

AYYILDIZ, T., GUNTEKIN, M., TEKIN, S., TOPLU, S. (2023). "Digital Literacy and Education", *International Journal of Social Science, Innovation and Educational Technologies (Online)*, Vol: 4 Issue: 15 pp: 228-240

Keywords: Digital Literacy, Education, School.

Article Type Review Article

Digital Literacy and Education

Arrived Date
28.04.2023

Accepted Date
20.05.2023

Published Date
31.07.2023


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ABSTRACT

Digital literacy is a concept that is gaining importance in today's world where modern technology and digital media are developing rapidly. This concept includes the ability of individuals to understand, use, evaluate and communicate effectively with digital technologies. Digital literacy includes not only basic computer skills, but also abilities to use the internet, social media, mobile apps, and other digital tools. Digital literacy in the educational context aims to provide students and individuals with the skills to understand and effectively use the digital world. These skills include not only technical aspects, but also topics such as information management, media reading, data security and privacy. In addition to enabling students to succeed in the information society, digital literacy education also helps them better understand the opportunities and risks presented by the digital world. Therefore, in the modern education system, digital literacy is an important subject that needs to be taught along with traditional literacy skills. In this article, the concept of digital literacy is discussed within the framework of education and it is aimed to raise awareness and also includes examples of how to use it in education.


1. INTRODUCTION

Digital literacy is the ability to effectively use information and communication technologies in today's rapidly digitalizing world. Digital literacy is not only limited to basic computer use, but also includes

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skills and knowledge related to the internet, digital devices, social media, data analysis, and other digital technologies.

Digital literacy in the field of education refers to the ability of students, teachers and educators to learn, teach and improve educational processes of digital technologies. Digital literacy teaches students important skills such as critically evaluating digital resources, effectively searching for and analyzing information, distinguishing between reliable and accurate information, and being aware of digital security. It also includes the ability of teachers to create and use educational materials and lesson plans on digital platforms.

Digital literacy is critical to increasing engagement and success in contemporary society. In a world where information and communication technologies are increasingly used, a lack of digital literacy can lead to injustices in access to information and increase the risk of missing out on the opportunities brought by the digital age.

Educational institutions and teachers should update their curricula and teaching methods to provide students with digital literacy skills. At the same time, it is important to teach students the safe and ethical use of the internet, take cybersecurity measures, and manage digital trailing. In this article, the concept of digital literacy is tried to be discussed in the context of education.

Digital Literacy

Digital literacy is a concept that includes the ability of the person to use digital technologies effectively, to understand, evaluate and to think critically. These skills help the individual to use digital technologies efficiently to live in the information age, to succeed in business and education, to communicate and access information. Digital literacy is a significantly less vague concept than information services. It is one of many new literacys that have been introduced and discussed in various disciplinary contexts over the past few decades (Huvila, 2012).

The origins of contemporary digital literacy are typically traced back to Paul Gilster (1997; Huvila, 2012). He argued in one of the first comprehensive expositions of the concept that digital literacy is 'mastering ideas, not keystrokes' (Gilster, 1997; Huvila, 2012).

Digital literacy; is the ability to use digital technology, communication tools or networks to find, evaluate, use and create information. It also refers to the ability to understand and use information from a wide variety of sources in multiple formats when presented through computers, or the ability of a person to perform tasks effectively in a digital environment (Fulton & McGuinness, 2016).

Digital literacy is not limited to the use of computers but encompasses a variety of digital platforms such as the internet, mobile devices, social media, digital publications, and the search and analysis of

information. In the digital age, digital literacy has become an integral part of everyday life and business life. Basically it includes:

1. **Search for digital information:** Digital information search refers to the ability to access accurate, reliable and needed information by using the internet effectively. It is important to be able to access and filter the vast amount of information resources brought about by the digital age. The ability to search for digital information optimizes the processes of research, learning and accessing information.
2. **Digital content creation:** Digital content production refers to the process of creating content in various digital formats (text, images, video, audio) and sharing this content on digital platforms. Digital content production enables individuals and institutions to express their ideas, stories, knowledge and experiences through various types of media. This skill increases freedom of personal expression, while also being used as part of marketing and communication strategies in the business world.
3. **Digital communication:** To be able to use digital tools such as email, messaging apps and social media platforms effectively and safely. These tools include various communication channels such as email, messaging apps, social media platforms, voice and video calling apps. Digital communication skills enable both individuals and organizations to communicate effectively, efficiently and securely.
4. **Digital security:** To be conscious of the protection of personal information and data, to combat cyber threats and to leave a digital trace. Digital security refers to the skills and measures necessary to ensure the protection of personal information and data, to deal with various cyber threats and to pay attention to the consequences of online activities.
5. **Digital critical thinking:** It is the ability to evaluate information on the Internet, recognize misleading content and distinguish reliable sources. Digital critical thinking is the ability to evaluate information, media content and other digital elements encountered in digital environments with a critical perspective. This skill includes questioning information, distinguishing reliable sources, recognizing fake news, and being conscious about online ethics and privacy. In the digital age, the ever-increasing flow of information and various media channels make it even more important for individuals to develop their digital critical thinking skills.
6. **Digital rights and ethics:** Digital rights and ethics refers to the ability to respect and be aware of copyright, privacy, and online ethics in the online world. Acting consciously and responsibly in the digital world ensures that both individuals and society can maintain their digital interactions in a healthy and fair way.

Digital literacy plays an important role in ensuring equity in access to information and managing information complexity. In today's world, where digital technologies are involved in every aspect of daily life, having digital literacy helps individuals to have a more informed and safe digital experience. Educational institutions, educators and families should pay attention to the development and support of digital literacy skills.

Education

Education is the key to success in the future and having many opportunities in our lives (Al-Shuaibi, 2014). There are three types of definitions of "education" (Scheffler, 1960; as cited in Chazan, 2022). The first type is called the descriptor. It is a phrase that proposes to indicate or explain the nature of the meaning of the word "education" using various words to explain what the phenomenon is or how it should be understood (Chazan, 2022).

The second type of definition of "education" is programmatic, which comes to defend or command a belief in what education should be or should do. A programmatic definition is less preoccupied with what the educational phenomenon or language is and focuses more on the proclamation of a particular educational practice that is seen as desirable (Chazan, 2022).

The third type of definition is conditional, but its purpose is technical and utilitarian. Basically, it's a linguistic agreement or agreement that keeps a discussion going smoothly without forcing a person to say, "This is what I mean by 'education'" every time. The explanation of the word "education" is called Version 1; a second person's comment is called Version 2, and the third comment is called Version 3 (Chazan, 2022).

The concept of digital literacy is becoming increasingly common in the 21st century (Reddy, Chaudhary, Hussein, 2023). With the development of technology, the education system is also changing (Mukul & Büyüközkan, 2023). Increasing demands from the business sector for individuals to be digitally literate have led to targeted interventions and innovations from the education sector to instill digital skills in the workforce of the future. However, despite efforts, the gap in digital skills remains globally visible (Reddy, Chaudhary, Hussein, 2023).

Education is a planned and organized process aimed at changing and improving the knowledge, skills, understanding, values and behaviors of individuals. Education enables people to learn the knowledge and skills necessary to survive and contribute to society. It usually includes, but is not limited to, formal teaching and learning activities held in educational institutions (schools, universities, vocational high schools, etc.).

The main objectives of the training are:

1. **Obtaining Information:** Education teaches individuals basic reading, writing, mathematics and knowledge of other disciplines. Thus, people can express themselves in society, transfer their thoughts and access information.
2. **Skill Development:** Education enables individuals to learn and develop specific skills (e.g., writing, communication, problem solving, leadership, digital skills, etc.). These skills support personal and professional development.
3. **Adding Value and Behavior:** The training teaches individuals ethical values, social responsibility, tolerance, empathy and other positive behavior patterns. This allows people to play a more positive and harmonious role in society.
4. **Self-Efficacy and Self-Confidence Development:** Education increases individuals' self-confidence and helps them discover their own potential.

Education contributes to the personal and social development of individuals and helps society to move forward. It also forms the basis for progress in areas such as science, technology, art and culture, making an important contribution to the progress and development of society.

Digital Literacy and School

The first challenge for children's digital literacy arises from the contradictory clues that make pictorial images both similar to and different from the three-dimensional (3D) world. Children's digital literacy has become an increasingly important skill today. Pictorial images of the three-dimensional (3D) world, in particular, can be both engaging and challenging for children. Although such images mimic the real world, they may contain some conflicting clues, which can make it difficult for children to understand. To help children overcome such challenges related to understanding and interpreting 3D imagery, various strategies for educational and technology tools have been developed. These strategies may include interactive educational materials, virtual reality experiences, and activities that enhance visual and spatial thinking.

Parents, teachers, and education professionals can offer a variety of resources and methods to help children interact with and understand 3D imagery. Realistic video footage and images retain most of the information in their real-world references, including color, shadows, relative size, and (in the case of video) movement. At the same time, babies can perceive the flatness of images (Held, Birch, & Gwiazda, 1980; Nawrot, Mayo, & Nawrot, 2009; as cited in Troseth, Strouse, Russo Johnson, 2017).

Digital literacy refers to having the ability to use information and communication technologies effectively in the digital world of our age. It is in this context that it is important to develop this skill. Improving digital literacy skills is seen as a key goal by many libraries. A growing body of evidence suggests that digital literacy is a significant barrier restricting the adoption and use of the Internet and

digital technologies in the developing world. Digital literacy can play a crucial role in expanding economic opportunities, enabling people to effectively find valuable information online (Ali, Raza, Ayyub Qaz, 2023).

Digital literacy is important not only in the assimilation of the Internet, but also in finding information efficiently in the digital world. Findings from developing countries show that digital technologies provide access to valuable information about markets, jobs, healthcare, education and financial services, but their benefits remain tied to complementary investments that enable the effective use of these technologies, such as infrastructure and skills (Aker & Blumenstock, 2014, Wheeler et al., 2022, Dodson et al., 2013; as cited in Ali, Raza, Ayyub Qaz, 2023).

Digital literacy builds on general literacy and reading skills to provide people with an understanding of how digital technology works and how to use it effectively (Nicholson, 2017). Schools play an important role in imparting digital literacy skills to students because digital technologies are increasingly important in education and other areas of life today.

The following important steps can be taken to encourage and support digital literacy for schools:

- 1. Digital Literacy Courses:** Digital literacy has become an increasingly important skill nowadays. Digital literacy lessons or programs have been developed to teach children this skill. These courses aim to help children understand, evaluate and effectively use the digital world. By offering digital literacy courses and programs, schools should teach students the skills to use digital technologies effectively, search for and evaluate information, produce digital content, and use the internet safely.
- 2. Digital Technology Integration:** Digital technology integration is the process of integrating digital tools and technologies into learning processes in the field of education. This integration aims to enable students to learn more effectively, make teachers' course content more engaging and interactive, and improve the overall educational experience. Digital technologies must be effectively integrated to support teaching processes. Teachers can provide students with a more effective learning experience by using digital tools that make lesson content more engaging and interactive.
- 3. Conscious Digital Use:** Conscious digital use is an approach that aims to use digital technologies and online platforms responsibly, maintain balance and achieve positive results. This is an important skill for both children and adults because the digital world has become an important part of our lives. Conscious digital use aims to minimize the negative effects of online interactions, content consumption and technology use and to increase positive experiences. Schools should educate students about using digital technologies responsibly and ethically. The

consequences of behavior on social media and online platforms, digital safety and privacy issues should be conveyed to students.

4. **Evaluating Digital Tools:** Students should be taught the ability to critically evaluate online content. Guidance should be given on avoiding misinformation and misleading content, recognizing reliable sources and finding the right ways to access information. A key component of effective teaching models is the quality of instruction that is produced by the teacher but also depends on how the teacher's teaching is perceived or assimilated by the students (Doyle, 2013; Hamre et al., 2013; Scheerens, 2007; as cited in Jaekel, Fütterer and Göllner, 2023). When evaluating digital tools, you should try to choose tools that students and teachers can have a better learning experience, taking into account their use cases and learning objectives. The evaluation process helps in understanding the long-term effectiveness of the tool and its potential to make a positive impact on learning outcomes.
5. **Accessibility:** Schools should make digital educational materials readily available to all. Appropriate arrangements should be made for students with disabilities to benefit equally from digital education. Making adjustments tailored to the needs of students with disabilities supports the goal of ensuring fairness and equality in education.
6. **Teacher Training:** Teachers should be trained to use digital technologies effectively and teach digital literacy skills. Teachers should set an example in the digital world and demonstrate the right digital behaviors to their students. Teachers are responsible for teaching students how to use it responsibly and ethically in the digital world.

Digital Literacy Practices in Education

The education sector has implemented significant strategies and changes over the years to adapt to the rapid development of technology and changing workforce requirements. These strategies, which aim to prepare students for the technology-oriented workplace of the future by improving their learning and digital skills, have transformed the understanding and methods of education. Over the years, the education sector has implemented various strategies to enhance the learning and digital skills of its students and prepare them for technology-driven workplaces (Reddy, Chaudhary, Hussein, 2023).

“Educators have a crucial role in educating students for the digital world. They should guide and support students as they navigate the digital environment, as well as provide them with skills such as digital literacy, media literacy and critical thinking.” (Url-1). Digital literacy; refers to evolving digital and social media applications including but not limited to search engines, medical blogs, Twitter, YouTube, Facebook, Wikipedia, and other social media channels (Combs & Meskó, 2015). Digital literacy practices in education are methods and tools used to enable students to understand the digital world,

use it effectively, and develop an informed and safe attitude towards digital technologies. Some of the commonly used practices for digital literacy in education are shown in Figure 1.



Figure 1. Some Widely Used Practices for Digital Literacy in Education

Source: Figure 1 was created by the authors.

Some Widely Used Practices for Digital Literacy in Education

- 1. Training Materials and Content:** Educational materials can be prepared for digital literacy and various digital contents (video, audio, interactive materials) can be used. These materials enrich the learning experience of students and make it more engaging. Using a variety of digital materials for digital literacy training is important to encourage students' active participation, enrich the learning experience, and enable them to learn more effectively.
- 2. Digital Tools and Apps:** For digital literacy in education, a variety of digital tools and applications can be used. For example, digital tools such as online search engines, digital books, online test and exam tools, video conferencing tools, e-learning platforms support students' access to information and learning.
- 3. Media and Sourcing:** It is important to teach students to critically evaluate information from the internet and other digital media sources. Distinguishing misleading or unreliable content and using reliable sources increases students' level of digital literacy.
- 4. Digital Storytelling:** Digital storytelling is an approach that combines traditional storytelling with digital technologies to deliver interactive, multimedia, and participatory experiences. Such stories enrich storytelling by incorporating various digital elements such as text, images,

audio, video, animation, and interactive elements. Digital storytelling is also frequently used in education to provide students with creativity, problem-solving and digital skills. Digital storytelling encourages students to create their own digital content. Students express themselves by creating their stories in video, animation or other digital formats and develop their skills in producing digital content.

5. Digital storytelling examples

- a) **Digital Storybooks:** Besides traditional storybooks, digital books are also popular. Digital books combine text, images, and interactive elements to provide readers with a richer experience.
- b) **Online Storytelling Tools:** Digital platforms and tools allow students to create and share their stories digitally. These tools allow you to easily combine text, images, audio and video.
- c) **Dijital Animasyonlar:** Using animation tools, students can create characters and scenes, bring the story to life, and make the narrative more compelling.
- d) **Digital Story Games:** Story-based video games offer interactive experiences where players can influence the course of the story. Players make decisions and shape the end of the story.
- e) **Podcast Stories:** Audio stories and podcasts tell the story with audio only, giving listeners immersive experiences.
- f) **Video Stories:** The video format is a powerful tool for telling the story by combining visual and audio elements. Videos can be effective in terms of acting out scenes and building emotional connection.
- g) **Augmented Reality Stories:** Augmented reality technology combines the physical world with digital content to tell interactive and experiential stories.

Digital storytelling is a great opportunity to give students creative expressive abilities, develop effective communication skills, and learn to use technology creatively. It also provides an opportunity to teach students how to act ethically and safely in the digital world. This method makes learning more fun, engaging, and student-centered.

6. **Digital Security and Privacy Training:** Digital literacy includes safe and ethical online behavior. It's important to train students on how to protect their personal information, protect against cyberbullying, and leave a digital trail. In recent years, *"technology; It has reshaped the way we communicate, work and learn, making digital literacy and citizenship skills critical for everyone. Digital citizenship is the responsible and ethical use of technology, and as children spend more time online, it is becoming a top priority for schools and parents. The need for digital*

citizenship education cannot be ignored, as students must learn to navigate the digital world safely and positively in order to succeed in school, career, and personal lives" (url-1)

7. **Digital Ethics:** Ethical behavior in the digital world, copyrights, content sharing and other ethical issues should be taught to students. Digital ethics is important for a positive and responsible membership in the digital society.

"It is necessary to have a curriculum that is appropriately designed to enable students to understand digital citizenship. A digital citizenship curriculum; It should cover topics such as online safety, cyberbullying, privacy, and social media etiquette. Some of the proposed digital citizenship curriculum and lesson plans include:

iKeepSafe: *CyberWise provides educators with digital citizenship resources that teach children to use digital media responsibly.*

CyberWise: *CyberWise provides educators with digital citizenship resources that teach children to use digital media responsibly.*

Common Sense Media's Digital Citizenship Curriculum: *This curriculum provides educators with a K-12 digital citizenship curriculum that covers digital topics." (Url-1).*

In a study by Vanwesenbeeck, Ponnet, and Walrave (2017); adolescents aged 16-18 who watched retargeted ads on social media (Facebook) were studied. As a result of the examination, the following observations were revealed:

- Retargeted advertising is associated with a higher level of purchase intent,
- Interference in an adolescent's "private space" leads the teen to be skeptical about this practice and a lower purchase intent,
- And adolescents with higher privacy concerns or who receive a text message advising themselves about retargeting have more skepticism and lower purchase intent.

RESULT

In conclusion, digital literacy helps individuals to live successfully, safely and consciously in the digital age and makes educational processes more efficient and effective. For this reason, it is important that education systems give due importance to digital literacy education and give priority to studies towards it. Gilster (1997) states that the most 'basic' competence when 'acquiring digital literacy for Internet use' is 'the ability to make informed judgments about what you find online' (Mckeown, 2016). Digital literacy is an indispensable skill for students to succeed in the contemporary world and to use digital technologies safely and efficiently. Schools contribute to the mission of raising conscious and equipped individuals of the future by giving due importance to digital literacy education. Digital literacy practices in education provide students with the ability to use digital technologies responsibly

and effectively, enabling them to succeed in the information age and to make the most of the opportunities brought by the digital world. These practices make educational processes more efficient and effective and help students adapt to the digital age. Digital literacy practices in education play a critical role in providing students with the skills necessary to succeed in today's digital world. These apps help students develop essential digital skills such as the ability to use technology effectively, analyze information, think critically, communicate and demonstrate ethical behavior online.

Acknowledgment: The authors have not received financial support from the University or any other institution/organization. The authors are grateful to the journal's anonymous reviewers for their extremely helpful suggestions to improve the quality of the manuscript.

Conflicts of Interest: The authors declare no conflict of interest.

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Young adolescents' advertising literacy and purchase intention in social network games: Influence of perspective taking and need for cognition

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