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Introduction to Digital Education

Digital Education

- Digital education is an approach to the use of digital tools and technologies in the process of teaching and learning (Richter & Jung, 2023).
- Digital education, also known as technology-enhanced learning, online learning or e-learning, refers to the use of digital technologies to enhance and support teaching and learning processes.
- It encompasses a wide range of strategies, tools, and platforms that enable educators to create interactive and engaging learning experiences for students.
- Digital education goes beyond traditional classroom settings by leveraging technology to facilitate anytime, anywhere learning.



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The Key Points About Digital Education (I)

- It involves the **innovative use of digital tools** and technologies such as online platforms, educational software, multimedia resources, and social media to deliver educational content and experiences.
- The purpose of digital education is **to provide students with a comprehensive education** that prepares them for success in the digital age by developing digital literacy and technical skills.
- Digital education **enables personalised and flexible learning**, as students can access educational content and resources at their own pace and in a way that suits their individual learning styles.
- Digital education tools and approaches **include learning management systems**, online course platforms, educational apps, virtual reality, and the use of big data analytics to optimise learning.

The Key Points About Digital Education (2)

- Implementing digital education effectively **requires addressing key factors** such as access to digital content, building the capacity of teachers and students to use digital tools, and ensuring reliable connectivity.
- Digital education has the **potential to transform education** by enhancing the quality and relevance of learning, strengthening inclusion, and improving education administration and governance.

In summary, digital education leverages digital technologies to deliver a more engaging, personalised, and effective learning experience that prepares students for success in the modern, technology-driven world.

Distance Learning

Many different definitions of distance learning are available in the IGI dictionary showing that

- learning can be organized by a department or instructor using a learning management system (LMS),
- studying remotely, giving the freedom to learn at any convenient time,
- the type of learning where information and communication technology (ICT) is its main mean for content delivery, interaction and facilitation and it can be either asynchronous or synchronous.

[Sustainability | Free Full-Text | Models for Administration to Ensure the Successful Transition to Distance Learning during the Pandemic \(mdpi.com\)](#)

Technology-Enhanced Learning (TEL)

- The term **Technology-Enhanced Learning (TEL)** is used to describe the application of information and communication technologies to teaching and learning.
- Explicit statements about what the term is understood to mean are rare (Kirkwood & Price, 2014).



Online Teaching and Learning

- **Online teaching and learning** are forms of open and distance education (Zawacki-Richter & Jung, 2023).
- Singh and Thurman (2019) provided multiple definitions of online learning based on the systematic literature review for over the last 30 years.
- Thus, online learning is defined as learning experienced through the internet/online computers in a synchronous classroom where students interact with instructors and other students and are not dependent on their physical location for participating in this online learning experience (Singh & Thurman, 2019, p. 302).

E-learning

E-learning is an approach to teaching and learning, representing all or part of the educational model applied, that is based on the use of electronic media and devices as tools for improving access to training, communication and interaction and that facilitates the adoption of new ways of understanding and developing learning (Sangra`et al., 2012).

Blended and Hybrid Learning

- **Blended learning** nowadays refers to the learning process that combines face-to-face and online interactions in such a way that both complement each other (Hrastinski, 2019).
- **Hybrid teaching** is defined as an educational approach or delivery mode that combines traditional face-to-face instruction with online learning to create a flexible and dynamic learning environment. In hybrid teaching both on-site students and remote students attend simultaneously during synchronous (real-time) teaching and learning sessions (Vaughan et al., 2013; Beatty, 2019; Padilla Rodriguez & Armellini, 2021).

Digital Education Components

- Online learning content
- Interaction - E-tutoring, e-coaching, e-mentoring
- Collaborative learning
- Virtual classroom
- Assessment
- Feedback
- Support services



Synchronous and Asynchronous Digital Education

Digital Education activities can be synchronous or asynchronous:

- **Synchronous activities** take place in real time. Synchronous communication between two people requires them to both be present at a given time. Examples of synchronous activities include chat conversations and audio/video conferencing.
- **Asynchronous activities** are time-independent. A self-paced course is an example of asynchronous e-learning because online learning takes place at any time. E-mail or discussion forums are examples of asynchronous communication tools.

Preparation for Digital Education (1)

- Provision of the participants (lecturers and students) with the tools necessary for distance learning (ICT equipment) and ensuring that all participants have it;
- Social environment of the participants, whether it ensures full participation in the study process;
- ICT equipment used by the higher education institution, whether it is appropriate and sufficient to organize distance learning studies;

Preparation for Digital Education (2)

- ICT software used in the study process of a higher education institution, whether it is suitable and sufficient to establish a remote work and learning environment;
- Competences of all participants in the study process (lecturers and students) to participate in the study process;
- Financial possibilities of a higher education institution to provide participants and administration of the institution with appropriate ICT equipment, to create an appropriate social environment, and to create possibilities for the development of the competencies that lecturers may lack.

References (I)

- Beatty, B. J. (2019). Hybrid-flexible course design. EdTech Books.
- Collis, B., & Moonen, J. (2001). Flexible learning in a digital world. London: Kogan Page.
- Jung, I. (Ed.). (2019). Open and distance education theory revisited. Singapore: Springer.
- Keegan, D. J. (1980). On defining distance education. *Distance Education*, 1(1), 13–36. <https://doi.org/10.1080/0158791800010102>.
- Kirkwood, A., & Price, L. (2014). Technology-enhanced learning and teaching in higher education: what is 'enhanced' and how do we know? A critical literature review. *Learning, Media and Technology*, 39(1), 6-36.
- Lea, M. R., & Nicoll, K. (2002). Distributed learning—Social and cultural approaches to practice. London: Routledge/Falmer.
- Osguthorpe, R. T., & Graham, C. R. (2003). Blended learning environments: Definitions and directions. *Quarterly Review of Distance Education*, 4(3), 227.
- Padilla Rodriguez, B. C., & Armellini, A. (Eds.). (2021). *Cases on active blended learning in higher education*. IGI Global.

References (2)

Sangrà, A., Vlachopoulos, D. & Cabrera, N. (2012). Building an Inclusive Definition of E-Learning: An Approach to the Conceptual Framework. *International Review of Research in Open and Distributed Learning*, 13(2), 145–159. <https://doi.org/10.19173/irrodl.v13i2.1161>

Singh, V., & Thurman, A. (2019). How Many Ways Can We Define Online Learning? A Systematic Literature Review of Definitions of Online Learning (1988-2018). *American Journal of Distance Education*, 33:4, 289–306, DOI: [10.1080/08923647.2019.1663082](https://doi.org/10.1080/08923647.2019.1663082)

Vaughan, N. D., Cleveland-Innes, M., & Garrison, D. R. (2013). *Teaching in blended learning environments: Creating and sustaining communities of inquiry*. Athabasca University Press.

Veletsianos, G., VanLeeuwen, C., Belikov, O. & Johnson, N. (2021). An Analysis of Digital Education in Canada in 2017-2019. *International Review of Research in Open and Distributed Learning*, 22(2), 102–117. <https://doi.org/10.19173/irrodl.v22i2.5108>

Weller, M. (2022). The Rise and Development of Digital Education. In *Handbook of Open, Distance and Digital Education* (pp. 1-17). Singapore: Springer Nature Singapore.

Zawacki-Richter, O., & Jung, I. (Eds.). (2023). *Handbook of Open, Distance and Digital Education*. Springer.

Thank you for attention

