

Doroudi, Fariborz; Abdolrahmani, Sofia (2024). Examining the Impact of Education on Information Literacy Skills of Dropout Students in Utilizing Digital Libraries and Databases. *Journal of Knowledge-Research Studies*, 3 (1):109-127.

DOI: 10.22034/jkrs.2024.60945.1074

URL: https://jkrs.tabrizu.ac.ir/article_18089.html

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Examining the Impact of Education on Information Literacy Skills of Dropout Students in Utilizing Digital Libraries and Databases

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Received: March, 18, 2024, Revised: May, 10, 2024

Accepted: May, 12, 2024, Published: June, 1, 2024

Abstract

Purpose: Information literacy involves a range of skills such as recognizing information needs, understanding information production and value, and using information to generate new knowledge ethically. It is essential for individuals to locate, evaluate, and utilize information effectively to become lifelong learners. This research aims to investigate how education influences the information literacy abilities of out-of-school children in accessing digital libraries and databases.

Methodology: This study utilized a Semi-experimental research design and survey method. Initial theoretical studies were conducted, and five information literacy standards were compared to develop a new pattern. The population consisted of 195 dropouts from two schools - Moshtaq in Kerman and Arslan Boys in Rafsanjan. The sample size of 120 individuals was selected using a simple random method, with 100 students completing the questionnaire. Survey data was analyzed before and after information literacy training over one semester using a checklist with five components and 15 indicators. Reliability was measured using Cronbach's alpha, which yielded a value of 0.851.

Findings: The study revealed that digital libraries and databases were available to a favorable extent, with a 2.935 percent availability rate. Prior to training, students showed a 2.125 percent proficiency in locating information in digital resources, which improved to 2.45 percent post-training. Additionally, students demonstrated an average skill level of 2.38 in utilizing full-text databases within digital libraries.

Conclusion: The research underscored the importance of education in enhancing information literacy skills, particularly in the areas of information retrieval and selection, database usage, and critical evaluation of online sources. Recommendations included teaching students how to identify reliable information sources, conduct effective information searches, and utilize various search operators for refining search results.

Value: The novelty of the research lies in its examination of the Impact of Education on Information Literacy Skills of Dropout Students in Utilizing Digital Libraries and Databases through a Semi-experimental research design.

Keywords: Education, Information Retrieval, Students, Information Literacy, Digital Library, Learning

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Extended Abstract

Introduction: The term information literacy was first introduced by Paul Zurkowski, the President of the American Information Industry Association, in 1974. Information literacy is specifically defined as the technology and skills required to utilize various information tools and critical sources of information to answer questions. These skills can be attained through effectively searching for necessary information, critically evaluating it, and appropriately applying and referencing it. Information literacy, along with related abilities, plays a vital role in school education. By acquiring information literacy skills, students are empowered to comprehend content, expand their research, and take control of their learning. Teachers in the education system are recognizing the increasing importance of cultivating students' information literacy skills. This skill serves as the foundation for lifelong learning, being applicable to all disciplines, learning environments, and educational levels. Today, information literacy is imperative for schools and educational institutions as students need it to engage in their educational activities. Hence, evaluating students' information literacy levels can be beneficial for academic planning.

Purpose: Information literacy is fundamental for lifelong learning across all disciplines, learning environments, and educational levels. It helps learners master content, enhance investigations, become more self-directed, and take charge of their learning. Developing lifelong learners is a key objective of educational institutions. By emphasizing reasoning, critical thinking abilities, and constructing a framework for learning how to learn, colleges and universities lay the groundwork for continual growth in individuals' careers and roles as informed citizens. Information literacy encompasses an array of abilities, including recognizing information needs, understanding information production and evaluation, and utilizing information to generate new knowledge and contribute ethically to research. It is crucial for individuals to be able to locate, evaluate, and use information to become independent lifelong learners. Various efforts have been made to further define information literacy and its interrelation with different skills and forms of literacy, such as traditional literacy, computer literacy, research skills, and critical thinking abilities. This research aims to investigate the impact of education on the information literacy skills of out-of-school children in utilizing digital libraries and databases.

Methodology: This study utilizes a semi-experimental and survey research method. Initial theoretical studies were conducted, comparing five patterns based on information literacy standards. Common elements were selected, and a new pattern was analyzed after determining its validity and reliability. The study population comprised 195 dropouts from two schools - Moshtaq in Kerman and Arslan Boys' in Rafsanjan - catering to dropouts. A sample size of 120 individuals was selected using the simple random method (Morgan table), with 100 students completing the questionnaire. The surveys were analyzed in two stages: before and after information literacy training over one semester. The data collection tool was a checklist consisting of five components and 15 indicators related to information literacy messages. Validity and face validity of the checklist were measured, and reliability was assessed using Cronbach's alpha, which yielded a value of 0.851. An observer completed the checklist based on observations.

Findings: Analysis of the data presented in Table 1 reveals that the skill level of dropout students in retrieving information from databases and digital libraries prior to training is rated as unfavorable, with an average score of 2.125. This indicates that these students did not possess adequate abilities to access electronic resources efficiently.



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Table 1. Assessing dropout students' skills before training

Indicator	Average	standard deviation	Desirability
The level of skills of Dropout Students in the field of retrieving information from databases and digital libraries before training	2.125	1.068	Undesirable

Table 2. Assessing dropout students' skills after training

Indicator	Average	standard deviation	Desirability
The level of skills of Dropout Students in the field of retrieving information from databases and digital libraries after training	2.45	1.114	Relatively Desirable

On the other hand, the data from Table 2 shows that the skill level of dropout students in information retrieval from databases and digital libraries improved after training, with an average score of 2.45, indicating a relatively favorable level of competency in accessing electronic information sources. The study focused on the education of disadvantaged children and assessed the availability of digital libraries and databases, which were found to have an overall availability of 2.935%. Initially, these children scored at 2.125% in terms of information retrieval skills, showing dissatisfaction in locating information in digital libraries and databases. However, after receiving training, their skills improved to 2.45%, indicating a positive change. Additionally, the children showed an average skill level of 2.38 in using full-text databases in digital libraries.

Conclusion: The continuous advances in science and technology have significantly transformed various aspects of life, including the rapid production and dissemination of scientific information. Education plays a crucial role in nurturing creativity and enhancing research skills among students, preparing them to excel in social, cultural, and professional settings. Information literacy is essential for improving quality of life, as individuals learn to access and evaluate information systematically to support their needs. The study highlighted the importance of teaching students to distinguish trustworthy sources from unreliable ones, as well as the significance of refining search strategies, such as using keywords, Boolean logic, and various operators, to enhance information literacy skills. Incorporating instruction on problem-solving techniques, database utilization, and ethical information practices, including proper use of digital technologies and web resources, are key recommendations arising from the research findings.

Value: The significance of this study lies in its exploration of the impact of education on enhancing information literacy skills among dropout students in utilizing digital libraries and databases, using a semi-experimental research design.



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