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Information Literacy and Research Capabilities of Grade 12 Humanities and Social Sciences Students

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ABSTRACT

This descriptive correlational study investigated the relationship between information literacy and their research capabilities of the Grade 12 Humanities and Social Sciences (HUMSS) students at Liceo de Cagayan University. A total of 220 students were selected using simple random sampling. The Information Literacy Self-Efficacy Scale and the RMRC-KModel of Research Competence were used to measure students' information retrieval, evaluation, and application skills, as well as their research proficiency across various dimensions. This study found that students had moderate information literacy and strong research skills. Pearson correlation analysis revealed a positive significant correlation was found between information literacy and research capabilities. These findings highlight the necessity of developing information literacy to improve research competences, providing useful insights for educators and policymakers in fostering critical thinking and research skills among students.

KEYWORDS: *information literacy, research capability, research competence*

INTRODUCTION

Information literacy serves as a fundamental skill for academic success and ongoing learning especially in this quickly evolving landscape of the 21st century. Nevertheless, many high school students find it challenging in developing strong information literacy as well as research capabilities. These challenges include difficulties in locating, evaluating, and effectively utilizing information, all of which are essential for academic achievement and informed decision-making. Information literacy is firmly connected to research skills of the students in forming the foundation for meticulous academic work and intellectual engagement (Shao & Purpur, 2016). However, due to the gaps in these competencies, it limits the students' critical thinking in assessing academic literature, analyzing data, and constructing well-supported arguments, leading to deficiencies in research capability. (D'Orio, 2019). These barriers hinder not only academic progress but also students' preparedness for higher education and work environments that demand strong research competency.

One of the major concerns of high school students is they find navigating wide and intricate data difficult, usually relying on unverified and insufficient sources. This problem has affected their academic performance as well as their preparedness for higher education and profession that requires research competence. Information literacy deficiency could result to misinformation, poor academic performance, and reduced critical thinking which are essential in today's knowledge-based society (De Paor & Heravi, 2020). In addition, students who lock information literacy skills might be challenged in distinguishing credible sources and misinformation, which leads to poor decision-making and restricted involvement in academic discourse. Moreover, marginalized students often deal with more rigorous challenges due to limited access to educational resources and support.

Comprehensive approach that incorporates information literacy instruction into the academic discourse will be required in addressing these gaps fostering a culture of exploration and critical thinking. Likewise, schools should provide opportunities for students in developing and applying their literacy skills in various learning settings. Educators, librarians, administrators, and stakeholders should also collaborate as this would serve essential in developing supportive frameworks in enhancing the students capabilities in research. Through educators professional development, information literacy policies advocacy, an expansion of access to technology and resources can aid in filling these skill gaps.

The Sustainable Development Goal (SDG) 4 aligned with this study, ensuring quality education that is inclusive and equitable promoting further education opportunities to everyone. Through examination of information literacy and research abilities to high school students', the researchers aimed to contribute to efforts in enhancing equity in education as well as quality. The necessity of targeted interventions and academic reforms to bridge these gaps are the highlights of this study, preparing students to persevere in an information-rich world ultimately.

This study's main objective is to investigate the relationship between grade 12 HUMSS students' information literacy and research capabilities. To identify areas of strength and weakness the researchers conducted a comprehensive assessment crucial to these skills. Furthermore, the study analyzed the underlying factors influencing students research competency, including educational approach and environmental influences. By determining these correlations, researchers sought in developing evidence-based techniques to improve students' information literacy skills and research capabilities. The findings of the study served as valuable insights for educators, school administrators, and stakeholders, cultivating an academic environment that helps critical thinkers nurture, preparing them for the demands of more advanced education and in the professional field.

STATEMENT OF THE PROBLEM

This study aimed to investigate the relationship between Information Literacy and Grade 12 HUMSS students' Research Capabilities. Specifically, this study seeks to find answers to the following questions:

1. What is the level of information literacy do grade 12 HUMSS students have in terms of:
1.1 defining the need for information;
1.2 initiating the search strategy;
1.3 locating and accessing the information;
1.4 assessing and comprehending information;

1.5 interpreting, synthesizing, and using information;
1.6 communicating Information; and
1.7 evaluating the product and process
2. What is the level of the grade 12 HUMSS students' research capabilities in terms of:
2.1 skills in reviewing the state of research;
2.2 methodological Skills;
2.3 skills on reflecting research finding;
2.4 communication Skills;
2.5 content Knowledge;
3. Is there a significant relationship between the grade 12 students' information literacy and research capabilities?

Hypothesis of the study

Items 1 and 2 are hypotheses-free. For the basis of item 3, it will be tested at 0.5 margin of error, with the null hypothesis of:

Ho: There is no significant relationship between Information Literacy and Grade 12 students' Research Capabilities.

METHODOLOGY

A sample of 220 students at Liceo de Cagayan University were selected from a population of 509 using a simple random sampling technique, ensuring representativeness. An adapted survey questionnaire was used, including the Information Literacy Self-Efficacy Scale by Kurbanoglu et al. (2006), which consists of 40 items categorized into seven areas, and the RMRC-K! Research Competency Model by Thiel and Bottcher (2014), which consists of 32 questions in five categories. Both instruments showed strong and reliable reliability with significant Cronbach's alphas of 0.84 and 0.94, respectively. Data collection was conducted through an online survey, following ethical considerations such as informed consent and confidentiality. This study was conducted at Liceo de Cagayan University during the first semester of the academic year 2023 -2024, using a descriptive correlation research design through quantitative research to assess the relationships between information literacy and the research skills of Grade 12 HUMSS students.

This study used descriptive statistics to determine and analyze the data collected through research instruments, which were then analyzed using Jeffrey's Amazing Statistics Program (JASP). In particular, descriptive statistics were used to assess the knowledge and skills of students at the research level, while the Pearson Correlation Coefficient was used to determine the direction and direction of their relationship

RESULTS AND DISCUSSIONS

Students' information literacy

Table 1 presents the results that shows that students had a Moderate to High Degree (MD-HD) of information literacy skills, with a grand mean of 5.23. They demonstrate strong proficiency to define their information needs, interpreting, synthesizing, and using information, implying confidence in identifying, understanding, and applying knowledge. The highest mean score for assessing and comprehending information (5.56) indicates that students excel in understanding and evaluating the information they gather. However, moderate scores in initiating search strategy, locating and accessing

resources, communicating information, and evaluating their research process indicate room for growth. The lowest mean score for locating and accessing resources (4.99) indicates difficulties in retrieving information quickly, particularly from library catalogs and databases. Furthermore, challenges with search refining, communication structure, and critically analyzing study conclusions suggest a need for additional skill development.

These findings aligned with the previous research that emphasized the importance of information literacy in achieving academic success. Geary (2021) and Robin (2023) defined information literacy as the recognition, evaluation, and effective use of information crucial for independent learning and creates careful decisions. However, Mao et al. (2022) And Rozkosz (2016), discovered that there are lots of students facing challenges in regards to refining search strategy, choosing the right keyword, and evaluating sources. This would explain the students' moderate evaluation in both resource access and the research start. Furthermore, deeper learning would require the capability to synthesize all found sources (Facione, 2015; Bayley & Phipps, 2023). but the students struggle communication and critical review of information indicate failures in these areas. Overestimation of information literacy, dependent on search strategy, and lack of ability to recognize reliable sources are found as barriers to an effective usage of information (Kurelovic et al., 2016; Amjad, 2024). To address these challenges, students may explore more and make use of information effectively by giving structured instruction in regards to information literacy, intellectual growth, and access to modern research tools (Thomas, 2018; Estacio et al., 2018)

Students' research capabilities

Table 2 highlights that students have a High Degree (HD) of research skills, with a Grand Mean of 3.58. They exhibit strong abilities in reviewing existing research, reflecting on findings, and applying research methods, showing they are confident in analyzing current studies, interpreting data, and grasping research techniques. The highest mean score (3.78) in reviewing the state of research suggests students are effective at evaluating current literature, recognizing relevant work, and combining key insights. On the other hand, their average performance in methodological skills, communication skills, and content knowledge points to areas where they can still grow. The lowest scores in methodological skills (3.50) and communication skills (3.51) show that students struggle with creating research designs, collecting data, and clearly presenting their results, underscoring the need for continued development in these areas, especially in proper research processes and academic writing.

These results are in line with earlier research that emphasizes how essential research skills are for academic achievement. Research competence involves skills like formulating research questions, choosing suitable methods, evaluating sources critically, and turning findings into clear, evidence-based arguments (Cara, 2016; Noerjanah & Maulidah, 2021). Students with strong research skills are more likely to perform well academically, as they can effectively gather and interpret information, create quality outputs, and join in scholarly discussions. However, they still face challenges, particularly in methodology and communicating their research clearly (Rahman et al., 2019; Ogo et al., 2023). Research also shows that factors such as discipline, understanding of research frameworks, and access to training have a major impact on how well students can carry out in-depth studies and generate meaningful insights (Gong et al., 2023). Doing independent research helps foster curiosity, problem-solving, and flexibility, skills that are valuable both in school and future careers (Klomsri & Tedre, 2016). Still, many students deal with a lack of training, limited resources, and difficulties making sense of complex data, which affects their ability to do reliable research. Overcoming these issues requires ongoing guidance in areas like research design, data handling, and ethical practices. With proper

instruction and active engagement in research tasks, students can enhance their skills and contribute more meaningfully to academic conversations.

Relationship of information literacy and research capabilities

To assess the relationship between the independent and dependent variable of this study, the Pearson Product Moment Correlation Coefficient was used.

Table 3 presents the results of a Pearson correlation analysis used to examine the connection between research capabilities and information literacy. The study found a significant positive connection ($r = 0.719$, $p < 0.001$) between more advanced levels of research capabilities and information literacy. Thus, the null hypothesis is rejected since the relationship was statistically significant.

These results align with previous studies indicating the significant influence of Information Literacy on research capabilities. For instance, Alahi and Yesmin (2024) emphasized the significance of information literacy skills—like the capability to locate, evaluate, and efficiently utilize information—for academic achievement and research results. Likewise, Head et al. (2022) discovered that students who possess strong information literacy skills excelled in self-directed research tasks.

CONCLUSIONS AND RECOMMENDATIONS

The results of the study demonstrated that Grade 12 HUMSS students have a strong basis in information literacy, allowing them to successfully explore, evaluate, and utilize research sources. Their research skills were also remarkable, demonstrating their ability to do lengthy study, solve complex difficulties, and successfully contribute to academic work. Furthermore, the study found a strong and significant association between information literacy and research capabilities. This suggests that students who can appraise and use knowledge do better in research-related tasks. As a result, the null hypothesis was rejected, emphasizing the necessity of information literacy in developing research abilities. These findings highlight the importance of improving these skills in order to enhance academic performance and prepare students for future academic studies.

For students, to enhance their skills, the study recommends taking information literacy classes, working on research projects, and attending digital literacy seminars. Although study tools and materials are widely available online, not all students make use of them. Providing students with reliable offline resources, mentorship programs, and peer collaboration can help them improve their research abilities, gain confidence, and prepare for academic and professional success.

For educators, they may participate in information literacy training programs and integrate it into research study. To keep educators maintain best practices in fostering students' research abilities, they may incorporate interactive webinars, seminars, workshops, and group study sessions. Teachers can help the student by effectively assist them in developing their analytical and critical thinking skills necessary for academic success by giving them the right materials and giving them support.

For schools, they may promote ongoing teacher training programs to gain more knowledge, provide access to a wealth of research resources, and build structured literacy exercises. Developing a focused environment on research such as implementing specialized research centers or holding academic symposiums can aspire students to participate in scholarly work cultivating a culture of inquiry and cognitive development.

Future research may investigate motivation, technology, accessibility, and institutional support as other factors that could influence students' information literacy and research capabilities. Moreover, to

determine the effectiveness of a particular programs about information literacy that boost research capabilities, additional study can be conducted offering insights that can serve as best practices in enhancing academic performance.

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