Educational Administration: Theory and Practice
2024, 30(5), 2454-2459
ISSN: 2148-2403
https://kuey.net/

Research Article

Instruction In Information Literacy And Its Function In Fostering Critical Thinking Abilities

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Citation: Hema Adhikari, Dr. Yougal Chandra Joshi (2024) Instruction *In Information Literacy And Its Function In Fostering Critical Thinking Abilities*, *Educational Administration: Theory and Practice*, *30*(5), 2454-2459
Doi:10.53555/kuey.v30i5.3305

ARTICLE INFO

ABSTRACT

Information literacy training is an integral part of every comprehensive education program, as it teaches students how to locate, analyse, and apply information for their own purposes. In today's information-driven society, the ability to think critically is crucial for solving problems and making sound judgments. In this research, we investigate how teaching information literacy can improve students' capacity for critical thought.

Information literacy is emphasised in the abstract as a means of helping students develop critical thinking skills and learn to evaluate information effectively. It recognises the difficulties in determining the direct effect of teaching on critical thinking outcomes and the necessity of continual study and collaboration to overcome these barriers.

In addition, the abstract stresses the importance of not only knowing where to access information, but also being able to evaluate its quality, spot biases, and consider alternative points of view. Instruction in information literacy encourages lifelong learning and helps students develop the critical thinking skills necessary to succeed in today's complex and uncertain society. This paper argues that teaching information literacy is crucial because it helps people develop the critical thinking skills necessary to deal with the complexities of the modern information age and to make the kind of well-informed decisions that are necessary for both individual and collective progress.

1. Introduction:

Libraries are recognizing the importance of critical thinking abilities and incorporating the concept of information literacy into their training programs. As more students opt for online education, libraries are expanding their traditional information literacy initiatives to reach these learners. Adapting to the changing landscape of education, libraries aim to provide students with autonomy, flexibility, and easy access to resources [1]. However, the challenge lies in developing effective instructional resources for asynchronous or self-paced online training while fostering critical thinking abilities that promote lifelong learning.

In today's digital era, access to a vast amount of knowledge has become easier than ever before. Consequently, the ability to explore, evaluate, and utilize this information successfully has become increasingly important. Information literacy has emerged as a crucial competency in our information-driven society. It encompasses the skills needed to locate, evaluate, and ethically use information [2]. While information literacy is valuable for critical thinking, it goes beyond simply knowing how to find information.

Critical thinking forms the foundation of intellectual development and analytical reasoning. It involves expert examination, analysis, and synthesis of information, empowering individuals to challenge assumptions, identify biases, and make well-informed decisions [3]. Integrating information literacy instruction into educational contexts has shown promise in developing and enhancing students' critical thinking abilities. By equipping individuals with the skills to critically evaluate information, they are empowered to engage with complex issues, explore diverse perspectives, and make informed judgments.

In the current landscape of information literacy, we face a crossroads due to the trend of delivering educational resources solely online and the demand for effective instructional design methodologies that promote lifelong

learning [4]. As students increasingly utilize various information sources to expand their knowledge and develop critical thinking skills for self-directed learning, there is a need for effective online library training.
To address this need, theories of instructional design provide guidance. Constructivist methods, in particular, show potential for efficient online learning. These approaches include problem-based learning, cooperative and collaborative learning, and discovery learning. Constructivist instructional materials may incorporate case studies or scenarios and often involve group work, with instructors playing a facilitating and guiding role rather than lecturing. Constructivist learning environments offer students the learning experiences necessary for developing critical thinking abilities, potentially leading to higher overall achievement [4]. By utilizing these approaches, libraries can create effective online training programs that foster critical thinking and support lifelong learning.

2. Concept of Information Literacy:

Paul Zurkowski, President of the US Information Industry Association, initially proposed the idea of information literacy in a proposal to the National Commission on Libraries and Information Science (NCLIS) in 1974 [5]. He spoke about those who had received an education in information and who knew how to use information tools to offer information solutions. He claims that those who have received training in the application of information resources to their jobs can be referred to as information literate. They now possess the knowledge and skills necessary to effectively use a wide variety of information tools as well as primary sources to shape information. The concept of information literacy initially arose in literature in the 1970s, according to Rader [6].

3. Importance of Information Literacy:

Everyone can benefit from information literacy skills, but research scholars in particular can use them to excel in school and in their future careers. To perform their jobs effectively and efficiently, scholars must have strong information literacy abilities. Basically, information literacy abilities are necessary for everyone in society. The academic and general quality of life in society is improved through information literacy. Our daily lives are made easier by information literacy. To meet everyone's academic objectives, information literacy skills are crucial. The foundation of a democratic society is information literacy.
An information-literate society is one that can effectively and efficiently access, assess, utilise, and communicate information. Computers are crucial in this situation for creating, producing, organising, and transmitting the information. For the effective use, consumption, and evaluation of the information resources offered by the institutions, IL is necessary. In today's dynamic environment, information literacy is a crucial practice. Every day, information technology is evolving. Information is always being produced. In order to do that, students need to be able to interpret and utilise information sources to inform their decisions. The ability to recognise when information is needed as well as how to find, assess, and use that knowledge effectively is known as information literacy.

4. Review of Literature:

In his study, Ashish Kumar [7] highlights an effort to look at the information needs and information-seeking behaviour of social science researchers at M.B.P.G. College, Haldwani, Uttarakhand. Researchers were surveyed to find out their opinions on various topics. In his study, the author focused on a number of different elements, including library collections, overall library efficacy, material organisation, library services, internet use, search engine usage, information resources, information needs, information purposes, etc. The study suggests orientation sessions for researchers to increase their knowledge of e-resources and improve their use of library resources.
In his writings, B. Subramanian [8] discussed how to ascertain how research researchers at Bharathidasan University use the library and their information-seeking habits. The aim of the study was to ascertain their information needs as well as their awareness of the services offered by libraries. The study gathered information on what researchers need in terms of information. 100 researchers participated in an open- and closed-ended questionnaire process to collect data. Findings show that instruction in the use of library resources and services is required to assist researchers in satisfying some of their information needs.
In their writings, Paresh kumar G. Ilasariya and Manjulaben D. Parmar [9] aim to investigate the information requirements and research habits of professors teaching in the arts departments at Hemchandracharya North Gujarat University (HNGU) in Patan. The study found that most college faculty were unfamiliar with IT due to a lack of resources in their libraries. College faculty members' information-seeking behaviors were studied using questionnaires in order to advocate for the widespread implementation of ICT.
Kumaripaba Athukorala and colleagues discuss the information-seeking habits of academics in their study[10]. The findings show that researchers are interested in obtaining relevant information for the purposes of both furthering knowledge and educating the public. They talk about some important research tools for navigating the literature.

In their study, K. S. Sivakumaren [11] focuses on how M.Phil. and Ph.D. students in LIS programmes at various institutions and colleges in Tamil Nadu, India, use library resources and services. For the purpose of this study, a questionnaire was developed and administered to academics. The Internet, electronic journals, online databases, and e-mail are all used by the vast majority of researchers as sources of data.
Information literacy, its necessity, importance, and benchmarks, are all discussed by M. Deshpande and D. Dakhole [12]. Information and communications technology (ICT) policies and government measures to increase information literacy in India are also discussed. Many government initiatives aimed at increasing citizens' information literacy are also included in this study.
Universities are expected to play a crucial role in the development issues of their countries and abroad, as emphasised by the works of Agnes Amunga [13]. The author paints a broad picture of information literacy-related activities at Kenyan universities, as well as the efforts of various stakeholders to promote, embrace, and execute such efforts.

5. Objectives:

1. Investigate the impact of information literacy instruction on the development of critical thinking skills among students.
2. Assess the level of digital information literacy among respondents and its relationship with their critical thinking skills.
3. Evaluate the participation rates in digital literacy programs organized by libraries and their impact on enhancing digital information literacy and critical thinking.
4. Examine the challenges in integrating information literacy instruction into existing curricula and its potential impact on critical thinking development.
5. Highlight the role of information literacy in empowering individuals to make informed decisions and engage effectively with complex issues in an information-driven society.

6. Material and Methods:

In order to collect data or seek information literacy competency across departments, a structured questionnaire based on the literature review was issued to the University's Research Scholars. Users were also provided with hard copies of the questionnaires. The scholars were mailed questionnaires and personally contacted. The surveys combined open-ended and closed-ended questions into a single form. One gives an answer to the inquiry using one's own words.
We based our questionnaire on the structure provided by the Information Literacy Competency Standards for Higher Education, created by the American Library Association in the United States. The questions are framed in terms of the researchers' specific goals and the nature and scope of the information they require, as well as the researchers' ability to access that information, evaluate it critically, incorporate it into the existing knowledge system, and achieve their goals. The survey inquires on topics such as respondent's demographics, educational background, information literacy awareness, reference book utilisation, familiarity with library shelving layout, etc. The information is then compiled and analysed in a database.
Each question's percentage of responses has been calculated and included in the appropriate tables after being analysed with statistical tools where appropriate.

7. Result and Discussion:

Table 1: Gender Wise Distribution of Respondent

	Frequency	Percent
FEMALE	157	67.1
MALE	76	32.6
Total	233	100.0

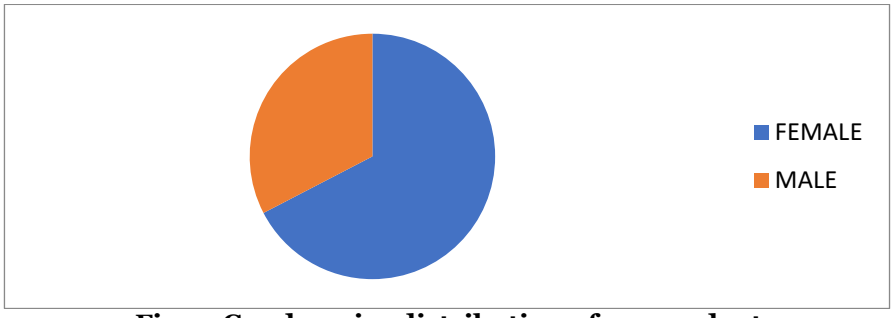


Fig 1: Gender wise distribution of respondent

The data from Table and Figure 1 reveals that out of the 233 respondents, 157 of them are female, while the remaining 76 are male. These findings indicate a greater number of female participants compared to male participants.

Table 2: Education of Respondent

	Frequency	Percent
PG STUDENTS	195	83.7
PROJECT ASSOCIATE	1	.4
PROJECT SCIENTIST-I	1	.4
RESEARCH SCHOLAR	36	15.5
Total	233	100.0

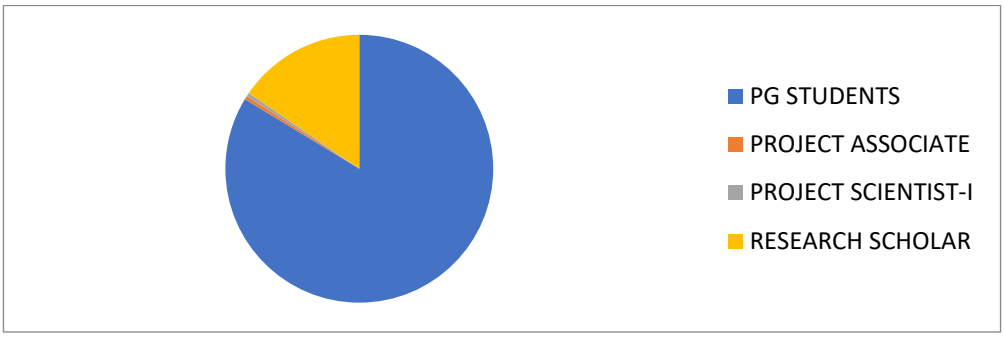
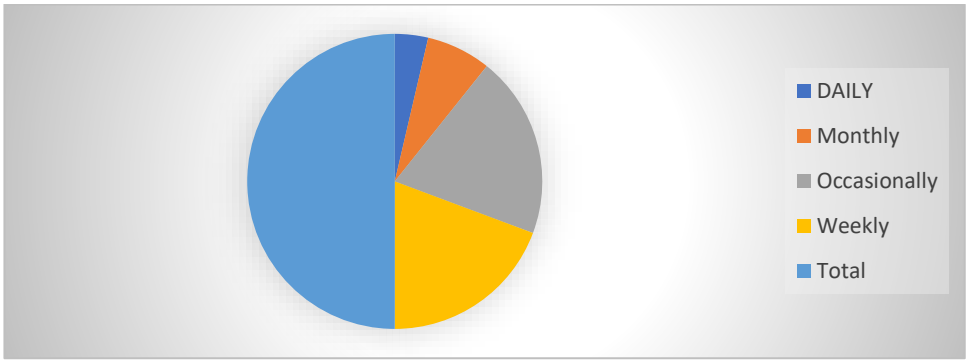


Figure 2: Education of Respondent

Based on the information presented in Table and Figure 2, it can be observed that out of the total 233 respondents, the majority, 195 individuals, are postgraduate students. Additionally, there is one project associate and one project scientist among the participants. The remaining 36 respondents are research scholars. Overall, the highest number of participants are pursuing postgraduate studies, followed by research scholars.

Table 3: Library visit

	Frequency	Percent
DAILY	17	7.3
Monthly	33	14.1
Occasionally	93	39.9
Weekly	90	38.6
Total	233	100.0



The data provided in Table and Figure 3 reveals that out of the total 233 respondents, 93 individuals visit the library occasionally, 90 individuals visit on a weekly basis, 33 individuals visit on a monthly basis, and 17 individuals visit the library daily. In terms of frequency, the highest number of participants visit the library occasionally, followed by those who visit on a weekly basis.

Table 4: Digital Information Literacy

	Frequency	Percent
No	83	35.7
Yes	150	64.4
Total	233	100.0

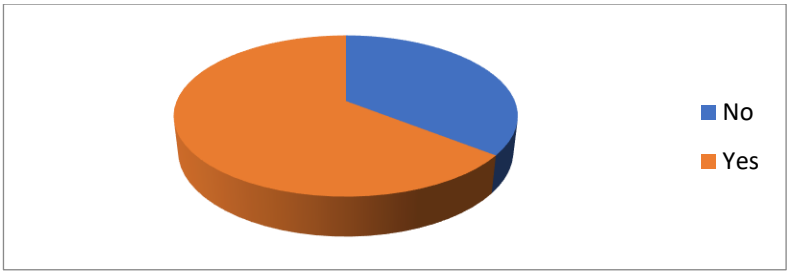


Table 4: Digital Information Literacy

Based on the data provided in Table and Figure 4, it is evident that out of the total 233 respondents, the majority, specifically 150 individuals, are aware of digital information literacy. Conversely, 83 respondents reported that they do not possess knowledge about digital information literacy. Overall, the highest number of participants demonstrated familiarity with digital information literacy.

Table 5: Digital Literacy Programme organized by library

	Frequency	Percent
No	190	81.6
Yes	43	18.4
Total	233	100.0

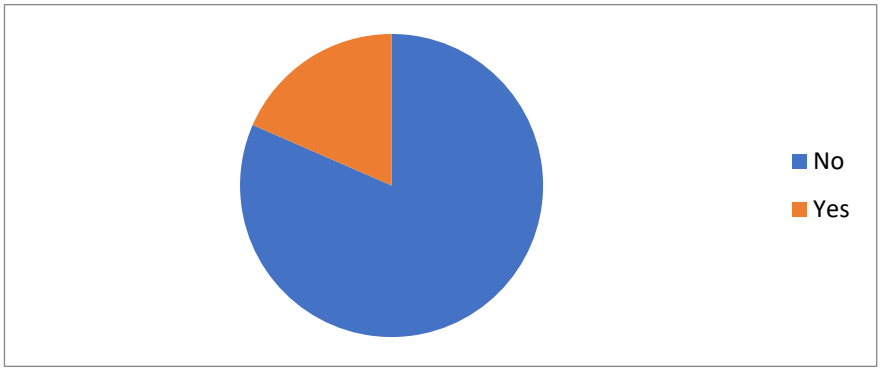


Table 5: Digital Literacy Programme organized by library

Based on the data presented in Table and Figure 5, it is clear that out of the total 233 respondents, the majority, specifically 190 individuals, do not participate in the digital literacy program. On the other hand, the remaining 43 individuals do attend the digital literacy program. In summary, a larger number of participants indicated that they do not attend the digital literacy program.

8. Limitations:

It may be difficult to analyse and measure the influence of information literacy teaching on critical thinking outcomes, which is a potential restriction of information literacy instruction and its function in promoting critical thinking abilities. The importance of information literacy in cultivating critical thinking is generally accepted, although it can be difficult to assess the direct effect of teaching on this goal. Because critical thinking is such a complex ability, it is difficult to separate the impacts of information literacy teaching from those of other factors.

In addition, there is a lack of standardization in the methods used to teach information literacy. It can be challenging to compare and generalise the results of information literacy teaching across settings since different institutions and educators may utilise different tactics and frameworks. The instructor's knowledge and pedagogical abilities, course materials, and students' interest and motivation may all play a role in the quality of their educational experience.

Another potential barrier is the limited amount of time available in school environments. There is often not enough time for in-depth examination and application of critical thinking skills when teaching in information literacy is incorporated into already crowded curricula. Learning and development of students' critical thinking skills may be hampered by the limited time available for education.

Another potential obstacle is that students may have trouble applying the critical thinking skills they acquire in information literacy courses to their everyday lives. Although students may show evidence of critical thinking in the classroom, it is essential to evaluate their ability to apply these skills in a variety of challenging real-world contexts.

Finally, there is a restriction caused by the ever-changing nature of information and technology. Due to the ever-evolving nature of information resources and delivery mechanisms, information literacy curricula must

be regularly revised and revised again. The issue lies in keeping up with these developments and making sure that students are given the tools they need to think critically in an ever-evolving information ecosystem. In order to improve the integration of information literacy instruction and its impact on fostering critical thinking abilities, it is important to acknowledge these limitations and address them through ongoing research, continuous evaluation of instructional approaches, and collaboration among educators, researchers, and practitioners.

9. Conclusion:

In conclusion, developing students' capacity for critical thinking depends on the inclusion of training in information literacy. Teaching people how to find, analyse, and make use of information helps them become more self-reflective and autonomous in their decision-making. However, continuous research and collaboration can assist address these difficulties, such as measuring the impact of instruction and time limits. Individuals may better navigate the information landscape, identify reliable sources, and evaluate claims from a variety of angles if they are equipped with information literacy abilities. By doing so, one might learn to think critically by challenging their own beliefs, analysing information, and arriving at sound conclusions. Education in information literacy is not a magic bullet, but it is a necessary one. It should be incorporated into pedagogical practises and backed by continuous assessment and improvement. In order to improve teaching methods and stay up with rapidly developing technology and information sources, collaboration among educators, researchers, and practitioners is essential. In the end, students who have been taught information literacy skills have developed the critical thinking skills necessary to be engaged citizens in the information age. Fostering these abilities helps people become the kind of knowledgeable and engaged citizens who can solve problems and make positive changes in the world.

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