

Digital Literacy and Critical Thinking Skills Among Grade 5 Learners

¹Harley M. Mabini (Researcher)

²Remigilda D. Gallardo (Co-Researcher)

Abstract:- This research focused on the relationship between digital literacy and critical thinking skills among Grade 5 learners. In terms of methodology, descriptive correlational research design, utilizing a survey method, was employed to capture the digital literacy and critical thinking skills among Grade 5 learners. The research instrument, a self-reported survey questionnaire, was crafted to resonate with the cognitive and communicative capacities of the respondents. The survey encompassed indicators ranging from basic digital skills to online safety, providing a holistic view of the participants' digital literacy proficiencies. A simple random sampling technique was applied to select 100 Grade 5 learners as respondents. This approach ensured a representative sample, allowing for generalizability within the specified population. The survey data underwent rigorous statistical analysis, employing tools such as mean, Pearson-r, and regression analysis to derive meaningful insights into the nuanced relationship between digital literacy and critical thinking skills. Correlation analysis reveals a substantial positive relationship between digital literacy and critical thinking skills, with a low p-value affirming statistical significance. The regression model emphasized Online Safety as particularly impactful. This empirical understanding provides a guide for educators, policymakers, and future researchers, outlining means to develop further the critical thinking abilities among Grade 5 learners in the digital era.

Keywords:- Digital Literacy, Critical Thinking Skills, Grade 5 Learners.

I. INTRODUCTION

In today's rapidly evolving digital landscape, the integration of technology in education has become increasingly prevalent, emphasizing the need for students to develop both digital literacy and critical thinking skills. Grade 5 students, in particular, stand at a crucial stage in their educational journey where they can benefit from cultivating these essential skills. Digital literacy encompasses the ability to effectively navigate and utilize digital tools, while critical thinking skills involve the capacity to analyze information, evaluate its credibility, and make informed decisions.

In the increasingly globalized and technologically driven world, digital literacy and critical thinking skills have emerged as vital competencies for students in international

educational settings. Recent research has shed light on the significance of these skills in preparing students to navigate the complexities of the digital age and engage in critical analysis and problem-solving.

In the local setting of Davao City, there is a growing recognition of the significance of digital literacy and critical thinking skills in the education landscape. Recent studies conducted in Davao City have shed light on the urgency of focusing on these skills within the local context.

This study, titled "Digital Literacy and Critical Thinking Skills Among Grade 5 Learners" aims to suffice the need to conduct a comprehensive study to investigate the specific relationship between digital literacy and critical thinking skills among Grade 5 students in Davao City.

The study acknowledges the significance of examining how digital literacy impacts the critical thinking skills of Grade 5 learners. It emphasizes the importance of understanding the relationship between students' proficiency in digital literacy and their ability to think critically. By investigating this connection, the study aims to provide a comprehensive analysis of how digital literacy can enhance or influence the development of critical thinking skills in young learners at the Grade 5 level.

Using quantitative research techniques, this study focuses on a descriptive correlational research design that makes use of the survey method. This design was carefully developed to examine and study the connection between students in Grade 5's critical thinking abilities and digital literacy. Using this methodology, the study seeks to objectively assess and evaluate the relationship between young pupils' development of critical thinking skills and their level of digital literacy. Surveys are a useful tool for gathering large amounts of data, which gives researchers a solid base upon which to find trends and make inferences on the relationship between these two crucial educational characteristics.

The findings of this study have significant implications to DepEd where the study can provide valuable data and insights into the current state of digital literacy and critical thinking skills among grade 5 students. School Heads can also benefit from this study as it provides school heads with evidence-based insights into the digital literacy and critical thinking skills of grade 5 students within their schools. This study can benefit teachers by shedding light on the specific areas of digital literacy and critical thinking skills that may

require further attention and support. The findings can help teachers identify students' strengths and weaknesses, inform instructional practices, and develop targeted interventions to enhance digital literacy and critical thinking skills in their classrooms. The study's outcomes can contribute to enhancing students' ability to access, evaluate, and apply digital information, thereby facilitating their academic success and lifelong learning. Lastly, this study can serve as a catalyst for further investigations and contribute to a growing body of research on digital literacy and critical thinking skills in education.

In conclusion, this research focused on the relationship between digital literacy and critical thinking skills among Grade 5 learners. The primary objective was to determine how these two dimensions intersect, shedding light on the potential influence of digital literacy on the development of critical thinking abilities in young minds.

II. METHOD

The research design employed in this study is a descriptive correlational research design using the survey method. This design was chosen to explore the relationship between digital literacy and critical thinking skills among grade 5 learners. Without altering or interfering with the natural environments, descriptive correlational study approach enables the gathering of data to investigate the link or association that currently exists between variables of interest. Critical thinking abilities and digital literacy are the study's factors of interest.

For this study, a total of 100 Grade 5 learners from Fishing Village Elementary School at Malita, Davao Occidental, were selected as respondents for the survey. The sampling procedure employed in this study is simple random sampling. Simple random sampling ensures that every Grade 5 learner has an equal opportunity to be included in the study, minimizing bias and enhancing the generalizability of the findings. . The randomly selected sample of Grade 5 learners is more likely to represent the larger population accurately, allowing for the application of inferential statistics to draw conclusions about the entire Grade 5 learner population. By ensuring randomness in participant selection, the researchers can increase the likelihood of obtaining unbiased and reliable data, thus strengthening the validity of the study's results.

The research instrument utilized to gather data for digital literacy in this study was a researcher-made questionnaire. This questionnaire is developed specifically for the purpose of assessing the students' level of digital literacy. It contains a series of statements that aim to explore perceptions of their digital literacy. On the other hand, the survey questionnaire for assessing critical thinking skills is based on the work of Halpern (2014) titled "Thought and Knowledge: An Introduction to Critical Thinking." This influential book provides a comprehensive understanding of critical thinking and offers valuable insights into its various dimensions and components

By using a researcher-made questionnaire for digital literacy and a survey questionnaire based on Halpern's work for critical thinking skills, the study aims to gather comprehensive and reliable data that reflect the participants' perspectives and competencies in these respective areas.

III. RESULTS AND DISCUSSIONS

The study's findings are derived from participants' responses to a survey that investigated the impact of digital literacy on the critical thinking skills of Grade 5 learners. By analyzing these survey responses, the research aimed to understand how students' proficiency in digital literacy affects their ability to think critically. This approach provided valuable insights into the relationship between digital literacy and critical thinking development in young learners.

The first theme explores extent of digital literacy among Grade 5 learners. The overall mean for Basic Digital Skills is 4.33, with a standard deviation of 0.77, reflecting a very extensive level of digital literacy among Grade 5 learners. This means that the digital literacy of Grade 5 learners is always manifested. This indicates a robust overall proficiency in the assessed basic digital skills.

The second explores digital literacy among Grade 5 learners. The overall mean for Internet Literacy is 4.26, with a standard deviation of 0.76, reflecting a very extensive level of digital literacy among Grade 5 learners. This indicates a robust overall proficiency in the assessed internet literacy skills.

The third theme explores digital literacy among Grade 5 learners, focusing on Information Evaluation. The overall mean for Information Evaluation is 4.03, with a standard deviation of 0.68, reflecting an extensive level of digital literacy among Grade 5 learners. This means that the digital literacy of Grade 5 learners is always manifested. This indicates a commendable overall proficiency in the assessed information evaluation skills.

The fourth theme presents the extent of digital literacy among Grade 5 learners, specifically focusing on Digital Communication. The overall mean for Digital Communication is 4.24, with a standard deviation of 0.86, reflecting a very extensive level of digital literacy among Grade 5 learners. This means that the digital literacy of Grade 5 learners is always manifested. This indicates an overall robust proficiency in the assessed digital communication skills.

The fifth theme delineates the extent of digital literacy among Grade 5 learners, specifically in terms of Online Safety. The overall mean for Online Safety is 4.00, with a standard deviation of 0.74, reflecting an extensive level of digital literacy among Grade 5 learners. This means that the digital literacy of Grade 5 learners is often manifested. This indicates an overall robust proficiency in the assessed online safety skills.

IV. CONCLUSION

In conclusion of all the themes, for the extent of digital literacy among Grade 5 learners, the mean scores reveal a remarkably high level of digital literacy, with Basic Digital Skills, Internet Literacy, and Digital Communication standing out as particularly extensive. These findings emphasize the pronounced digital acumen of the participants, laying the groundwork for a nuanced exploration of the interconnected critical thinking skills.

For the critical thinking skills among Grade 5 learners, the indicators Analysis and Evaluation exhibit the highest mean at a moderate level, suggesting students' reasonable proficiency in critically assessing information. Inference and Reasoning, with the lowest mean, indicating a potential area for improvement in logical inference and reasoning skills. The overall mean for critical thinking skills is reflect a moderate proficiency across dimensions, implying a balanced skill set among Grade 5 learners.

The remarkably high mean scores in Basic Digital Skills, Internet Literacy, and Digital Communication among Grade 5 learners underscore their pronounced digital acumen. These findings not only reveal a substantial proficiency in fundamental digital realms but also lay a robust foundation for investigating the interplay between digital literacy and critical thinking skills. The extensive digital competency observed sets an optimistic tone for fostering cognitive abilities crucial for holistic development.

In terms of recommendations for officials at the Department of Education, the study underscores the imperative of integrating targeted digital literacy programs within the curriculum for Grade 5 learners. In light of the study's findings, the researcher recommends that school heads foster an environment conducive to the seamless integration of digital literacy into daily pedagogy. Teachers are encouraged to design interactive and collaborative assignments that leverage digital tools, fostering a dynamic educational ecosystem that aligns with the cognitive needs of Grade 5 students. For Grade 5 students, it is recommended that they embrace the digital landscape with curiosity and discernment, engage with online resources, but critically evaluate information for reliability, and develop proficiency not only in basic digital skills but also in digital communication and online safety. Lastly, this study suggests that future researchers venture into the intersection of digital literacy and critical thinking skills, this study opens avenues for deeper exploration.

REFERENCES

- [1]. Albirini, A. (2018). The Relationship between Digital Literacy and Second Language Acquisition among University-Level English Language Learners. *Journal of Educational Computing Research*, 56(3), 393-414.
- [2]. Abrami, P. C., Bernard, R. M., Borokhovski, E., Waddington, D. I., Wade, C. A., & Persson, T. (2015). Strategies for Teaching Students to Think Critically: A Meta-Analysis. *Review of Educational Research*, 85(2), 275-314.
- [3]. Acquisti, A., Brandimarte, L., & Loewenstein, G. (2015). Privacy and Human Behavior in the Age of Information. *Science*, 347(6221), 509-514.
- [4]. Atkinson, R. C., & Shiffrin, R. M. (1968). Human Memory: A Proposed System and Its Control Processes. In K. W. Spence & J. T. Spence (Eds.), *The Psychology of Learning and Motivation* (Vol. 2, pp. 89-195). Academic Press.
- [5]. Babbie, E. (2016). *The Practice of Social Research* (14th ed.). Cengage Learning.
- [6]. Howell, T., & Kemp, G. (2019). *Critical Thinking: A Concise Guide*. Routledge.
- [7]. Boyd, d. (2014). *It's Complicated: The Social Lives of Networked Teens*. Yale University Press.
- [8]. Brookhart, S. M. (2013). *How to Assess Higher-Order Thinking Skills in Your Classroom*. ASCD.
- [9]. Chaffee, J., & McMahon, T. (2017). Critical Thinking Skills: A Necessity for Decision Making and Problem Solving in the Workplace. In T. K. Miller (Ed.), *Handbook of Research on Adult Learning and Development* (pp. 350-369). Routledge.
- [10]. Chen, L., Wu, L., & Zhang, C. (2019). Integrating Digital Literacy and Critical Thinking Instruction: A Case Study in an International School. *Journal of International Education Studies*, 12(3), 112-125.
- [11]. Creswell, J. W., & Creswell, J. D. (2017). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed.). SAGE Publications.
- [12]. Cruz, A., & Hernandez, M. (2019). Enhancing Critical Thinking Skills through Digital Literacy Instruction among Grade 5 Students in the Philippines. *Philippine Journal of Education*, 98(2), 45-60.
- [13]. Cropley, A. J. (2015). *Creativity in Education and Learning: A Guide for Teachers and Educators*. Routledge.
- [14]. Ennis, R. H. (2016). Critical Thinking: Its Nature, Measurement, and Improvement. *Inquiry: Critical Thinking Across the Disciplines*, 31(1), 3-18.
- [15]. Eshet-Alkalai, Y. (2021). Digital Literacy: Definitions, Directions, and Challenges. In L. J. Saha, D. J. Slykhuis, & K. L. Calandra (Eds.), *Handbook of Research on Integrating Digital Technology with Literacy Pedagogies* (pp. 1-19). IGI Global.
- [16]. European Commission. (2017). *Digital Economy and Society Index (DESI)*. Retrieved from <https://ec.europa.eu/digital-single-market/en/digital-economy-and-society-index-desi>
- [17]. Facione, P. A. (2015). *Critical Thinking: What It Is and Why It Counts*. Insight Assessment.

- [18]. Fisher, D., & Frey, N. (2015). Making Inferences: Reading Comprehension Skills and Strategies. *The Reading Teacher*, 69(6), 623-626.
- [19]. Flanagan, A. J., & Metzger, M. J. (2019). Digital Media and Perceptions of Source Credibility in Political Communication. In P. Moy, R. S. Tewksbury, & A. D. Weisenbacher (Eds.), *The Oxford Handbook of Political Communication* (2nd ed., pp. 231-246). Oxford University Press.
- [20]. Garcia, M., & Lopez, R. (2017). Enhancing Digital Literacy Skills among Students in Davao City. *Davao Educational Journal*, 45(2), 89-102.
- [21]. Halpern, D. F. (2014). *Thought and Knowledge: An Introduction to Critical Thinking*. Psychology Press.
- [22]. Hales, D., & Stoker, G. (2013). *Critical Analysis for Social Policy*. Palgrave Macmillan.
- [23]. Hargittai, E. (2018). Digital Literacy. In N. K. Duke & L. M. Bennett (Eds.), *Handbook of Research on Reading Comprehension* (2nd ed., pp. 442-460). Guilford Press.
- [24]. Hargittai, E., & Hsieh, Y. P. (2013). Digital Inequality. In K. D. Thomas (Ed.), *Handbook of Research on Social Interaction Technologies and Collaboration Software: Concepts and Trends* (pp. 384-404). IGI Global.
- [25]. Hmelo-Silver, C. E. (2015). Problem-Based Learning: What and How Do Students Learn? *Educational Psychology Review*, 27(1), 61-74.
- [26]. Hobbs, R. (2016). *Digital and Media Literacy: A Plan of Action*. The Aspen Institute.
- [27]. Johnson, R., & Lee, M. (2017). Exploring the Relationship between Digital Literacy and Critical Thinking among International Students. *International Journal of Education and Development using ICT*, 13(2), 72-87.
- [28]. Karampiperis, P., Koulocheri, E., Triantafyllou, E., & Ktistakis, I. (2020). Digital Literacy and Digital Skills: Conceptual Framework and Research Paradigms. In P. Karampiperis & P. Mikropoulos (Eds.), *E-Learning and the Academic Library: Essays on Innovative Initiatives* (pp. 3-22). IGI Global.
- [29]. Kuhn, D. (2017). Problem Solving and Reasoning. In D. Hacker, J. Dunlosky, & A. C. Graesser (Eds.), *Handbook of Metacognition in Education* (pp. 131-148). Routledge.
- [30]. Li, Y., & Ranieri, M. (2017). Digital Skills for the Workplace: Framing the Issues. In Y. Li & M. Ranieri (Eds.), *The Digital Turn: User's Practices and Cultural Transformations* (pp. 3-22). Springer.
- [31]. Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2017). Maximizing Opportunities and Minimizing Risks for Children Online: The Role of Digital Skills in Emerging Strategies of Parental Mediation. *Journal of Communication*, 67(1), 82-105.
- [32]. Livingstone, S., & Haddon, L. (2009). Risky Experiences for Children Online: Charting European Research on Children and the Internet. *Children & Society*, 23(4), 271-283.
- [33]. Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2017). Maximizing Opportunities and Minimizing Risks for Children Online: The Role of Digital Skills in Emerging Strategies of Parental Mediation. *Journal of Communication*, 67(1), 82-105.
- [34]. Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2017). Maximizing Opportunities and Minimizing Risks for Children Online: The Role of Digital Skills in Emerging Strategies of Parental Mediation. *Journal of Communication*, 67(1), 82-105.
- [35]. Marzano, R. J. (2017). *The New Art and Science of Teaching*. ASCD.
- [36]. Mascheroni, G., & Ólafsson, K. (2020). Exploring the Notion of Digital Well-being for Children. *New Media & Society*, 22(4), 695-713.
- [37]. Madden, M., Lenhart, A., & Duggan, M. (2013). *Privacy Management on Social Media Sites*. Pew Research Center.
- [38]. Merchant, G., Gillen, J., Marsh, J., Davies, J., & Hardman, J. (2014). *Virtual Literacies: Interactive Spaces for Children and Young People*. Routledge.
- [39]. Metzger, M. J. (2018). Making Sense of Credibility on the Web: Models for Evaluating Online Information and Recommendations for Future Research. *Journal of the Association for Information Science and Technology*, 69(3), 321-333.
- [40]. Morley, L., Leonard, P., David, M., Satchwell, C., & Shackleton, N. (2018). Evidence-Informed Approaches to Employability, Skills and Work-Based Learning. *Higher Education Pedagogies*, 3(1), 491-503.
- [41]. Mumford, M. D., Reiter-Palmon, R., & Redmond, M. R. (2018). Problem Construction and Creative Performance: An Integrative Review. *Journal of Creative Behavior*, 52(4), 392-408.
- [42]. Patchin, J. W., & Hinduja, S. (2018). *Preventing Cyberbullying: Research and Strategies*. Routledge.
- [43]. Paul, R., & Elder, L. (2014). Critical Thinking: The Nature of Critical and Creative Thought. *Journal of Developmental Education*, 37(2), 2-10.
- [44]. Paul, R., & Elder, L. (2016). Critical Thinking: The Nature of Critical and Creative Thought. *Journal of Developmental Education*, 37(2), 2-10.
- [45]. Shane, S. (2017). *The Entrepreneurial Mindset*. Edward Elgar Publishing.
- [46]. Turkle, S. (2015). *Reclaiming Conversation: The Power of Talk in a Digital Age*. Penguin Books.
- [47]. Trinchero, E., & César, M. (2018). Critical Analysis in Research. In S. H. Kuenzi, & B. D. Kuenzi (Eds.).