

INFORMATION AND DATA SERVICE COMPETENCE: CONCEPT, APPROACHES, AND SIGNIFICANCE

Oxunov Tohirjon Ma'murjon ugli

Independent Researcher

Nizami Tashkent State Pedagogical University

Abstract:

This article focuses on explaining the concept of information and data service (IDS) competence, which is increasingly vital for future specialists. It addresses the content of IDS competence, various theoretical and practical approaches to this concept, as well as its significance in the digital age. By expanding upon the notion of IDS competence, the article clarifies its role in modern educational processes and professional activities.

Keywords: Information and data service competence, digital technologies, information literacy, professional training, integrative approach, digital literacy.

Introduction

In today's rapidly evolving technological environment, a global digital ecosystem is taking shape. In such circumstances, every professional is expected to quickly and effectively process information flows, analyze them, and draw meaningful conclusions. Consequently, "information and data service competence" (IDS competence) takes on particular importance, emerging as a set of essential skills and abilities for future specialists in any field. This article examines the theoretical foundations of IDS competence, various perspectives and interpretations of it, and its relevance and significance within the realm of modern digital technologies.

MAIN SECTION

Information and data service competence is becoming more relevant by the day, especially given the rapid growth of digital technologies worldwide. This competence demands that every professional—particularly aspiring developers—be able to work quickly and effectively with large volumes of information, as well as accurately assess and process data. The discussion in this article centers on the content of IDS competence, approaches to understanding it, and its importance in the context of digital innovation.

In general, the term competence refers to a set of domain-specific knowledge, skills, and experiences. Meanwhile, information and data service involves a sequence of complex operational tasks, such as collecting, sorting, processing, presenting, and evaluating information. Therefore, IDS competence extends beyond basic information literacy to include analytical capabilities that drive effective decision-making.

From a pedagogical standpoint, future professionals—especially those in programming and software development—should be taught to handle information through practical projects and assignments that simulate real-world situations. A psychological perspective underscores the importance of motivation, attention, memory, and related cognitive processes, all of which strongly influence an individual's ability to absorb and apply large volumes of data productively.



Within information technology, effective usage of databases, networks, online platforms, and software tools remains critical, not to mention the need for robust cybersecurity measures. A managerial view highlights the effective organization and oversight of information, as well as group collaboration and leadership skills, each contributing to efficient data-driven decision-making.

Digital technologies have raised the bar for developing this competence on a broader scale. In the global labor market, professionals stand to gain a competitive advantage through intelligent selection of relevant data, evaluating its credibility and suitability, and discarding extraneous information at the right time. Moreover, as the concept of digital literacy continues to expand, professionals are expected not only to command operational and technical know-how but also to demonstrate advanced analytical and creative thinking capabilities.

Contemporary vocational and higher education systems must consider a range of factors in building IDS competence. These include crafting well-defined study programs, focusing on real-world projects involving data manipulation, encouraging independent research, and emphasizing information security. Aspiring developers, in particular, can gain substantial benefits from acquiring skills in designing databases, working with artificial intelligence (AI) or big data, and operating in online platforms and networks.

Looking ahead, as technologies become increasingly integrated across various domains, IDS competence is poised to become a cornerstone of professional expertise. The expanding relevance of AI, blockchain, advanced mobile communications, and quantum computing will likely intensify data flows, creating even more complex and dynamic work environments. Consequently, not only software developers but also professionals from myriad fields will need to master information management skills. In this sense, strengthening IDS competence serves both as an enabler of sustained competitiveness in the labor market and a catalyst for active engagement with future innovations.

When viewed as an ongoing developmental objective rather than an isolated skill, information and data service competence aligns with modern teaching methodologies that equip future programmers and other professionals to attain high-level performance in the workforce. Understanding how to process data efficiently—and thereby propose innovative solutions—could ultimately define professional excellence in an ever-more digitized world.

CONCLUSION

Information and data service competence stands out as a vital factor in preparing specialized personnel in our digital age, especially in fields like software development. Professionals with an advanced level of this competence skillfully manage information flows, producing rapid, precise, and competitive solutions. The continued evolution of IDS competence not only ensures professional stability against impending technological disruptions but also spurs continuous innovation across industries. By recognizing the necessity of strengthening IDS competence, educators and organizations pave the way for success in both current and future professional landscapes.



REFERENCES

1. American Library Association (2000). Information Literacy Competency Standards for Higher Education.
2. Bruce, C. (1997). The Seven Faces of Information Literacy. Adelaide: Auslib Press.
3. Eynon, R. (2021). Digital inequalities in policy and practice: Where next for digital inclusion research? *Information, Communication & Society*, 24(3), 401-419.
4. Kuhlthau, C. C. (2004). *Seeking Meaning: A Process Approach to Library and Information Services* (2nd ed.). Westport, CT: Libraries Unlimited.
5. Mayer, R. E. (2010). *Learning with Technology*. Washington, DC: American Psychological Association.
6. Mojarad, S., & Hosseini, M. (2019). A framework for assessing information literacy among university students. *Journal of Information Science*, 45(2), 232-246.
7. Qodirov, A. (2020). Raqamli texnologiyalar sharoitida axborot xizmati kompetentligini rivojlantirish. *Pedagogik innovatsiyalar jurnali*, 11(2), 45-51.
8. Savolainen, R. (2018). Information needs, seeking and use. *Annual Review of Information Science and Technology*, 42(3), 293-327.
9. Wilson, T. D. (1999). Models in information behaviour research. *Journal of Documentation*, 55(3), 249-270.

