Improving the learning competences in the higher education - Digital tools and socio-human sciences

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Abstract
The digital environment tends to have more and more importance in the human life. Whether it's through virtual realities, global connectivity, data exploration, or technological innovation, the digital applications offer endless opportunities for exploration and growth. Consequently, the digital skills are essential for the future of society, in general, and for actual education process, in special. This paper proposes a new educational perspective that bringing the social and human sciences and digital environment. Having intention to analyse this corelation, we propose some educational solutions as follows: the integrated curriculum, the practical intervention which can be applied in the higher education in special, the methodological recommendations, the digital tools and technologies, the students researching competences that can be improved using the digital environment. The paper results underline the necessity of using digitalization for develop the learning and teaching in the social and human field. But our results can be very useful for the educational interventions in the schools, in general.

Keywords: *Digital education; university; integrated curriculum; social and human sciences; new technologies;*

1. Introduction

The actual educational preoccupations seem to be more and more aimed at development of students learning and training using the digital opportunities. This is related to two obvious realities:

- In the context of current technological evolution, educational systems are forced to correlate their strategies and finalities with digital technologies. In this way, it is expected to prepare the future specialists in order to make possible the exploration of the digital environment and to continue the development of it.
- The digital became an element with a growing presence in the public space but also in the private life. Consequently, people must have ”digital education” to be able that using the digital environment to rapidly communicate with different institutions, organisations and communities, to solve individual problems easier and more economical.

In addition, the importance of digital environment for humanity is emphasizes by many European documents. For example, Europe prepared for the digital era is one of political priorities of European Commission. As a politic programme, this priority

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is sustained by more documents to realize the digital transformation of UE economy and society (European Commission, 2021; European Union, 2021). Obviously, such a topic has many analysing perspectives that emphasise aspects related to digital competences, digital learning, developing the digital technologies, exploring and safety using of them, advantages and risks, official recommendation. In consequence, this topic could not have been missed from official and specialized organizations and institutions, from different NGO and national / transnational projects (UNICEF, 2019; ChildFund Alliance, 2022; OECD, 2021; UNICEF, 2017; UNICEF, 2023; OECD, 2023; European Union, 2019).

For these reasons, there are a lot of scientifical and methodological studies which are related to use the digital technologies for improving the learning activities (Doncheva & Voinohovska, 2022; D'Angelo et al., 2016; University of Western Sydney & Third, 2017; Ngoaketsi et al., 2021; Van Deursen & Van Dijk, 2009; Klein & Hilbig, 2018; Lynn et al., 2022; Foutsitzi & Caridakis, 2019; Baker, 2011; Walker, 2024; Deep Hayer, 2022; Kaur, 2019).

Despite of this large scientific literature, there are few studies that concern the use of digital technologies respecting the particularities of each research disciplines. There are no more approaches related to the advantages of digital environment for each of them and the modalities to use it for improving the specific students' learning competences. In this respect, one example is the case of socio-human sciences.

In general, the digital environment is used as a concept that integrates all digital electronics systems which assure an integrated communications environment.

Certainly, the socio-human field, as research and scholar discipline, has some particular aspects that can explain why it is no so simple to use the digital environment, concept that includes the digital competences and technologies also the virtual space. For example, one specific aspect is the specific documentary sources. They are predominantly based on the archival and actual acts and documents, public and private ones, the data collected from the society / community / social group, the social sondages, evidences, interviews, the individual and collective memories.

Consequently, the research activity in the socio-human field is tightly connected to those products of human and society acts. They are not focused on the creativity and attractivity in its research and learning activities.

The second example of specificity of the socio-human field is related to the addressability of its research results. Generally, the results of researching activity in the socio-human field are directed to the specific public, not for a large one.

Even though there are difficult to connect the specific of socio-human field with the digital environment, we consider that it is important to realize it. As we mentioned above, the digital environment is essential for the actual and future time and its advantages can be very useful for learning, training and researching in the socio-human field also.

2. Methodology and Objectives

Starting from the importance of the digital environment in the learning and researching and knowing the specific of socio-human domain, we propose to

emphasize the connection between these and the modalities to be useful in the high education system. In this respect, our approach is focused on the following issues:

- Identifying the place of the digital environment in the higher education curricula and the possibilities to be integrated in these educational documents.
- Emphasizing the relevance of using the digital environment for improving the learning, training and researching in the socio-human field.
- Proposing the methodological interventions to develop the students research competences in the socio-human domain.

Our study is theoretical research that respected the specific research strategies. Intending to develop the abovementioned approach directions, also, having intention to be as close as possible to the students' learning experience and expectations, we have used the activities with students to collect the specific data. In this respect, we have used, as the researching methods, the systematic observations, collective discusses, exercises, collective reflexive journal.

3. Discusses

3.1 Digital environment and higher education curricula

The main mission of university is closely related to the develop of students' professional competences and, in this way, they should be prepared so as to be social and professional integrated. For that, it is imperiously requested to be updated the university curricula to the recent social, cultural and economic realities.

In this section we have analysed the university curricula of socio-human studies programs, and we emphasize the importance of its connection with the digital environment.

The presence of digital environment on the curricular documents is not so significant. For example, there are two modalities to express of it:

- Complementary learning that means the inclusion of specialized courses as the technologies assisted by computer. These courses are provided for one semester in the first studying year and are designed to prepare students with essential skills and practices necessary to use the computer and virtual space. Unfortunately, like these specialized courses are not mandatory for all faculties and consequently, there are many studies programmes that do not offer any subjects related to the using digital technologies.
- Additionally learning like the individual studying that means the students are encouraged to study independently some issues using the virtual space. In general, that preoccupation is oriented to the search for the electronic bibliography and virtual sites and investigate of them. Unfortunately, even in this situation, the initiatives are very inconsistent.

Obvious, these modalities cannot motivate the students to develop their competences relate to use the digital environment to improve their learning. In consequence, the students very often have to learn to use it themselves.

Having intention to optimize the use of the digital environment for develop the learning competences in the higher education, we propose one more modality, the *curriculum integrated*. This basically means that it is requested to complete the

curriculum with knowledge, skills, values and capacities which encourage the use of digital environment to develop the learning students' competences.

3.2 Academic Curricular development for integrate the digital environment

Starting from the premise that in university there is intention for improve the students learning competences using the digital environment, we propose in this section a possible structure of the curriculum integrated. In this respect we have identified and corelated the Curricular Integrated Components with the Contents units.

This model can be adapted to specific of all human and social sciences disciplines.

Table 1. The curriculum integrated structure

Digital environment as a Curricular component	Teaching/learning contribution	Learning finalities
Theoretical and attitudinal contents: - knowledge - behaviours - values and attitudes	• Understanding the specific concepts and operating principles and norms. • Models of using the digital tools. • Ethical principles of using the digital environment.	Knowledge related to the use correctly and safely of digital environment for: - developing the individual learning and research; - communicating with specialized groups from different spaces; - exploitation results of research activity.
Educational strategies: -teaching/learning support - learning strategy - debating space	Offering the technical instruments needed to sustain the teaching and learning process.	Digital tools and space as a technical support are able to assure: - the accessibility to collect and archive information, documents, visual and auditive sources, documentaries, etc; - the possibility to use of them in a work paper.
Evaluation	Evaluation as an alternative evaluation modality of students' knowledge and competences.	Digital environment can be used for: - sustaining the students learning results; - creating new modalities of learning results valorisation; - expressing in a creative and attractive

	modality the results of researching activities; - analysing and debating the researching results of others; - promoting the results learning in the virtual space.

Even if it is a bit difficult to change the curricula of higher education, the digital environment is very useful both to complete the students learning and to optimize the teaching activity in the social and human sciences.

As can be noticed in Table 1, the digital technologies can be easier integrated in the content units, learning and evaluation activities, educational strategies.

In addition, in the next section, we propose to emphasise a set of practical contribution of the digital environment to study the social and human disciplines in the higher educational system. These examples represent elements of curriculum integrated also.

3.3 Digital environment as a component of teaching / learning the human and social sciences

Explaining the digital environment as a concept that includes technologies, tools and virtual space, there are many possibilities to use them for improve the study of social and human disciplines, especially in the higher education. But we have to correlate them with the curriculum structure in general.

Respecting this, we propose the following schema, focusing on the relevance of digital environment for develop the students' competences in the social and human field:

Table 2. Digital environment and learning competences

Specific competences	Applications
Developing the students critical thinking: - Identifying of electronic sources from the virtual space related to a specific issue; - Identifying the information needed to solve a research issue; - Identifying the research instruments, statistics, official sites them to have a valid support of research.	- Exercises for respecting the ethical principles of using electronic sources and the virtual space; - Exercises for applying the critical thinking to the using the electronic sources; - Practical activities related to subjectivity of electronic sources and researching relevance of them;

Developing the scientific researching competences: - Analysing the electronic sources; - Constructing a point of view/ opinion/ discourse related to the research issue.	- Application related to use of electronic sources for develop the research issue; - Exercise for using the digital tools for construct a research discourse and to communicate with the others people which are involved in studying and researching the human and social sciences.
Developing the communication competences - Communicating to others the results of researching issues using virtual space; - Establishing and extending the virtual community in human and social field.	

4. Conclusion

The socio-human and digital fields should not be seen in opposition, due to their different studying specificity (Alexandrache & Cocu, 2024). Among them there are sufficient elements which, if properly are valued, will contribute to the development of the learning experience being more oriented both to the real and practical relevance of learning, and to the real and individual needs of learning.

As a result, the study highlighted such common aspects that can ensure interdisciplinarity, but also increase motivation for learning in general. Of course, the study also provided examples that can assure the curricular context for achieving this disciplinary collaboration, respectively methodological examples of how the digital environment contributes to the improvement of knowledge in the socio-human field.

References

Alexandrache, C., & Cocu, A. 2024. Utilizarea instrumentelor digitale în studierea disciplinelor socio-umane. In Alexandrache, C. & Cocu, A. (eds.) *Tehnologii digitale pentru învățare interactivă*. Galati, Galati University Press, pp. 129-135.

Baker, D.P. 2011. The Future of the Schooled Society: The Transforming Culture of Education in Postindustrial Society. In Hallinan, M. (eds) *Frontiers in Sociology of Education. Frontiers in Sociology and Social Research*, vol 1. Springer, Dordrecht, pp.11–34. Retrieved from https://doi.org/10.1007/978-94-007-1576-9_2.

ChildFund Alliance. 2022. "Web Safe & Wise: Creating a better digital world with children." Available at: https://pre2023.childfundalliance.org/resources/publications/4807-web-safe-wise-policy-brief.

D'Angelo, B.J., Jamieson, S., Maid, B. & Walker, J.R. (Eds.). 2016. *Information Literacy: Research and Collaboration across Disciplines. The WAC Clearinghouse*. University Press of Colorado. Retrieved from https://doi.org/10.37514/PER-B.2016.0834.

Deep Hayer, A. 2022. Digital education: future of Teaching-learning, *International Journal of Creative Research Thoughts*, 10, 3. Retrieved from https://ijcrt.org/papers/IJCRT2203068.pdf.

Doncheva, J., & Voinohovska, V. 2022. Investigation of attitudes to apply information and communication technologies in educational practice, *Proceedings of INTED2022 Conference*. Retrieved from https://iated.org/inted/publications.

European Commission. 2021. *2030 Digital Compass the European way for the Digital Decade*, Brussels, 9.3.2021. Available at: https://eufordigital.eu/wp-content/uploads/2021/03/2030-Digital-Compass-the-European-way-for-the-Digital-Decade.pdf.

European Union. 2021. *Digital Education Action Plan 2021-2027 Resetting education and training for the digital age*. Available at: https://education.ec.europa.eu/focus-topics/digital-education/action-plan

European Union. 2019. *The Digital Competence Framework for Citizens (DigComp)* Available at: https://joint-research-centre.ec.europa.eu/digcomp_en.

Foutsitzi, S. & Caridakis, G. 2019. ICT in education: Benefits, Challenges and New directions, *10th International Conference on Information, Intelligence, Systems and Applications*, 1-8. 10.1109/IISA.2019.8900666,

Kaur N. 2019. Higher education: Challenges, trends and issues in digitalization, *International Journal of Applied Research*, 5(SP 4): 68-71. Retrieved from http://www.allresearchjournal.com/archives/2019/vol5issue4S/PartC/Sp-5-4-25-609.pdf.

Klein, S. A., & Hilbig, B. E. 2018. How virtual nature experiences can promote pro-environmental behavior, *Journal of Environmental Psychology*, 60: 41-47. https://doi.org/10.1016/j.jenvp.2018.10.001.

Lynn, Th., Rosati, P., Conway, E., Curran, D., Fox, G., & O'Gorman, C. 2022. *Digital Education*. Springer, 10.1007/978-3-030-91247-5_7.

Ngoaketsi, J., Salawu, Y.K., & Tella, A. 2021. Digital Environment in Academic Libraries: Leveraging on Advanced Information Communication Technologies for Better Service Delivery, *Proceedings of the Accra Bespoke Multidisciplinary Innovations Conference*, Ghana: University of Ghana: 179-194. Retrieved from www.isteams.net/ghanabespoke2021.

OECD. 2021. Children in the digital environment: Revised typology of risks, *OECD Digital Economy Papers*, 302. Retrieved from https://doi.org/10.1787/9b8f222e-en.

OECD. 2023. *Shaping Digital Education: Enabling Factors for Quality, Equity and Efficiency*. Available at: https://doi.org/10.1787/bac4dc9f-en.

UNICEF. 2023. *Digital Learning*. Available at: https: // www.unicef.org/education/digital-learning.

UNICEF. 2019. *Digital literacy for children: exploring definitions and frameworks*. Available at: https://www.unicef.org/globalinsight/media/1271/file/%20UNICEF-Global-Insight-digital-literacy-scoping-paper-2020.pdf.

UNICEF (2017). *Children in a Digital World. Executive Summary*, Available at: https://www.unicef.org/media/48581/file/SOWC_2017_ENG.pdf

University of Western Sydney, Livingstone, S., & Third, A. (2017). *Children and young people's rights in the digital age: an emerging agenda*. Available at: https://researchdirect.westernsydney.edu.au/islandora/object/uws:38531.

Van Deursen, A. J. A. M., & Van Dijk, J. A. G. M. 2009. Improving digital skills for the use of online public information and services, *Government Information Quarterly*, 26(2), 333–340.

Walker, M.D. 2024. What is Digital Learning? In *Digital Learning. How modern technology is changing education*. Sheffield U.K.: Sicklebrook publishing. Retrieved from https://www.researchgate.net/publication/378214984_What_is_Digital_Learning.