Reality Check: Exposure to Hyper-Realistic AI-Generated Content and Its Relationship on Media Literacy Among Computer Engineering Students of Bulacan State University

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ABSTRACT

Artificial Intelligence (AI) has been developing in several ways that can generate new content, which has an impact on the media industry and the community. This study uses a quantitative research approach, which aims to determine the relationship between levels of exposure to hyper-realistic AI-generated content and levels of media literacy of computer engineering students at Bulacan State University. A total of 40 respondents answered the validated online questionnaire, containing the demographic profile, assessment of AI exposure, and an evaluation of media literacy using Likert scales and a human-AI identification test. The collected data were gathered using frequency distribution, weighted mean, standard deviation, and Spearman's rho correlation at a 0.05 significance level. The results revealed that students often encountered hyper-realistic AI-generated content (overall weighted mean = 4.07). The respondents reported that they often encountered the diversion of AI formats (overall weighted mean = 4.12). The students highly understand the concept of AI-generated content and how to use it in other ways (overall weighted mean = 4.66). They also have a high sense of digital responsibility in determining the authenticated content across social media platforms (overall weighted mean = 4.54). Spearman's rho indicated a weak relationship ($\rho = 0.299$) between exposure to hyper-realistic AI-generated content and media literacy. Their relationship is not statistically significant ($\rho = 0.061$). This research concluded that the digital experiences of the respondents are part of their everyday lives, revealing that they are frequently exposed to AI-generated images, videos, and music. This also fosters the media analytical and technical skills development. The findings revealed that the computer engineering students have a high level of media literacy as they can recognize algorithmic patterns and validate sources effectively.

Keywords: hyper-realistic AI, media literacy, AI-generated content, AI exposure, computer engineering students

INTRODUCTION

Photography projects typically consist of shooting, editing, and conducting post-production work. It requires photographers to have both artistic skill and technical proficiency in image processing (Tang, Z., 2023). However, according to Mesquita et al. (2025), for the past years, the rapid development of Artificial Intelligence (AI) has affected several kinds of artistry and creativity, including photography. Creative AI can now alter photos and videos by creating new content such as text, images, and audio based on existing data (Feuerriegel et al., 2023). Specifically, the exposure to hyper-realistic AI affects how humans interact with this tool in the media industry (Manisha & Acharya, 2023).

Frequent exposure to AI-generated content can have an impact on the media literacy of individuals, given that social media platforms are being the most widespread source of this influence (Tiernan et al., 2023). While people increasingly encounter AI-generated content in mass media, their ability to identify whether the shown information is real may gradually decline, which directly affects a key component of media literacy (Salman & Fayyad, 2025). As AI tools become easier to access and use, they are increasingly employed to manipulate information in misleading, deceiving, and harmful ways, putting public trust at risk (Hussain et al., 2025). To

better understand this phenomenon, Signal Detection Theory (SDT) states that performing decision-making under uncertainty can be quantified as the ability to differentiate a genuine informational stimulus (the signal) and the constant flow of random input (noise). According to Macmillan and Creelman (2005), three key concepts were identified from Signal Detection Theory (SDT) that can be used to evaluate performance: sensitivity (d'), the criterion (β), and the Receiver Operating Characteristic (ROC) curve. These concepts distinguish an individual's true ability to detect a signal from response bias, which refers to the tendency to favor certain responses over others (Green & Swets, 1966). In essence, SDT acts as a bridge between the information coming in ("the input") and the response given ("the output"), allowing for the measurement of accuracy in situations filled with confusing or misleading information. This aspect proved useful for examining how technical students view AI-generated media.

Media literacy is not only a personal skill but also a professional requirement for computer engineering students. Studying this demographic group helps determine whether a technical background actually helps individuals to effectively identify AI-driven misinformation. A study conducted at Laguna University, involving 368 Engineering and Computer Science students, revealed a "Moderate Awareness" of deepfakes among the participants; nevertheless, they were still deeply concerned about the increasing difficulty of differentiating real events from AI-generated ones (Quest Journals - JECER, 2024). Another study involving Filipino students found a "confidence gap," wherein theoretical knowledge of advanced AI concepts does not always translate into practical skills for verifying online information (Labide et al., 2025). This challenge is reinforced by broader research indicating that university students often struggle to identify AI-generated images, despite frequent exposure to AI-generated content on social media (Hao Wu, 2025). This study evaluates the relationship between the level of exposure to hyper-realistic AI-generated content and the media literacy level of Computer Engineering students at Bulacan State University – Main Campus. Specifically, it examines whether students who encounter AI frequently end up developing the ability to identify convincing yet AI-generated digital content.

Objectives of the Study

1. To be able to assess the level of exposure of computer engineering students to hyper-realistic AI-generated content

2. To be able to evaluate the media literacy level of computer engineering students

3. To be able to examine the relationship between the level of exposure to hyper-realistic AI-generated content and the media literacy level of computer engineering students

METHODS

This study used a quantitative research design, focusing on numerical analysis and measurement of data gathered by conducting a survey via Google Forms. This questionnaire includes the demographics of the sample, AI exposure assessments, and the evaluation of their media literacy. The data was gathered using Likert scales and a human-AI identification test.

Research Design

This study used a quantitative, descriptive-correlational design to evaluate the relationship of AI exposure frequency and the level of media literacy.

Participants/Respondents/Subjects

The total population consisted of Computer Engineering students at Bulacan State University Main Campus who are currently enrolled during the 2nd Semester of Academic Year 2025-2026. The sample size included 40 (forty) students, with 10 (ten) students from each year level (1st to 4th year). Before the data collection, the researchers presented informed consent to all of the respondents through the consent section of the online survey.

Instruments

The data are gathered via a validated online questionnaire using Google Forms, which consists of a demographic profile, level of exposure to hyper-realistic generated content, measured using a Likert scale, and level of media literacy.

Procedures

The researchers conducted the survey using an online platform for users' convenient access that was sent to 40 computer engineering students from 4-year levels, 10 students from each year level. After conducting the online survey, the researchers collected the data and verified if the target respondents were reached. Upon verifying, the survey form was closed down to prevent receiving responses, and the data were being tallied and analyzed for data interpretation.

Data Analysis

Descriptive statistics including frequency distribution, weighted mean, standard deviation, and Spearman's rho correlation were employed through the use of SPSS software to summarize responses, measure variability, and identify patterns in the data. The results reflected the respondents' diverse AI format encounters, average level of exposure to AI-generated content, and their level of media literacy.

Ethical Considerations

This study was conducted with respect to ethical research standards. The respondents' identities were protected and a consent for data gathering was obtained. Ensuring confidentiality is an important aspect in this study. Conflicts regarding interest and funding were not disclosed. Lastly, ethical clearance was properly acknowledged.

RESULTS AND DISCUSSION

1. To be able to assess the level of exposure of computer engineering students to hyper-realistic AI-generated content

Table 1. Summary of Frequency of Daily Encounters on Social Media

Questions	Weighted Mean	Interpretation
1. How often do you encounter AI-generated images in sponsored advertisements or promoted content?	4.20	Often
2. How often do you see hyper-realistic AI videos appearing in your public news feeds or global trending topics?	3.88	Often
3. How frequently do you encounter AI-manipulated audio or "voice-overs" in short-form video content (e.g., Reels, TikTok)?	4.53	Very Often
4. How often do you observe AI-generated content being shared within educational or professional contexts?	3.88	Often
5. How often do you notice AI-generated content in non-tech related forums or community groups?	3.88	Often
Overall	4.07	Often

The table 1 shows the frequency of daily encounters of the computer engineering students using the weighted mean. The results presents that computer engineering students at Bulacan State University have often encountered hyper-realistic AI-generated content. The overall weighted mean summary of the frequency of daily encounters on social media of the respondents is often, with a total value of 4.07. The gathered data shows that a high frequency of encounters on general AI-generated content is experienced by the students.

Table 2. Summary of Diversity of AI Formats Encountered

Questions	Weighted Mean	Interpretation
1. I have seen deepfake videos of people saying or doing that look real.	4.15	Often
2. I have seen AI-generated photos that appear realistic.	4.23	Often
3. I have encountered AI-generated news images or videos.	3.98	Often
4. I have encountered AI-generated medical education videos.	4.08	Often
5. I have encountered AI-generated advertisements or promotional content.	4.18	Often
Overall	4.12	Often

Table 2 presents the summary of the diversity of AI formats encountered by computer engineering students. The overall weighted mean results reflect that there is a high weighted mean of 4.12 with an interpretation of Often. The value of the overall mean and the interpretation of the data reflects the high level of exposure of the respondents to different kinds of AI-generated content.

To be able to evaluate the media literacy level of computer engineering students

Table 3. Summary of Technical Awareness of AI-Manipulation Markers

Questions	Weighted Mean	Interpretation
1. I am aware that AI can generate realistic photos, videos, and audio.	4.80	Strongly Agree
2. I know some signs that indicate content may be AI-generated.	4.55	Strongly Agree
3. I can notice unnatural details in photos or videos.	4.35	Strongly Agree
4. I am familiar with the concept of deepfakes.	4.65	Strongly Agree
5. I understand that AI-generated content can be used to mislead people.	4.95	Strongly Agree
Overall	4.66	Strongly Agree

The table interpreted the summary of technical awareness of AI-manipulation of computer engineering students at Bulacan State University. The results show the overall mean of 4.66 that is Strongly Agree reflecting that the respondents have a clear grasp of the concept of AI-generated content and the different ways that it can be used.

Table 4. Summary of Evaluation on AI Formats Encountered

Questions	Weighted Mean	Interpretation
1. I examine videos carefully to determine whether they may be deepfakes or digitally manipulated.	4.45	Strongly Agree
2. I check multiple sources before trusting digital content.	4.30	Strongly Agree
3. I question the authenticity of viral or sensational content.	4.65	Strongly Agree
4. I consider the credibility of the account or page that posted the content.	4.60	Strongly Agree
5. I think critically before sharing content on social media.	4.68	Strongly Agree
Overall	4.54	Strongly Agree

The table illustrates the summary of evaluation on AI formats encountered by the respondents of this study using weighted mean and interpretations. An overall weighted mean is calculated to be 4.54, which reflects the level

of media literacy of the respondents. This results shows that computer engineering students at Bulacan State University are struggling in determining the authentic content on social media platforms.

3. To be able to examine the relationship between the level of exposure to hyper-realistic AI-generated content and the media literacy level of computer engineering students

Table 5. Exposure to Hyper-Realistic AI-Generated Content Score and Media Literacy Score

Variables	Mean	Standard Deviation	Interpretation
Exposure to Hyper-Realistic AI-Generated Content	4.10	0.50	High
Media Literacy	4.10	0.47	High

The table 4.7 presents the results of Exposure to Hyper-Realistic AI-Generated content scores and Media Literacy scores. The overall mean for Exposure to Hyper-Realistic AI-Generated content is 4.10 which is High and indicates that students are frequently exposed to hyper-realistic AI-generated contents across media platforms. The standard deviation is 0.50 that presents that most students' answers are closely around the overall mean which shows a consistent experience of high exposure. The overall mean score for Media Literacy is also 4.10 and it falls under the High and it suggests that respondents generally demonstrate strong abilities in analyzing, evaluating, and interpreting media content. The result of standard deviation of 0.47 shows a high level in the high literacy skills observed among the students.

Table 6. Relationship of Exposure to Hyper-Realistic AI-Generated Content and Media Literacy

Variable	Spearman’s rho	p-value	Interpretation
Exposure to Hyper-Realistic AI-Generated Content Media Literacy	0.299	0.061	Weak Correlation

The table 6 results presents Spearman's rho correlation analysis between Exposure to Hyper-Realistic AI-Generated content and Media Literacy among the computer engineering student respondents. This shows a correlation coefficient (ρ) of 0.299, indicating a weak correlation between the variables. The significance value ($p = 0.061$) is greater than the 0.05 level of significance that indicates that the relationship is not significant.

CONCLUSION

This study declares that Computer Engineering students at Bulacan State University are severely impacted on hyper-realistic AI-generated content in their daily lives, resulting in a high level of exposure to various types of AI-generated content and contributing to their media analytical and technical skills development. The results of this study determines a high level of media literacy among respondents. However, there is a remaining minor weakness, implying that even skilled individuals encounter challenges as AI technology evolves. The study suggests that AI-content exposure continuously aids as an informal learning procedure, and corresponds certainly to the media literacy skills, which strengthens the ability of students to distinguish differences and technical flaws. As future professionals, critical awareness advancement and ethical responsibilities are crucial for credible and responsible AI systems application in society.

RECOMMENDATION

This study has presented significant observations on how computer engineering students on Bulacan State University Main Campus regarding the exposure and media literacy on hyper-realistic AI-generated matters. The following recommendations summarizes possible research areas in the future:

1. **Impact of Social Media Platforms.** The social media platforms should be analyzed by future researchers on how these shape users' exposure to AI-generated content and how these aspects with media-literacy procedure can improve educational results.
2. **Evaluation of AI Tools in Education.** Learning AI tools, like chatbots and automated systems, academic interaction, and educational experiments provides more context for responsible AI use in school purposes.
2. **Cross-Sectional Studies on Media Literacy.** Cross-sectional studies can be utilized by future researchers to evaluate the media literacy of the students across academic levels, analyze how exposure impacts literacy, and identify contents that are AI-generated.
3. **Broader Demographic Studies.** Widening the research beyond Computer Engineering on larger demographics can show variety in AI-content exposure and recognition within the department.
4. **Comparative Research with Other Universities.** Other studies of universities can be compared in interpreting differences in media literacy and exposure patterns that can aid the social impacts of AI content and related academic manners.

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