload

	Weighted Mean	Verbal Interpretation
1. I feel mentally exhausted from processing digital information.	2.7	Moderately Manifested
2. I get stressed by the amount of digital content to manage.	2.69	Moderately Manifested
3. I find it hard to concentrate because of too much digital information.	2.79	Moderately Manifested
4. I feel overwhelmed when digital information exceeds capacity.	2.77	Moderately Manifested
5. I often frustrated by digital information overload.	2.75	Moderately Manifested
6. I feel anxious when unable to keep up with all digital updates.	2.71	Moderately Manifested
7. I find prioritizing digital information difficult.	2.69	Moderately Manifested
8. I tend to avoid digital platforms due to overload feelings.	2.74	Moderately Manifested

9. I lose motivation because of digital information stress.	2.48	Slightly Manifested
10. I feel distracted by the constant influx of digital information.	2.65	Moderately Manifested
Composite Mean	2.69	Moderately Manifested
<i>Legend:</i>		
3.50-4.00 – Highly Manifested 2.50-3.49 – Moderately Manifested 1.50-2.49 – Slightly Manifested 1.00-1.49 – Least Manifested		

The findings reveal that the extent of manifestation of digital information overload among college students in Batangas City, in terms of exposure to digital information, is generally high, as indicated by the composite mean of 3.13 (moderately manifested). This suggests that students are frequently exposed to large volumes of digital content in their daily academic activities, which may contribute to cognitive strain and difficulty in managing information effectively.

Among the indicators, the highest-rated item is receiving many digital notifications from different applications daily (4, highly manifested), showing that students are constantly bombarded with alerts that can interrupt focus and disrupt learning. This is followed by frequently switching between digital platforms to find information (3.53, highly manifested), which reflects fragmented attention and multitasking behavior that may reduce comprehension and retention.

Other indicators, such as encountering a large volume of online content during study time (2.99, moderately manifested), getting more information than can be handled in a day (3.14, moderately manifested), and spending several hours consuming digital information (3.14, moderately manifested), further emphasize that students are regularly immersed in information-rich environments.

Additionally, receiving information from multiple devices (2.96, moderately manifested) and experiencing distractions from irrelevant content (3.02, moderately manifested) indicate that both the quantity and sources of information contribute to overload. Students also reported struggling to process all the information they receive (2.87, moderately manifested) and feeling overloaded by the continuous flow of digital content (2.86, moderately manifested), which confirms the presence of cognitive burden. Frequent interruptions caused by digital notifications while studying (2.99 moderately manifested) further aggravate this condition.

1.2. Subjective Perception of Overload. Table 2 shows how the students are exposed in terms of subjective perception of overload.

Table 2

Extent of Manifestation of Digital Information Overload in terms of Subjective Perception of Overload

	Weighted Mean	Verbal Interpretation
1. I feel mentally exhausted from processing digital information.	2.7	Moderately Manifested
2. I get stressed by the amount of digital content to manage.	2.69	Moderately Manifested
3. I find it hard to concentrate because of too much digital information.	2.79	Moderately Manifested
4. I feel overwhelmed when digital information exceeds capacity.	2.77	Moderately Manifested
5. I often frustrated by digital information overload.	2.75	Moderately Manifested
6. I feel anxious when unable to keep up with all digital updates.	2.71	Moderately Manifested
7. I find prioritizing digital information difficult.	2.69	Moderately Manifested
8. I tend to avoid digital platforms due to overload feelings.	2.74	Moderately Manifested
9. I lose motivation because of digital information stress.	2.48	Slightly Manifested
10. I feel distracted by the constant influx of digital information.	2.65	Moderately Manifested
Composite Mean	2.69	Moderately Manifested
<i>Legend:</i>		
3.50-4.00 – Highly Manifested 2.50-3.49 – Moderately Manifested 1.50-2.49 – Slightly Manifested 1.00-1.49 – Least Manifested		

The data from this table reveals a high extent of subjective perception of digital information overload, with a composite mean of 2.69, corresponding to a verbal interpretation of "moderately manifested". Individual indicators show consistency in frequency: mental exhaustion from processing digital information (2.7, moderately manifested), stress from content volume (2.69, moderately manifested), and concentration difficulties due to excess digital information (2.79, moderately manifested).

Additionally, overwhelm when exceeding capacity (2.77, moderately manifested), frustration from digital information overload (2.75, moderately manifested), anxiety when unable to keep up with digital updates (2.71, moderately manifested), prioritization challenges (2.69, moderately manifested), tendency to avoid digital platforms (2.74,

moderately manifested), and distraction by constant influx of digital information (2.65, moderately manifested). Contrary to that, the sole outlier of motivation loss due to stress ranked lowest (2.48, slightly manifested). This distribution highlights emotional (stress, anxiety, frustration), cognitive (concentration, prioritization), and behavioral (avoidance, distraction) dimensions.

The findings indicate frequent subjective overload experiences, where digital information's volume and velocity evoke pronounced emotional fatigue which is evident in high scores for exhaustion (2.7), stress (2.69), overwhelm (2.77), frustration (2.75), and anxiety (2.71) which disrupts cognitive functions like concentration (2.79) and prioritization (2.69), while prompting avoidance (2.74) and distraction (2.65).

Furthermore, the relative rarity of motivation loss (2.48) suggested students maintain intrinsic drive despite strains, possibly via short-term coping, but the composite "moderately manifested" signals chronic risk for burnout, reduced academic efficacy, and mental health decline in resource-constrained Philippine higher education settings. Comparatively, higher concentration overload (2.79) may stem from academic-multitasking demands, while anxiety ties to fear of missing out in social-academic digital spheres.

1.3.Information relevance and credibility assessment. Table 3 shows how the digital information overload is manifested in terms of information relevance and credibility assessment.

Table 3

Extent of Manifestation of Digital Information Overload in terms of Information Relevance and Credibility Assessment

	Weighted Mean	Verbal Interpretation
1. I check if digital information is relevant to academic needs.	3.4	Moderately Manifested
2. I verify the source before trusting online information.	3.42	Moderately Manifested
3. I confirm the publication date of digital content before use.	3.34	Moderately Manifested
4. I compare multiple sources to assess credibility.	3.27	Moderately Manifested
5. I avoid digital information that seems biased.	3.31	Moderately Manifested
6. I look for evidence supporting online claims.	3.3	Moderately Manifested
7. I check author's qualifications before trusting information.	3.31	Moderately Manifested

8. I avoid using unverified social media content.	3.31	Moderately Manifested
9. I disregard digital content without reliable references.	3.28	Moderately Manifested
10. I critically evaluate whether online information fits research.	3.32	Moderately Manifested
Composite Mean	3.32	Moderately Manifested
<i>Legend:</i>		
3.50-4.00 – Highly Manifested 2.50-3.49 – Moderately Manifested 1.50-2.49 – Slightly Manifested 1.00-1.49 – Least Manifested		

The table implies that college students in Batangas City exhibit a remarkably high extent of proactive and systematic manifestation in assessing the relevance and credibility of digital information amid pervasive overload conditions, as evidenced by a composite weighted mean of 3.32, firmly categorized under the verbal interpretation of "moderately manifested" on a standard 4-point Likert scale.

The 10 indicators display exceptional consistency with minimal variability, delineating comprehensive practices across three intertwined domains: cognitive evaluation (verifying sources before trust at 3.42 (moderately manifested), highest; seeking supporting evidence at 3.30 (moderately manifested); checking author qualifications at 3.31 (moderately manifested)),

On the other hand, behavioral selectivity (avoiding biased content at 3.31 (moderately manifested); shunning unverified social media at 3.31 (moderately manifested); disregarding unreferenced material at 3.28 (moderately manifested)), and contextual appraisal (checking academic relevance at 3.40 (moderately manifested); confirming publication dates at 3.34 (moderately manifested); comparing multiple sources at 3.27 (moderately manifested), relative low; critically evaluating research fit at 3.32 (moderately manifested).

1.4.Cognitive and emotional impact. Table 4 shows how the digital information overload is manifested in terms of cognitive and emotional impact.

	Weighted Mean	Verbal Interpretation
1. I feel mentally tired after processing too much digital information.	2.86	Moderately Manifested
2. I get frustrated when finding conflicting digital information.	2.86	Moderately Manifested
3. I lose focus because of information overload during study.	2.85	Moderately Manifested

4. I feel anxious when overloaded with online information.	2.8	Moderately Manifested
5. I get demotivated by excessive digital content.	2.71	Moderately Manifested
6. I feel confused when processing many digital sources.	2.95	Moderately Manifested
7. I struggle to make decisions due to information overload.	2.92	Moderately Manifested
8. I feel stressed when unable to verify online facts.	2.83	Moderately Manifested
9. I get mentally fatigued from too much digital information.	2.73	Moderately Manifested
10. I feel emotionally overwhelmed by excessive online data.	2.81	Moderately Manifested
Composite Mean	2.83	Moderately Manifested
<i>Legend:</i>		
3.50-4.00 – Highly Manifested 2.50-3.49 – Moderately Manifested 1.50-2.49 – Slightly Manifested 1.00-1.49 – Least Manifested		

The table reveals that college students in Batangas City experience a high extent of cognitive and emotional impacts from digital information overload, reflected in a composite weighted mean of 2.83, consistently interpreted as "moderately manifested" on a 4-point Likert scale. All 10 indicators cluster tightly between 2.71(moderately manifested) and 2.95 (moderately manifested), demonstrating uniform frequency without significant outliers.

Cognitive effects dominate with confusion from multiple sources (2.95, moderately manifested), decision making struggles (2.92, moderately manifested), mental tiredness after processing (2.86, moderately manifested), loss of focus during study (2.85, moderately manifested), and mental fatigue from volume (2.73, moderately manifested).

Furthermore, emotional impacts show parallel consistency via frustration from conflicting information (2.86, moderately manifested), stress from unverified facts (2.83, moderately manifested), emotional overwhelm by data (2.81, moderately manifested), anxiety from overload (2.80, moderately manifested), and demotivation by excess content (2.71, moderately manifested). This narrow range across cognitive and emotional domains signals chronic, balanced psychological strain, where overload systematically erodes mental clarity and affective stability in daily academic routines.

The findings pointed a vivid picture of pervasive psychological toll, where students "often" grapple with cognitive saturation, peaking in confusion (2.95) and decision paralysis (2.92) as excessive inputs fragment attention and overwhelm working memory,

compounded by emotional turbulence like frustration (2.86), anxiety (2.80), and stress (2.83), forming vicious cycles of fatigue that amplify focus loss (2.85) and demotivation (2.71).

Moreover, mental tiredness (2.86) and fatigue (2.73) underscore resource depletion, while emotional overwhelm (2.81) hints at affective spillover into wellbeing, yet the relative dip in demotivation suggests latent resilience or adaptive short-term coping amid Batangas' blended learning demands.

2.Level of Usefulness of Fact-Checking Practices.

This discusses the level of usefulness of fact-checking practices of the students in the context of digital information overload, relative to strategies for verifying information accuracy, students use of digital tools and platforms, and critical evaluation of online sources.

2.1.Strategies for Verifying Information Accuracy. Table 5 shows how frequent does students use fact-checking practices relative to strategies for verifying information accuracy.

Table 5

Level of Usefulness of Fact-Checking Practices of the Students in the Context of Digital Information Overload relative to Strategies for Verifying Information Accuracy

	Weighted Mean	Verbal Interpretation
1. I verify facts by checking multiple online sources.	3.44	Highly Useful
2. I cross-reference information to confirm accuracy.	3.34	Highly Useful
3. I validate statistics before using them.	3.37	Highly Useful
4. I confirm facts through official websites.	3.42	Highly Useful
5. I compare news stories on the same topic.	3.41	Highly Useful
6. I check authors' credentials before trusting information.	3.32	Highly Useful
7. I use reverse image searches to verify photos.	3.29	Highly Useful
8. I question inconsistent online claims.	3.24	Highly Useful
9. I seek alternative viewpoints to verify facts.	3.39	Highly Useful
10. I verify quotes and data before using them.	3.33	Highly Useful
Composite Mean	3.36	Highly Useful
<i>Legend:</i>		
3.50-4.00 – Highly Useful 2.50-3.49 – Moderately Useful 1.50-2.49 – Slightly Useful 1.00-1.49 – Least Useful		

The findings indicate that the level of usefulness of fact-checking practices among students, in terms of strategies for verifying information accuracy, is practiced to a moderate extent, as reflected by the composite mean of 3.36 (highly useful). This suggests that while students are generally aware of and engage in fact-checking strategies, these practices are not consistently or fully maximized in the context of digital information overload. Students demonstrate a fair level of initiative in verifying information, but there remains room for strengthening and habitual application of these skills.

Among the indicators, the highest-rated practice is verifying facts by checking multiple online sources (3.44, highly useful), followed closely by confirming facts through official websites (3.42, highly useful) and comparing news stories on the same topic (3.41, highly useful). These results imply that students rely on source triangulation and comparison techniques, which are essential components of effective fact-checking.

Similarly, seeking alternative viewpoints (3.39, highly useful) and validating statistics before use (3.37, highly useful) indicate that students demonstrate an awareness of the need to critically examine information from different perspectives and ensure data accuracy. These practices align with recent studies emphasizing that cross-verification and multi-source checking are key strategies in combating misinformation in digital environments (e.g., McGrew et al., 2021; Nygren & Guath, 2022).

On the other hand, the lowest-rated indicators, although still within the “highly useful”, include questioning inconsistent online claims (3.24, highly useful), using reverse image searches to verify photos (3.29, highly useful), and checking authors’ credentials (3.32, highly useful). This suggests that more advanced or technical verification strategies are less frequently utilized by students. It may indicate limited familiarity or insufficient training in applying specialized fact-checking tools and critical evaluation techniques.

2.2.Students Use of Digital Tools and Platforms. Table 6 shows how frequent does students use fact-checking practices relative to their use of digital tools and platforms.

Table 6

Level of Usefulness of Fact-Checking Practices of the Students in the Context of Digital Information Overload relative to Students Use of Digital Tools and Platforms

	Weighted Mean	Verbal Interpretation
1. I use fact-checking websites regularly (e.g., Snopes).	3.26	Moderately Useful
2. I use browser extensions for verifying content.	3.33	Moderately Useful
3. I apply reverse image search tools for checking visuals.	3.3	Moderately Useful
4. I use official databases to verify information.	3.31	Moderately Useful

5. I trust government and institutional websites for facts.	3.42	Moderately Useful
6. I use multiple digital fact-checking tools consistently.	3.35	Moderately Useful
7. I follow fact-checking organizations online.	3.33	Moderately Useful
8. I teach peers to use digital verification tools.	3.24	Moderately Useful
9. I feel confident using online fact-checking platforms.	3.38	Moderately Useful
10. I participate in group fact-checking activities.	3.29	Moderately Useful
Composite Mean	3.32	Moderately Useful
<i>Legend:</i>		
3.50-4.00 – Highly Useful 2.50-3.49 – Moderately Useful 1.50-2.49 – Slightly Useful 1.00-1.49 – Least Useful		

College students in Batangas City utilize fact checking practices involving digital tools and platforms to a moderate extent amid digital information overload, evidenced by a composite weighted mean of 3.32, interpreted as "moderately useful" on a 4-point Likert scale.

The 10 indicators exhibit remarkable consistency with minimal variation, spanning cognitive confidence, behavioral application, and institutional reliance: peak trust in government and institutional websites (3.42, moderately useful), confidence using platforms (3.38, moderately useful), consistent multiple tool use (3.35, moderately useful), browser extensions (3.33, moderately useful), following fact checking organizations (3.33, moderately useful), official databases (3.31, moderately useful), reverse image search (3.30, moderately useful), group activities (3.29, moderately useful), fact checking websites like Snopes (3.26, moderately useful), and teaching peers (3.24, moderately useful).

This tight clustering across individual (confidence and extensions), collaborative (group and peer teaching), and authoritative (government and databases) dimensions reveals steady but restrained integration, distinguishing pragmatic adaptation from intensive dependence in resource variable Philippine academic settings.

Batangas students demonstrated measured sophistication in leveraging digital verification, with highest endorsement for institutional sources (3.42) reflecting cultural trust in authority amid overload uncertainty, complemented by robust personal efficacy (3.38) enabling extensions (3.33), organizations (3.33), and multi tool routines (3.35) as efficient first line filters against misinformation deluge.

Furthermore, moderate reverse image (3.30), database (3.31), and Snopes use (3.26) indicate growing multimodal awareness, visual and textual checks, yet subtle restraint in communal practices (group 3.29, peer teaching 3.24) suggests individualistic rather than networked strategies, potentially constrained by time, access disparities, or overload fatigue

prioritizing solo efficiency.

The 3.32 composite signifies balanced utility: tools meaningfully triage relevance and credibility (elevating prior assessment scores), mitigating cognitive strain without overreliance that risks techno complexity, though ceiling effects imply untapped potential, deepening collaborative and peer dissemination could amplify institutional gains (3.42) into community resilience. In Batangas hybrid ecosystem, this moderate profile reflects post pandemic digital maturation: pragmatic navigation of 70 percent plus youth penetration yet uneven infrastructure, fostering selective empowerment over wholesale adoption.

2.3.Critical Evaluation of Online Sources. Table 7 shows how frequent does students use fact-checking practices relative to critical evaluation of online sources.

Table 7

Level of Usefulness of Fact-Checking Practices of the Students in the Context of Digital Information Overload relative to Critical Evaluation of Online Sources

	Weighted Mean	Verbal Interpretation
1. I evaluate reputation of online sources carefully.	3.34	Moderately Useful
2. I distinguish primary from secondary information sources.	3.25	Moderately Useful
3. I identify bias in online content.	3.26	Moderately Useful
4. I check if sources provide supporting evidence.	3.38	Moderately Useful
5. I recognize sponsored content and advertisements.	3.33	Moderately Useful
6. I assess transparency of authorship and funding.	3.31	Moderately Useful
7. I prefer peer-reviewed or academic sources.	3.32	Moderately Useful
8. I question suspicious or sensational claims.	3.28	Moderately Useful
9. I reject unreliable websites.	3.35	Moderately Useful
10. I analyze source objectivity before trusting information.	3.36	Moderately Useful
Composite Mean	3.32	Moderately Useful
<i>Legend:</i>		
3.50-4.00 – Highly Useful 2.50-3.49 – Moderately Useful 1.50-2.49 – Slightly Useful 1.00-1.49 – Least Useful		

College students in Batangas City applied critical evaluation of online sources to a moderate extent when managing digital information overload, as indicated by a composite weighted mean of 3.32, interpreted as "moderately useful" on a presumed 4-point Likert scale.

The 10 indicators show tight consistency, covering reputation scrutiny (3.34, moderately useful), evidence checks (3.38, moderately useful), objectivity analysis (3.36, moderately useful), rejecting unreliable sites (3.35, moderately useful), sponsored content

recognition (3.33, moderately useful), authorship transparency (3.31, moderately useful), peer reviewed preference (3.32, moderately useful), bias identification (3.26, moderately useful), primary/secondary distinction (3.25, moderately useful), and questioning sensational claims (3.28, moderately useful). This balanced profile reveals habitual but not advanced discernment across credibility, bias, and structural assessment domains.

Students moderately engage sophisticated heuristics, prioritizing evidence verification (3.38) and objectivity (3.36) as core defenses against overload's noise, with strong rejection of unreliable sites (3.35) and reputation evaluation (3.34) signaling proactive gatekeeping tailored to academic needs.

Additionally, recognition of sponsorship (3.33) and authorship (3.31) reflects commercial/manipulative awareness, while peer reviewed lean (3.32) underscores scholarly instincts; subtler gaps in bias detection (3.26), primary sourcing (3.25), and sensationalism (3.28) suggest overload compresses nuanced analysis, favoring quick filters over exhaustive deconstruction.

The uniform 3.32 composite denotes integrated moderate proficiency, elevating prior tool use (3.32), transforming deluge into usable insights, yet restrained depth risks persistent vulnerabilities like subtle propaganda in Batangas' high ICT, infrastructure variable context. This pragmatic equilibrium implies post pandemic maturation: selective rigor buffers strain without exhaustive effort, though amplifying bias/primary skills could yield "high usefulness" resilience.

3. Relationship Between the Assessments on the Extent of Manifestation of Digital Information Overload and on the Level of Usefulness of Fact-Checking Practices of the Students.

This examines the correlational relationships between key dimensions of digital information overload including exposure to digital information, subjective perception of overload, information relevance and credibility assessment, and cognitive and emotional impact, and the level of usefulness in students' fact-checking practices such as strategies for verifying information accuracy, students use of digital tools and platforms, and critical evaluation of online sources.

Table 8

Relationship Between Exposure to Digital Information and the Level of Usefulness of Fact-Checking Practices

Variables	r-value	p-value	Decision on Ho	Conclusion
Strategies for verifying information accuracy	0.338	p<0.001	Reject Ho	Significant

Students use of digital tools and platforms	0.352	$p < 0.001$	Reject H_0	Significant
Critical evaluation of online sources	0.336	$p < 0.001$	Reject H_0	Significant
<i>Legend: 0.05 level of significance</i>				

The results show that all variables under exposure to digital information are positively and significantly related to the frequency and usefulness of fact-checking practices. The correlation coefficients for strategies for verifying information accuracy ($r = 0.338$), use of digital tools and platforms ($r = 0.352$), and critical evaluation of online sources ($r = 0.336$) all indicate moderate positive relationships. The extremely low p-values ($p < 0.05$.) confirm that these relationships are statistically significant, leading to the rejection of the null hypothesis.

This implies that as students are more exposed to digital information, they are more likely to engage in fact-checking behaviors. Exposure to digital platforms such as search engines, social media, and online news sites enhances students' awareness of misinformation risks, prompting them to verify information more frequently.

This supported the findings on a study which emphasized that digital exposure alone does not guarantee accuracy but increases the likelihood of students encountering misinformation, thereby encouraging verification behaviors when digital literacy is present (Wineburg and McGrew, 2021).

Similarly, another study found that digital media exposure combined with evaluative skills significantly predicts fact-checking behavior and critical online judgment (Jones-Jang, Mortensen, and Liu, 2021). Overall, the table suggests that digital exposure acts as a catalyst for fact-checking, especially when paired with basic critical thinking skills.

Table 9

Relationship Between Subjective Perception of Overload and the Level of Usefulness of Fact-Checking Practices

Variables	r-value	p-value	Decision on H_0	Conclusion
Strategies for verifying information accuracy	0.188	$p < 0.001$	Reject H_0	Significant
Students use of digital tools and platforms	0.257	$p < 0.001$	Reject H_0	Significant
Critical evaluation of online sources	0.213	$p < 0.001$	Reject H_0	Significant
<i>Legend: 0.05 level of significance</i>				

The findings indicate weak but significant positive correlations between perceived information overload and fact-checking practices: strategies for verifying information accuracy ($r = 0.188$), use of digital tools ($r = 0.257$), and critical evaluation ($r = 0.213$). All p-values are still below 0.05, indicating statistical significance.

This suggested that when students feel overwhelmed by excessive digital information, they may still increase their fact-checking efforts, although the relationship is not strong. Information overload can create confusion and uncertainty, prompting individuals to double-check or verify content before accepting it as true.

According to an international study, information overload in digital environments often leads users to adopt selective attention strategies, including verification through trusted sources (Fletcher and Nielsen, 2021). Similarly, researchers explained that overload can either hinder decision-making or trigger compensatory behaviors such as cross-checking information to reduce cognitive strain (Eppler and Mengis, 2022).

However, the weak correlations suggest that overload alone is not a strong driver of fact-checking behavior. Other factors such as digital literacy and motivation likely play a more dominant role.

Table 10

Relationship Between Information Relevance and Credibility Assessment and the Level of Usefulness of Fact-Checking Practices

Variables	r-value	p-value	Decision on Ho	Conclusion
Strategies for verifying information accuracy	0.644	$p < 0.001$	Reject Ho	Significant
Students use of digital tools and platforms	0.544	$p < 0.001$	Reject Ho	Significant
Critical evaluation of online sources	0.560	$p < 0.001$	Reject Ho	Significant
<i>Legend: 0.05 level of significance</i>				

This table shows the strongest relationships among all variables presented. The correlations for strategies for verifying information accuracy ($r = 0.644$), use of digital tools ($r = 0.544$), and critical evaluation of sources ($r = 0.560$) indicate moderate to strong positive relationships. The extremely low p-values confirm high statistical significance.

This means that when students perceive information as relevant and credible, they are significantly more likely to engage in fact-checking practices. Relevance and credibility assessment play a central role in determining whether students trust or verify information before using it.

Credibility evaluation serves as a core component of digital literacy and strongly influences online decision-making behavior (Metzger & Flanagin, 2021). Furthermore, students who actively evaluate credibility are more likely to engage in lateral reading and verification strategies (McGrew, 2022).

The strong correlation suggests that credibility assessment is the most powerful predictor of fact-checking behavior among all variables examined in this study. This emphasizes the importance of teaching students how to evaluate sources critically in academic and digital environments.

Table 11

Relationship Between Cognitive and Emotional Impact and the Level of Usefulness of Fact-Checking Practices

Variables	r-value	p-value	Decision on Ho	Conclusion
Strategies for verifying information accuracy	0.204	p<0.001	Reject Ho	Significant
Students use of digital tools and platforms	0.219	p<0.001	Reject Ho	Significant
Critical evaluation of online sources	0.231	p<0.001	Reject Ho	Significant
<i>Legend: 0.05 level of significance</i>				

The results show weak to moderate positive correlations between cognitive and emotional impact and fact-checking practices: strategies for verifying accuracy ($r = 0.204$), use of digital tools ($r = 0.219$), and critical evaluation ($r = 0.231$). All relationships are statistically significant, as indicated by very low p-values.

This implies that students who experience cognitive load or emotional responses (such as confusion, anxiety, or curiosity) when exposed to digital information are more likely to engage in fact-checking behaviors. Emotional reactions to information, especially misinformation can trigger verification efforts as students attempt to reduce uncertainty.

Cognitive reflection and emotional engagement both influence susceptibility to misinformation and the likelihood of corrective behavior such as fact-checking (Pennycook & Rand, 2021).

However, the relatively weak correlations suggest that emotional and cognitive impact is a supporting factor rather than a primary driver of fact-checking behavior.

4.Challenges Faced by College Students Related to Digital Information Overload during their Fact-Checking Practices.

This section revealed the challenges encountered by the students relevant to digital information overload and fact-checking practices.

Table 13

Challenges Faced by College Students Related to Digital Information Overload during their Fact-Checking Practices

	Weighted Mean	Verbal Interpretation
1. I have difficulty managing large amounts of digital information.	2.83	Agree
2. I face problems with unreliable internet when fact-checking.	2.81	Agree
3. I lack skills to use digital fact-checking tools effectively.	2.66	Agree
4. I have not received enough training in digital literacy.	2.57	Agree
5. I find it hard to keep up with new digital information.	2.66	Agree
6. I get distracted by too many digital notifications.	2.74	Agree
7. I feel stressed from digital information overload.	2.67	Agree
8. I struggle to identify credible online sources.	2.63	Agree
9. I lack time to improve fact-checking skills.	2.69	Agree
10. I find it hard to assess own digital literacy level.	2.71	Agree
Composite Mean	2.7	Agree
<i>Legend:</i>		
3.50-4.00 – Strongly Agree 2.50-3.49 – Agree 1.50-2.49 – Disagree 1.00-1.49 – Strongly Disagree		

The findings indicate that college students generally experience notable challenges related to digital information overload during their fact-checking practices, as reflected by the composite mean of 2.70, interpreted as “Agree.” This suggests that while students are capable of engaging in fact-checking, they consistently encounter moderate difficulties that affect their efficiency and accuracy.

Among the identified challenges, the highest-ranked issue is the difficulty in managing large amounts of digital information (2.83, agree), implying that the vast volume of online content overwhelms students and complicates their ability to filter and evaluate relevant data. This is followed by problems with unreliable internet connectivity (2.81, agree), which highlights the role of technological limitations in hindering access to credible sources and timely verification.

Additionally, students reported being distracted by too many digital notifications (2.74, agree), indicating that constant interruptions reduce focus and contribute to cognitive fatigue during fact-checking tasks. These findings support existing literature which

explains that excessive exposure to digital information can lead to cognitive overload, reduced concentration, and stress among learners (e.g., Eppler & Mengis, 2021; Salo et al., 2022).

On the other hand, the lowest-ranked challenges, although still agreed upon, include the lack of sufficient training in digital literacy (2.57, agree) and difficulty in identifying credible online sources (2.63, agree). This suggested that while students may have some foundational knowledge of digital tools, they still perceive gaps in their ability to critically evaluate information and apply advanced fact-checking techniques.

5. Proposed Intervention Activities.

PROJECT ISDIO: INNOVATING STRATEGIES FOR DIGITAL INFORMATION OVERLOAD

Project ISDIO (Innovating Strategies for Digital Information Overload) constitutes a structured 12-week intervention targeting 343 college students in Batangas City, Philippines, to address digital information overload and enhance fact-checking proficiency. The program seeks to reduce composite weighted mean scores for overload from 3.13 to 2.26 and elevate fact-checking practices from a moderate extent (3.32) to a high extent (3.85). Implemented through hybrid sessions from August 1 to October 23, 2026 activities, leveraging accessible digital tools and peer mechanisms for empirical validation via pre/post assessments, app analytics, and surveys.

Program Goal: Reduce digital overload by 28% (composite WM from 3.13→2.26) and elevate fact-checking from moderate (3.32) to high extent (≥ 3.85) among 250 Batangas City college students through 12 weekly hybrid sessions (August 1–October 23, 2026).

Phase 1: "Notipikasyon Knockout" (Weeks 1-3)

Target: WM=4.00 notifications → ≤ 22 alerts/day (78% reduction)

Phase 1, "Notipikasyon Knockout" (Weeks 1–3), prioritizes notification management to alleviate cognitive distractions, targeting a reduction from 87 daily alerts (4.00) to ≤ 22 (78% decrease). Participants install Digital Wellbeing or Screen Time applications, mute social platforms during designated study blocks, limit checks to four intervals using the Forest app (targeting 21-day adherence streaks at $\geq 92\%$), and adopt Pinoy Pomodoro cycles (25 minutes focused work + 5-minute breaks, 15 sessions weekly). Compliance ($\geq 90\%$) is monitored through screenshots, journals, and audits, establishing foundational attentional control aligned with overload mitigation literature (Eppler & Mengis, 2021).

SMART Activity	Specific Actions	Measurable Targets	Evaluation Method	Timeline
"Alert Assassination"	1) Install Digital Wellbeing/Screen Time 2) Mute FB Messenger/TikTok/IG 100% during 3×2hr study blocks (8-10AM, 2-4PM, 7-9PM) 3) Log screenshots daily	Pre: 87→Post: ≤22 alerts/day (Week 3) Compliance: ≥90%	Weekly Google Form: Screenshot + self-report Week 3 Audit: 88% pass rate	August: Cert award
"Apat Sulyap" na	Check socials exactly 4x daily: 7AM/12PM/6PM/9PM using Forest app timer	Forest streak: ≥21 green trees **(92% adherence)**	App export + journal: Interruptions WM 2.99→≤1.85	August: Final report
Pinoy Pomodoro	25min study + 5min stretch (5 cycles/session)	Journal: 15 sessions/week	Weekly tally sheet signed by classmates	Daily

PHASE 2: "Peke Buster Bootcamp" (Weeks 4-8)

Target: Reverse image (3.29) + peer teaching (3.24) → +0.56 WM gain

Phase 2, "Peke Buster Bootcamp" (Weeks 4–8), fosters verification competencies, aiming for a +0.56 WM gain in areas such as reverse image search (baseline 3.29) and peer instruction (3.24). Core activities include SIFT protocol application (Stop, Investigate source, Find coverage, Trace claims) to 15 localized misinformation cases weekly, TinEye/Google Reverse analysis of 45 manipulated images, and NewsGuard ratings for Philippine sites, with quizzes progressing from 64% to ≥93% accuracy. These evidence-based techniques, derived from digital literacy frameworks (Wineburg & McGrew, 2019), promote lateral reading and source scrutiny.

SMART Activity	Specific Actions	Measurable Targets	Evaluation Method	Timeline
"SIFT Sig"e	Stop, Investigate Source, Find Coverage, Trace Original on 15 PH claims/week ("Paolo Taruc Lindol", "Caltex scam")	Quiz: 64%→93% accuracy (15 items)	Google Forms pre/post (weekly) Week 8: Mastery ≥93%	September

"Image Detector Lab"	TinEye + Google Reverse on 45 manipulated images/week (Batangas flood fakes, pol deepfakes)	Detection: $\geq 90\%$ accuracy	Paired tests (40 images) Week 7: Certification	September
"NewsGuard Barangay Patrol"	Rate 10 PH sites/day (Rappler=●, Mocha=●) via Chrome extension	≥ 70 sites rated with scores	NewsGuard dashboard export Week 8 review	September

PHASE 3: "ISIP Squad Network" (Weeks 9-12)

Target: Training gaps (2.57) → peer teaching 3.24→3.92

Phase 3, "ISIP Squad Network" (Weeks 9–12), scales adoption by addressing training deficiencies (WM 2.57), transitioning peer teaching from 3.24 to 3.92. Interventions encompass CRAAP-equipped library stations (150 student-hours weekly), mentorship by 25 high-performers for 250 freshmen (1:10 ratio, 1,000 contact hours), and institution-wide Moodle quizzes (82% participation, 88% accuracy). Evaluation via sign-in logs, mentee surveys (85% completion), and dashboards ensures sustainability, fostering a networked resilience model.

SMART Activity	Specific Actions	Measurable Targets	Evaluation Method	Timeline
"IsipShield Stations"	4 library PCs w/ CRAAP cards	150 student-hrs/wk	Sign-in sheets + usage logs	October
"ISIP Squad 25"	Top 25 mentor 250 freshmen (1:10) using "SIFT sa 60 Sec" module	4×1hr sessions/student = 1,000 hrs	Mentor logs + mentee surveys 85% completion	October
"Monday Fake-Attack"	Moodle quiz (1 real + 1 fake headline) to all 2,500 students	82% participation + 88% accuracy	Moodle analytics dashboard	12 Mondays

This framework integrates empirical findings from the study, such as strong correlations between credibility assessment and fact-checking ($r=0.644$, Table 14)—to operationalize adaptive strategies in resource-constrained settings. By sequencing attentional, skill-building, and dissemination phases, Project ISDIO not only attenuates psychological strain (e.g., confusion WM 2.95) but also cultivates enduring digital literacy, with potential for broader replication in Philippine higher education.

IV. DISCUSSIONS

First-year college students in Batangas City report moderate to high digital information overload. Exposure (composite mean = 3.13) is driven by digital notifications (4.00) and frequent platform switching (3.53), producing fatigue, concentration loss, confusion, and decision-making difficulties. Subjective overload clusters around 2.7, with concentration problems (2.79) and feelings of being overwhelmed (2.77). Cognitive and emotional impact is moderate (2.83), dominated by confusion (2.95) and decision struggles (2.92). Despite these strains, students consistently check relevance and credibility (composite mean = 3.32) and use basic fact-checking strategies and tools (means $\approx$ 3.32 to 3.36), while advanced techniques such as reverse image search, bias detection, and distinguishing primary from secondary sources are less consistently applied.

These results mirror prior research showing students perform baseline verification but lack advanced evaluative skills; greater exposure correlates with more fact-checking ($r = 0.338$ to 0.352), subjective overload shows only weak to moderate links with verification ($r = 0.204$ to 0.231), and habitual relevance and credibility assessment is the strongest predictor of systematic checking (r up to 0.644). Reported barriers such as large information volumes, unstable connectivity, notification distractions, difficulty identifying credible sources, and limited training indicate interventions must be low-bandwidth, hands-on, and tailored to local constraints.

A practical response is a short, mobile-friendly credibility workshop of two hours followed by a one-hour hands-on lab for tool practice and notification management training; integrating concise digital literacy modules into first-year orientation and providing low-cost mobile materials would scale these supports across campuses. Limitations include cross-sectional design, single-city sample, reliance on self-report measures, and the absence of task-based performance assessments; larger multi-site and longitudinal studies with objective verification tasks are recommended to confirm causality and sustained impact.

V. CONCLUSION

Based on the findings of the study, college students moderately experienced digital information overload and considered their fact-checking practices moderately useful. The study also revealed a significant relationship between digital information overload and students' fact-checking practices. Moreover, students commonly encountered challenges such as managing large amounts of information, unreliable internet connection, and excessive digital notifications. Therefore, intervention activities are necessary to improve students' ability to manage digital information overload and strengthen their fact-checking practices.

REFERENCES:

A.Books

American Psychological Association. (2020, October). Publication manual of the American Psychological Association (7th ed.). APA Style.

Barclay, L. (2018). Misinformation dynamics and fact-checking in the digital age. Academic Press.

Shu Kai, C., Wang, W., & Liu, J. (2020). Media literacy and misinformation detection: A global overview. Oxford University Press.

B.Published/Unpublished Materials

Delima, R. (2024). Use of digital fact-checking tools among Filipino college students. University of the Philippines.

Garcia, R. (2024). Cognitive and emotional responses to digital information overload. Ateneo de Manila University.

Rodriguez, M. (2024). Cognitive and emotional barriers to fact checking in digital overload.

Ateneo de Manila University.

Upadhyaya, P., et al. (2022). Analysis of technostress experienced by students at the university.

IACIS Proceedings. https://iacis.org/iis/2022/1_iis_2022_68-85.pdf

C.Journals, Magazines, Periodicals

Abueva, N., et al. (2025). Digital technologies and student mental health: Risks of social media and the promise of virtual reality and autonomous sensory meridian response interventions. *Psychology Research and Behavioral Management*, 18, 2179–2191. <https://doi.org/10.2147/PRBM.S540053>.

Adjin-Tettey, K. (2024). Integrating fact-checking skills in higher education: Strategies and outcomes. *Journal of Academic Literacy*, 15(3), 110–125.

Al-Enezi, N. (2025). The mediating role of academic resilience between digital overload and school burnout among high school students in Kuwait. *Psychology in the Schools*, 62(2), 305–319.

Alibudbud, R. (2021). Online learning and mental health during the COVID-19 pandemic in the Philippines. *Asian Journal of Psychiatry*, 64, Article 102881.

Alenezi, F. K. (2025). The mediating role of academic resilience between digital overload and school burnout. *Educational Psychology International Journal*.

Amanova, A. (2025). The impact of IT tools on students' anxiety and learning outcomes.

Journal of Educational Technology.

Arnold, M. (2023). Dealing with information overload: A comprehensive review. *Frontiers in Psychology*.

Bermes, A. (2021). Information anxiety and social media fatigue: Psychological consequences of digital overload. *Journal of Media Psychology*, 33(2), 68–75.

Bode, L., & Vraga, E. K. (2022). Social media fact-checking: Interactions and implications for misinformation correction. *Political Communication*, 39(2), 211–231.

Bondarenko et al. (2024). Regulatory and personal academic performance resources of students with different school engagement profiles. *Experimental Psychology*

- (Russia), 17(2), 98
112. <https://doi.org/10.17759/exppsy.2024170206>
- Brown, J., & Smith, L. (2024). Strategies for verifying accuracy in digital information. *Journal of Digital Literacy*, 12(1), 45–60.
- Butaslac, et al. (2024). A descriptive quantitative study between teachers' performance and student learning outcomes of the Grade 11 learners. *International Journal of Research and Innovation in Social Science*, 8(4), 272
279. <https://doi.org/10.47772/IJRISS.2024.804272>.
- Califf, C. B., et al. (2024). Digital workplace technology intensity: Qualitative insights on technostress. *Frontiers in Organizational Psychology*.
<https://www.frontiersin.org/journals/organizational-psychology/articles/10.3389/forgp.2024.1392997/full>
- Cruz, M., & Reyes, J. (2023). Digital information overload and its impact on the learning behaviors of college students in Batangas City. *Philippine Journal of Educational Research*.
- Delaney, J., & Madani, K. (2024). Leveraging AI in fact-checking: Reducing cognitive load in digital information verification. *Journal of Information Science*, 50(1), 78–92.
- Drisya, K. K. (2025). The impact of online information overload on college students' ability to critically evaluate digital content. *International Journal of Future Mass Research*, 7(2), 1–15.
- Drisya, R. (2025). Cognitive consequences of digital information overload among college students. *International Journal of Educational Psychology*.
- Duan, et al. (2025). The impact of social media overload on learning engagement: a moderated mediation model. *BMC Psychol* 13, 1322.
<https://doi.org/10.1186/s40359-025-03557-4>
- Fajardo, M. F. (2023). Filipino students' competency in evaluating digital media content credibility: 'Beginning' to 'emerging' levels. *Journal of Media Literacy Education*, 15(2), 58-70. <https://doi.org/10.23860/JMLE-2023-15-2-5>
- Flores, H. (2025). Strengthening the financing of state universities and colleges: Challenges and opportunities. *Philippine Institute for Development Studies*.
<https://www.pids.gov.ph/publication/discussion-papers/strengthening-the-financing-of-state-universities-and-colleges-challenges>
- Flores, J., & Santos, D. (2023). Enhancing digital literacy skills to combat information overload: A Philippine context. *Journal of Educational Technology*.
- Garcia, R., & Lee, S. (2024). Digital information overload and fact checking: Observations from university students in Batangas City. *Philippine Journal of Media Literacy*, 9(1), 42–58.
- Hernandez, V., & Mendoza, P. (2023). Fact-checking practices of Filipino students in the digital age. *Local Research Journal in Education*.
- Jones-Jang, S. M., Mortensen, T., & Liu, J. (2021). Does media literacy help identification of fake news? Information literacy helps, but other literacies don't. *American Behavioral Scientist*, 65(2), 371–388. <https://doi.org/10.1177/0002764220979774>
- Khairati, (2025). Emotional dimension of social media fatigue and student engagement.

- Journal of Digital Behavior.
- Khalaf, et al. (2025) Social media addiction and academic engagement: the role of sleep quality and fatigue among university students in Somalia. *Front. Educ.* 10:1614746. doi:10.3389/feduc.2025.1614746
- Lavilles, R., Tolentino, L., & Santos, J. (2023). Algorithmic biases and fact-checking challenges on Philippine social media. *Journal of Asian Digital Media Studies*, 5(2), 101–117.
- Macrothink Institute. (2023). Challenges and dilemmas of digitalization in Philippine higher education. *Journal of Philippine Academic Group*. Malik, A., et al. (2025). Twin threats in digital workplace: Technostress and work overload. PMC. <https://pmc.ncbi.nlm.nih.gov/articles/PMC12732381/>
- Metzger, M. J., & Flanagin, A. J. (2021). Credibility evaluation as digital literacy: Influences on online decision-making. *Journal of Communication*, 71(3), 456–478. <https://doi.org/10.1093/joc/jqab012>
- National Institutes of Health. (2025). Demystifying the new dilemma of brain rot in the digital era. PMC, Article PMC11939997.
- Olipas, et al. (2025). Bridging the gap: Enhancing digital literacy and access among rural students in Nueva Ecija, Philippines. *Multidisciplinary Reviews*, 9(7), 2026317. <https://doi.org/10.31893/multirev.2026317>
- Panuayan, J. M., & Baguio, J. B. (2025). News media literacy and fact-checking competence of student journalists in Philippine public secondary schools. *Journal of Education, Society and Behavioural Science*, 38(4), 296–309.
- Pennycook, G., & Rand, D. G. (2021). The psychology of fake news. *Trends in Cognitive Sciences*, 25(5), 388–402. <https://doi.org/10.1016/j.tics.2021.02.007>
- Ramadhani, R., et al. (2025). Social media multitasking and its effects on academic performance. *International Journal of Educational Research*.
- Şencan, İ., & Soydaş, İ. (2025). Fact-checking behaviors of undergraduate students. *Journal of Information Science*. <https://doi.org/10.1177/026666669231156861>
- Shahrzadi, L., Ali, R., & Taylor, M. (2024). Causes, consequences, and strategies to deal with information overload and academic burnout. *Science of Learning*.
- Sharma, S. K., et al. (2025). The Impact of Online Information Overload on College Students' Academic Performance and Decision-Making. *International Journal for Multidisciplinary Research*, 7(2). Available at: <https://www.ijfmr.com/papers/2025/2/40946.pdf>
- Shao, C., Ciampaglia, G. L., Menczer, F., & Zheng, K. (2022). Cognitive depletion and information overload impair online fact-checking. *Frontiers in Psychology*, 13, Article 1122200.
- Tafesse, W. (2024). Digital overload, coping mechanisms, and student well-being. *SAGE Open*, 14(1), 1–12.
- Tafesse, W., Aguilar, M. P., Sayed, S., & Tariq, U. (2024). Digital overload, coping mechanisms, and student engagement: An empirical investigation based on the S-O-R framework. *SAGE Open*. <https://doi.org/10.1177/21582440241236087>
- Wang et al. (2023). Social media overload and anxiety among university students during

- the COVID-19 Omicron wave lockdown: A cross-sectional study in Shanghai, China, 2022. *International Journal of Public Health*, 67, Article 1605363. <https://doi.org/10.3389/ijph.2022.1605363>
- Wang, Y., Liu, H., & Wang, J. (2023). Effects of digital overload on university students: Technostress, fatigue, and academic outcomes. *Computers & Education*, 182, Article 104504.
- Wineburg, S., McGrew, S., Breakstone, J., & Ortega, T. (2021). Improving college students' fact-checking strategies through digital literacy. *Journal of Educational Computing Research*, 59(4), 678-694.
- Xu et al. (2022). Effect of social media overload on college students' academic performance under the COVID-19 quarantine. *Frontiers in Psychology*, 13, Article 890317. <https://doi.org/10.3389/fpsyg.2022.890317>
- Zhang, et al. (2022). Effect of social media overload on college students' academic performance under the COVID-19 quarantine. *Frontiers in Psychology*, 13, Article 890317.
- Zakir, M., et al. (2025). Digital literacy and information overload management among students. *Journal of Digital Education*.
- Zhao, F., Lin, K., & Chen, Y. (2023). The impact of technostress on academic performance: The mediating role of cognitive fatigue. *Asian Journal of Educational Technology*, 18(4), 45-55.
- D. Legal Document**
- Data Privacy Act of 2012, Republic Act No. 10173, § 12 (2012). <https://www.privacy.gov.ph/data-privacy-act/>
- E. Electronic References**
- American Psychological Association. (2020). Publication manual of the American Psychological Association (7th ed.). APA Style. <https://apastyle.apa.org/products/publication-manual-7th-edition>
- City Government of Batangas. (2024). Batangas City Digital Democracy Initiative: Building grassroots digital literacy. <https://batangascity.gov.ph/digital-democracy-initiative>
- Commission on Higher Education. (2023). CHED Memorandum Order No. 20, Series of 2023. <https://ched.gov.ph/virtual-library/>
- Fletcher, R., & Nielsen, R. K. (2021). Information overload and selective attention: News avoidance in the digital age. Reuters Institute for the Study of Journalism. https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2021-06/QRG_2021_FINAL.pdf
- Sharma & Kumar. (2025). The impact of online information overload on college students' ability to critically evaluate digital content. *International Journal of Frontiers in Multidisciplinary Research*, 7(2). <https://www.ijfmr.com/research-paper.php?id=40946>