

The axiology of national culture in the context of digital education challenges

Aurica BUZENCO (Republic of Moldova),

PhD, Associate Professor, Faculty of Psychology and Special Psychopedagogy, “Ion Creangă”

State Pedagogical University of Chisinau,

buzenco.aurica21@gmail.com, ORCID:0000-0002-5168-7186

Valeria BUZENCO, (Republic of Moldova),

PhD, University Lecturer, Faculty of Psychology and Social Assistance

University of European Studies of Moldova, Chisinau, buzencovaleria@gmail.com

Abstract

Digital education has asserted itself as a transformative force in contemporary learning environments, reshaping pedagogical practices and access to knowledge. The effectiveness of digital learning initiatives is strongly influenced by national cultural values, which shape students' expectations, engagement patterns, and attitudes toward technology-mediated instruction. The article analyzes the relationship between national culture and digital education, highlighting how cultural dimensions such as individualism versus collectivism, distance from power, avoidance of uncertainty, and long-term orientation influence the adoption, design, and implementation of digital learning strategies. The study highlights the need for culturally sensitive digital education policies and practices that recognize learners' diverse values and behavioral norms. At the same time, it explores how digital education can support inclusive, adaptable, and ethically informed learning environments, aligned with the local cultural context and oriented towards developing global skills. The analysis provides a conceptual framework for understanding the influence of cultural factors on digital learning outcomes and proposes practical directions for teachers, decision-makers and instructional designers concerned with optimizing digital education in culturally diverse contexts.

Keywords: digital education, national culture, cultural dimensions, culturally sensitive learning, pedagogical innovation.

Introduction

The profound transformations of the contemporary world are printing significant changes in all areas of social life, including education, where the accelerated growth of the volume of information determines the permanent need to adapt to the demands of the digital age. The experience of countries with high-performance economies confirms that sustainable development and social progress depend to a large extent on the quality of the educational process and on the way in which human capital is harnessed. In a global context marked by digitalization and interconnection, education has the role of forming flexible personalities,

capable of critical thinking and creative action in a knowledge-based society. The education system is called upon to provide skills adapted to international standards, favoring the integral development of the individual through the balanced integration of digital technologies in learning and training activities.

National culture and the role of values in digital education

The digitization process acquires authentic meaning when analyzed from the perspective of the values of national culture, as modern technology can become a tool for reaffirming one's identity and perpetuating one's own spiritual heritage. In this framework, the use of digital resources contributes to the preservation, promotion and reinterpretation of cultural traditions, giving younger generations the opportunity to assimilate them into current forms of expression.

The digital space brings opportunities for communication but also major ethical risks regarding authenticity, confidentiality, and information manipulation.

L. Boia (2019) observes that national identity is “always negotiated between reality and myth”, and the digital environment amplifies this tension through the proliferation of false narratives and cultural propaganda (Boia, 2019).

Z. Bauman speaks of “liquid modernity”, in which values become fluid and unstable, a phenomenon accentuated by the online environment, where ethics is often relativized (Bauman, 2000).

The 2018 European Union report highlights the difficulties encountered in the process of integrating digital technologies in education, mentioning the need to train teachers' digital skills, adapt curricula and modernize training methodologies. The report's conclusions are also reflected in national educational realities, where the reform of the system must ensure a coherent alignment between technological innovation and the cultural-identity dimension of education (RUE, 2018).

Digital education and the contemporary learning environment

Digital ethics is becoming a battleground between freedom of expression and social responsibility, between visibility and dignity. Seen through the prism of national cultural values, it involves cultivating a digital culture oriented towards responsibility, discernment, and respect for the community's spiritual heritage. From this perspective, the integration of modern technologies is a complex formative process that supports the development of personality, the consolidation of cultural identity, and the preparation of young people for active and conscious participation in the life of contemporary society. In the digital environment, belonging to national culture risks being replaced by a superficial belonging to global consumer cultures, and digital education can serve as a tool to protect cultural identity. The integration of digital technologies in the contemporary educational system determines a complex reconfiguration of the relationship between education and culture. In the analysis carried out by N Barkóczy (2021), technology is interpreted as an environment of convergence between the educational and cultural dimensions, with the role of facilitating

the formation of intercultural competences and supporting the valorization of spiritual heritage through digital resources (Barkoczi, 2021).

Digital education is defined as a broad training process that includes technical, cultural, ethical, and social dimensions. Within it, the concept of *digital citizenship* is developed, associated with responsibility, moral conduct and awareness of cultural identity in the virtual environment. The people involved in the learning process are oriented towards the conscious and creative use of digital resources, through which they can express and capitalize on the values of the national culture. The digital transformation of the educational environment offers the possibility to develop learning scenarios adapted to cultural diversity, aimed at strengthening the link between cultural heritage and modern technological tools. These scenarios enable the reinterpretation of cultural content through interactive methods, ensuring the continuity and relevance of national values in shaping younger generations.

The innovative nature of the current training context, together with the extensive potential of digital technologies to configure an attractive and diversified educational framework, determines a reconfiguration of the attributes of the teaching-learning environment. These transformations give the educational process new valences, oriented towards interactivity, autonomy and the integration of multiple resources. In the context of digitalization, the concept that the educational process takes place in a spatial-temporal continuum, overcoming traditional institutional limits, is strengthened. Culture is the formative benchmark of human development, and technology acts as a mediator of learning, facilitating the development of educational scenarios that promote informal learning, stimulate motivation and expand access to knowledge and cultural expression (Barkoczi, 2021).

L. Ilomäki and M. Lakkala (2018) describe the educational unit as a framework for social and collaborative activities carried out by teachers, pupils, students and other participants involved in the educational process. These interactions help shape and transform educational culture, values, and practices. With the digitization process, the speed of knowledge sharing increases, which drives significant transformations in the teaching profession and opens up new directions for the formation of cultures based on the exchange of experience and shared learning (Ilomäki & Lakkala, 2018).

Cultural dimensions and influence on digital education

The concept of national culture is important in the way individuals learn and interact with new educational technologies. G. Hofstede defined culture as a kind of “*mental software*” that distinguishes members of a group from others, highlighting that nationally shared values profoundly influence social behaviors and practices, including educational ones.

In the educational context, the theoretical framework of cultural dimensions provides a valuable lens to examine how values such as distance from power, individualism, or avoidance of uncertainty shape classroom dynamics, teacher-student relationships, and learning behaviors. 2013).

Recent studies confirm the link between national culture and the success of e-learning initiatives. A systematic analysis (2001-2020) on the adoption of virtual learning platforms in different countries shows that differences between national cultures explain significant variations in the decision of institutions to adopt these technologies. For example, a global study published in 2024 found statistically significant differences between groups of countries classified by cultural values, in almost all digitization indicators analyzed (proportion of internet users, social media users, preference for certain platforms, etc.). This suggests that cultural values play a substantial role in shaping digital habits and access to technology: societies with more secular values and oriented towards self-expression tend to have a higher degree of digital penetration (more internet users, mobile services, online payments, etc.). In contrast, in traditionalist cultures, certain technologies may be adopted more slowly or used differently, according to local norms (Iamalova, 2024).

The values of national culture: dignity, solidarity, creativity, respect, can be **ethical benchmarks for digital behavior**. A. Pleșu (2005) emphasizes that ethics cannot be separated from the “cultural style of a nation”, which is expressed through sensitivity to truth and beauty (Pleșu, 2005).

C. Noica (1978) proposed a “culture of utterance”, an ethics of the well-spoken word, an important principle in an internet invaded by violent and superficial language (Noica, 1978).

The rediscovery of the values of national culture means a nostalgic return, an ethical anchoring in the digital, through a “morality of the word and responsibility”.

Cultural diversity can be analyzed through several dimensions, but four of them are frequently highlighted as having a particular impact on educational and technological practices: *individualism vs. collectivism*, *distance from power*, *avoidance of uncertainty*, and *long-term* (vs. short-term) orientation. Each dimension influences the way students and teachers interact with the digital learning environment and how new educational technologies are adopted:

- *Individualism vs. collectivism* – In individualistic cultures, people emphasize personal autonomy and the achievement of individual goals, while in collectivist cultures, group loyalty, cooperation, and common goals prevail. These orientations are reflected in digital education through different preferences in how to learn: learners in individualistic societies may prefer *self-paced*, flexible learning paths that allow them to progress independently, while those in collectivist societies may respond better to group activities and a community learning framework. Meta-analytic studies on e-learning adoption show that in collectivist cultures the influence of social norms (*what others think about the usefulness of online courses*) and self-efficacy (confidence in one's ability to succeed) on the intention to use e-learning is much stronger than in individualistic cultures. In other words, in a collectivist country, if family, friends or colleagues positively value online learning, the individual will be much more motivated to participate, and if they feel insecure about their digital skills, they will probably not continue the course. On the other

hand, in an individualistic country, the decisive factor for the learner is the perception of the usefulness of the online course, how much they use it practically, as it has a greater weight in the adoption decision (Zhao, et.al., 2021).

- *Distance from power*—this dimension refers to how much a society accepts inequality and hierarchy in power relations (e.g., between teachers and students). In cultures with a long distance from power, teacher authority is rarely challenged, teaching style is often more *masterful* and formal, and students expect clear guidance and structure. In contrast, in cultures with a short distance from power, the teacher-student relationship is more egalitarian, with emphasis on student-centered learning, open dialogue, and two-way feedback. These differences influence the adoption of educational technologies: e-learning platforms originating from low-distance environments (e.g., many Western designs) often assume that users (students) will take initiative, independently manage their learning, and interact freely with teachers (Daouk, et.al., 2022).
- *Avoidance of uncertainty* – this dimension describes the degree to which members of a culture feel comfortable with unforeseen, ambiguous, or new situations. Cultures with a strong uncertainty avoidance tend to favor clear rules, detailed planning, and security, while cultures with a higher tolerance for uncertainty are more likely to accept experimentation, innovation, and lack of predictability. In education, a high-avoidance culture will prefer structured curriculum, step-by-step guides, and students will need clear instruction on how to learn and use the new tools. In the implementation of digital education, this translates into the need to provide additional support and structure to learners in risk-avoidant environments.
- *Long-term vs. short-term orientation* - this dimension reflects the prevailing temporal perspective of a culture: some societies are future-oriented, valuing saving, planning and perseverance (long term), while others focus more on the present or past, valuing tradition and immediate satisfactions (short term). Temporal cultural orientation influences attitudes towards investing in education and technology. Long-term oriented communities will see digital education as a strategic investment in the future of young people and the economy, being willing to allocate considerable resources to digital skills training and infrastructure development, even if the immediate results are not spectacular. Conversely, where a short-term vision prevails, immediate benefits are often expected from new educational technologies, otherwise interest may decline rapidly.

Although we have discussed these four dimensions separately, in reality they interact in a complex way in each national context. Cultural analysis provides a useful *conceptual framework* to understand why certain e-learning strategies work well in one place and fail in another. By knowing the cultural profile, educational factors can anticipate potential learner resistance and adapt instructional design accordingly.

Given the major influence of cultural values on learning behaviors, it becomes imperative that policies and practices for implementing digital education are culturally sensitive. A first

direction of action is the localization of the curriculum and digital content. Translation of study materials is not enough; Often deep customization is required. For example, experts point out that certain courses aimed at developing *soft* skills or managerial competencies (e.g. negotiation, conflict resolution) require almost entirely rewritten teaching materials when they are intended for another cultural space, as the way of communication and examples must be adapted to the context (Kato, et.al., 2013).

A second direction refers to the training of teachers and instructional designers in the spirit of cultural competence. Teachers who create or deliver online courses must be aware of the cultural diversity of their students and adjust their methods accordingly. The concept of *culturally-responsive digital teaching* emphasizes that educators must value each student's unique experiences and identity and build *learning "bridges"* from them (Wcet, 2023).

Digital education, inclusion and ethical challenges

A major benefit of digital education, when implemented intelligently, is its potential to create more *inclusive, flexible and ethically aware* learning environments that serve both local needs and global goals.

Increased inclusion through digitalization. Digital platforms, by their nature, can expand access to education beyond traditional constraints of space and time. For geographically isolated communities or disadvantaged groups, online learning can be a chance to benefit from quality educational resources. UNESCO stressed that digital technology has the power to strengthen inclusion and provide open learning opportunities for all (UNESCO). An example is the case for people with disabilities: digital tools can provide increased *accessibility* (from screen readers for the blind, to subtitles and machine translations for the hearing impaired, or the possibility to learn from home for those with reduced mobility). Also, in rural areas or in countries where there is a shortage of qualified teachers, *e-learning* can bring the best educators "virtually" in front of students.

From local identity to global skills. Another role of digital education is to prepare young people for an increasingly globalized and interconnected world, without uprooting them from their local identity. These two objectives can support each other, if the digital curriculum is well designed. On the one hand, the integration of local content (as mentioned before) ensures the relevance and legitimacy of education in the eyes of students; On the other hand, the fact that online platforms can connect students and teachers from different corners of the world is a unique opportunity to develop global skills. Digital education facilitates collaboration between students from different cultures, promoting the exchange of diverse ideas and perspectives, international virtual seminars, workshops and conferences enrich the learning experience and contribute to a global understanding of cultures.

Through online interaction with peers from other countries, students can practice their intercultural skills: they learn to communicate effectively across language and cultural barriers, develop empathy and appreciation for diversity, and become more aware of their own cultural identity (through contrast and comparison). For example, an eTwinning project between schools in Europe can involve a joint blog in which each class posts about local

traditions related to the environment, and the others react, students will understand both global issues (e.g. climate change, which affects everyone) and the particular way in which they are felt and addressed in different cultures. These transformative global learning experiences help reduce stereotypes and prejudices and form a sense of global citizenship in young people.

H. Gardner and K. Davis (2013) show that young people “born digitally” need an “ethics of meaning” to guide the use of technology (Gardner & Davis, 2013).

D. David (2015) suggests that for Romania, digital modernization must be accompanied by a “collective identity therapy”, in which national values become criteria of moral selection. *and* digital education must cultivate not only technical skills but also cultural awareness and moral discernment (David, 2015).

Ethical and identity challenges in the digital space. While digital education opens the doors to the world, it also brings challenges related to ethics and cultural identity. One of these is exposing young people to a huge volume of online content, not always filtered or adequate. Global cyberspace abounds in information, but also in misinformation, stereotypes, offensive or harmful content. Without guidance, students can internalize messages that go against the ethical values promoted by the school or family. Traditional moral education must also be extended to online behavior: what does respect mean in virtual communication, how to relate to diversity in the online environment, why it is important to combat cyberbullying, how to respect the rights and privacy of others, etc. The ethical and identity challenges in the digital space require a re-anchoring in the values of national culture, in order to transform technology from a tool of alienation into a means of affirming dignity and cultural diversity.

Conclusion

Digital education is undoubtedly one of the engines of the transformation of education in the 21st century. As we have highlighted, the success of this transformation depends largely on the alignment of technologies and pedagogical strategies with the beneficiaries' cultural values and norms. The national culture acts as a filter through which students and teachers interpret new e-learning practices, from attitudes towards learning autonomy to comfort with technology to expectations regarding the teacher-student relationship online. Our analysis highlights the need for a culturally sensitive approach in digital education policies. Teachers, policymakers and instructional designers are urged to abandon the universal model and adopt a local-global *model as a vision*, with local *adaptation*. At the same time, we argued that truly high-quality digital education aspires to create inclusive and ethical learning environments where cultural diversity is respected, and global skills are cultivated. The influence of cultural factors on digital learning outcomes must be understood as an integral part of any discussion about the modernization of education. The ethical and identity challenges posed by the digital environment require a lucid reassessment of the relationship between technology and national cultural values. In a world marked by globalization and moral relativism, national culture becomes a landmark of stability and discernment, capable

of providing coherence to online behavior. The return to deep values such as respect, responsibility, solidarity, represents a return to the past, a form of conscious adaptation to the present. The assumption of national cultural values in the digital space becomes an expression of moral maturity and identity continuity, valuable for building an ethical and responsible information society. “Technology will not replace excellent teachers, but an excellent teacher who uses technology in harmony with the values of his or her community can produce transformational change.”

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