

## Chapter 9

# Digital Literacy Training: Opportunities and Challenges

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### ABSTRACT

*The new information age technologies influence and shape the social and business life of individuals. Technological changes and their impact on business and society are also seen in cities, countries, and even on a global scale to use resources efficiently and to increase social welfare. As the internet is a fast and convenient communication tool, it is important to make correct decisions by distinguishing functional information while adapting to this change. In the process of digitalization, it is necessary to cooperate with libraries and other memory institutions to interact with digital cultural heritage in obsolete or inaccessible formats. From this point of view, the smart cities are seen as the reflections of digitalization on social life; then the difficulties and opportunities encountered in the process are mentioned in this chapter. In this way, information awareness which can directly affect the level of the ability to use information effectively is expected to increase in the digitalization process.*

### INTRODUCTION

The current and expected widespread reach of smart devices are possible with individual and institutional attention. The launch or use of a new technology product means that individuals make changes in their old habits and behaviors. With the aim of effective use of resources, increasing social welfare, sustainability, and development, high-tech products are being implemented in daily life, in cities, and all public and private institutions such as e-government and e-commerce (Adam & Alhassan, 2021). The success of this entire process does not depend solely on the advancement of technology. In addition, the individual should understand and adapt to this technology by improving the ability to use it. This new knowledge, which an individual must develop to adapt to the innovations brought by the age, is called digital literacy because its focus is technology. This is the process of awareness and realizing

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new knowledge, and it therefore involves not only reading or writing but also acquiring a new pattern or model of behavior. Many factors, such as the acceleration of globalization, changes in urbanization policies, and a productive, active life require such a change in behavior patterns.

In all this process of change, there are great inventions that mark all stages of social development, from people living in communities to agricultural life, industrialization, and the knowledge age. These inventions have radically changed the way of life, urbanization, state structure, and even global trade. Libraries, Archives, and Museums (LAMs), which are called cultural heritage or information providing institutions, record the journey of these developments by visual, written, or other methods. Transferring these nonrenewable or irreplaceable resources to new generations can only be associated with the cooperation of relevant institutions, keeping up with technological advancements and the current age (Trant, 2009). While increasing humanity's knowledge, LAMs have made progress by adding new information from the past and sometimes by offering radical solutions. Digitalization has enabled the developments that humanity has experienced to date to progress much faster in the last century. This development has radically changed social life and removed boundaries in the business world. For this reason, the concept of literacy, which is one of the requirements of the age, is vital in terms of interpreting all these developments correctly and using information effectively. The importance of concepts such as digital literacy, which has many social, economic, and political consequences, has become even more prominent in the information age. Therefore, smart cities, one of the effects of digitalization on human life, is mentioned first, followed by the difficulties of literacy that emerge when pressuring society to change in the information age in this chapter of the book. Lastly, the importance of digital literacy education is emphasized and detailed. Handling the issue from this perspective is also important in terms of drawing attention to the impact of cultural heritage institutions on social structure.

## **Digitization and Smart Cities**

With the transition to settled life, cities have become the focal point of human life. Rapid population growth and demographic changes have begun to manifest themselves in cities. Demographic changes in cities, transportation, rapid and unplanned urbanization, the phenomenon of immigration, education, health, safety, energy, water, and waste management strain the infrastructure of cities and bring new problems with it. For this reason, there is a need for technological innovation where the resources of the city are used more efficiently, information and communication technologies are used effectively and better service is provided to city residents (Batty et al., 2012). In this context, the smart city concept has emerged with the increasing emplacement of technological applications at the center of the search for solutions that form urban systems, facilitate people's lives and increase the quality of life.

The smart city is a result of new solutions offered by information communication technologies for more livable, more sustainable, and more efficient cities. However, these solutions should be implemented in cooperation with all relevant stakeholders and institutions with a human-centered design (HCD) and approach, without violating the confidentiality of personal data and other ethical rules. The smart city is predominantly an Information and Communication Technology (ICT) framework for developing, deploying, and promoting sustainable development practices to address increasing urbanization challenges (Agee, 2021). This ICT framework is an intelligent network of connected objects and machines that transmit data using wireless technology and the cloud. Cloud-based IoT (internet of things) applications ingest, analyze and manage data in real-time to help municipalities, businesses, and citizens make better decisions that improve the quality of life (Gavrilović & Mishra, 2021).

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