Sociology of Education

Designing a Model and Validating of Information Literacy in the Curriculum of Senior School Students

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Article Cite:
Najafi M, AzadolMolki S, Hosseini Mirsafi A. (2023). Designing a Model and Validating of Information Literacy in the Curriculum of Senior School Students, Sociology of Education. 9(1): 403-412.

Purpose: Considering the importance of information literacy in today's era and the need to include it in the curriculum of students, the present research was conducted with the aim of designing a model and validating of information literacy in the curriculum of senior school students.

Methodology: This study in terms of purpose was applied and in terms of implementation method was mixed (qualitative-quantitative). The research population in the qualitative section was the experts of curriculum and information literacy education of Tehran city in the 2023 year, which number of 16 people of experts (according to the principle of theoretical saturation) were selected as a sample with using the purposeful sampling method. The research population in the quantitative section was the senior school students of Tehran city in the 2022-2023 academic years, which number of 400 people of them were selected as a sample with using the multi-stage cluster sampling method. The research tools were semi-structured interviews by experts and completion of researcher-made questionnaires by students, which whose psychometric indicators were confirmed. The data were analyzed by coding methods and exploratory factor analysis.

Findings: Based on the findings of coding interviews for information literacy in the curriculum of students were identified 40 components in 7 dimensions including information access and retrieval, information evaluation, information organization and combination, information ethical considerations, information communication and sharing, cognitive factors of information literacy learning and motivational factors of information literacy learning. Also, the results of the exploratory factor analysis showed that 13 components could explain 81% and all 40 components could explain 100% of the variance of information literacy in the curriculum of students, the factor loading of all 40 components was above 0.70 and information literacy in the curriculum of students on the 7 dimensions and each dimension on its components had a direct and significant effect (P<0.001). Therefore, the designed model of information literacy in the curriculum of students was valid.

Conclusion: Based on the results of this study, in order to improve information literacy in the curriculum of students it is possible to provide the basis for realizing the identified dimensions and components.

Extended Abstract

Purpose: Today, with the increase in the amount of available information and the connection between information and various processes of social life, it is necessary for all members of the society to be equipped with a tool that they can use to go through the stages of personal and social growth and development. Information and communication technology is considered one of the most important and necessary tools of education, and the increase in people's need to education, lack of access to educational centers, lack of experienced teachers, lack of economic facilities, and factors such as fatigue, loss of useful time, etc., led to increase the use of this technology. Information and communication technology has connected different disciplines and as a linker, it uses all modern sciences to provide the information needed of experts, industries, organizations and all people in the society in the shortest possible time and in the best possible way. Access to information and its optimal use requires a set of skills called information literacy, which include such as this skills can be noted to skills of retrieving, locating, accessing, organizing, evaluating, exchanging information and effectively using of information. In the third millennium, the growth of information and communication technology led to the understanding of a new concept of learning under lifelong learning, which to realize it requires multiple literacy including information literacy. The concept of information literacy was first used in 1974 by Zurkowski in the United States. Information literacy indicates that a person should have the ability to recognize when he needs information and to use it effectively while locating and evaluating the required information. Information literacy is one of the fundamental rights of every person for the citizens' well-being, economic growth, national development and achievement of educational standards, and this literacy emphasizes on the importance of accessing, evaluating and using information. This structure refers to the set of skills and abilities that a person must have in today's world to perform their assigned tasks. The necessity of having information literacy is clear which whose definitions usually include the ability to access, evaluate and use information. The integration of information literacy with the curriculum is accepted in all services and programs provided and in the field of administrative life of educational systems. Due to the importance of information literacy in the current information age and the role that this skill can have in advancing the goals and curriculum of learners, this variable has received double attention from researchers. Curriculum refers to a set of systematic and planned educational opportunities at the national, regional, local level up to the school and classroom level which students are placed to acquire the necessary skills to achieve their identity and proper growth and prosperity through development and excellence. Curriculum has a decisive and undeniable role in the realization of educational goals and missions, and every curriculum has its own goals, and each educational organization according to its vision, puts forth goals to achieve and reach its visions. In a useful curriculum, learners are expected to build their knowledge, find meaning for their lives, and visualize their understanding in the form of a big picture. Considering the importance of information literacy in today's era and the need to include it in the curriculum of students, the present research was conducted with the aim of designing a model and validating of information literacy in the curriculum of senior school students.

Methodology: This study in terms of purpose was applied and in terms of implementation method was mixed (qualitative-quantitative). The research population in the qualitative section was the experts of curriculum and information literacy education of Tehran city in the 2023 year, which number of 16 people of experts (according to the principle of theoretical saturation) were selected as a sample with using the purposeful sampling method. The research population in the quantitative section was the senior school students of Tehran city in the 2022-2023 academic years, which number of 400 people of them were selected as a sample with using the multi-stage cluster sampling method. The research tools were semi-structured interviews by experts and completion of researcher-made questionnaires by students, which whose psychometric indicators were confirmed. Interview questions were design based on the theoretical foundations and with the help of professors, which for this purpose were considered seven questions. In this study, after the interview with the 16th person, the research reached saturation, and it should be noted that the duration of the interview with each of the experts lasted between 30 and 50 minutes. The validity of the interviews was confirmed by the triangulation method and their reliability was obtained by the agreement coefficient method between two coders above 0.80 and equal to 0.87 or 87%. Based on the results of the interviews, a questionnaire with 40 items was designed, which to answer each of them were used a five-point Likert scale from completely disagree to completely agree. It should be noted that the psychometric indicators of the researcher-made questionnaire were checked and confirmed. The data were analyzed by coding methods and exploratory factor analysis.

Findings: Based on the findings of coding interviews for information literacy in the curriculum of students were identified 40 components in 7 dimensions including information access and retrieval, information evaluation, information organization and combination, information ethical considerations, information communication and sharing, cognitive factors of information literacy learning and motivational factors of information literacy learning. Also, the results of the exploratory factor analysis showed that 13 components could explain 81% and all 40 components could explain 100% of the variance of information literacy in the curriculum of students, the factor loading of all 40 components was above 0.70 and information literacy in the curriculum of students on the 7 dimensions and each dimension on its components had a direct and significant effect (P<0.001). Therefore, the designed model of information literacy in the curriculum of students was valid.

Conclusion: Based on the results of this study, in order to improve information literacy in the curriculum of students it is possible to provide the basis for realizing the identified dimensions and components. In line with the results of the present study, it is recommended that both schools and families should try to increase information literacy of students. First, enriched infrastructure with information and communication technology and sufficient digital learning materials should be provided to students in schools to increase their exposure to information and communication technology and allow them to develop the awareness of the application of information and communication technology in learning and everyday life. Also, teachers should consciously integrate the information and communication technology with educational practices and develop students' awareness of using information and communication technology to solve problems they encounter in learning contexts.