

HEI SUSTAINABLE COMMUNICATION IN SOCIAL MEDIA: E-COURSE EVALUATION VIA TRIANGULATION METHOD

Andreas Ahrens

Hochschule Wismar, Germany

Jelena Zascerinska

Centre for Education and Innovation Research, Latvia

Liudmyla Huliaieva

Academy of Labour, Social Relations and Tourism, Ukraine

Wojciech Duranowski

University of Opole, Poland

Zbigniew Dąbrowski

Fundacja im. Zofii Zamenhof, Poland

Margarida Santos

Universidade Lusófona, Portugal

Ana Filipa Oliveira

Universidade Lusófona, Portugal

Timóteo Rodrigues

Universidade Lusófona, Portugal

Andrii Oliinyk

State University of Trade and Economics, Ukraine

Abstract. *Given that sustainable communication is already a complex phenomenon, the role of social media, currently growing rapidly, is underestimated by universities and academia. The present research aims at analysing the e-course “The power of social media in the professional development of teachers: personal brand, tools for educational products, promotion of sustainable development values” for HEIs teaching staff. The exploratory research was leveraged in this work for the e-course construction and evaluation. The exploratory empirical study was implemented in 2022-2023. The empirical study was built on the triangulation method referred to data collection and data analysis. The sample was composed by six trainers, 15 participants, and two experts. HEIs sustainable communication in social media is beneficial for all the involved as it supports just green transition, e.g. by lowering the carbon emissions by, for example, commuters, aimed at reducing climate impact and mitigating climate change. The empirical study allows drawing a conclusion that the e-course “The power of social media in the professional development of teachers: personal brand, tools for educational products, promotion of sustainable development values” for HEIs teaching staff was positively evaluated. The positive evaluation proposes that the e-course is effective and efficient.*

Keywords: *e-course evaluation, higher education institutions, ranking, social media, sustainability communication, sustainable communication, triangulation method.*

Introduction

Sustainable communication of higher education institutions (HEIs) in social media is beneficial for both, on the one hand, for higher education institutions, and, on the other hand, for a wider society. Sustainable communication of higher education institutions in social media links higher education institutions with all the relevant stakeholders aimed at strengthening regional development as well as economies (Ahrens et al., 2021). Social media establishes two-way communication between higher education institutions and a wider society with the help of different skill sets.

Given that sustainable communication is already a complex phenomenon, the role of social media, currently growing rapidly, is underestimated by universities and academia. A reason could be that the competence of higher education institutions' teaching staff in sustainable communication of higher education institutions in social media belonging to higher education institutions have to be increased (Ahrens et al., 2023).

Conventionally, education and training are widely recognized as the efficient way of competence development (Ahrens, Zašcerinska, Lange, & Aļeksejeva, 2021). Particularly important is e-education (electronic education or online) and e-training (electronic training or online) as it helps lower the carbon emissions of, for example, students commuting to campus in order to reduce their climate impact (Versteijlen, Wals, & van Wee, 2023) and take measures for adaptation to mitigate the impact of natural disasters (Mackey, Gilmore, Dabner, Breeze, & Buckley, 2012).

The present research aims at analysing the e-course “The power of social media in the professional development of teachers: personal brand, tools for educational products, promotion of sustainable development values” for HEIs teaching staff.

The exploratory research was leveraged in this work for the e-course construction and evaluation. The exploratory empirical study was implemented in 2022-2023. The empirical study was built on the triangulation method referred to data collection and data analysis (Zašcerinska, 2013). The methods of data collection were an online survey for the e-course participants, focus group interview with the e-course trainers, and semi-structured interviews for the e-course experts. The data from the online survey were analysed via mean and frequency analysis as well as ranking, while from the semi-structured interviews – via content analysis.

Research Methodology

The exploratory research was applied in this research. The research methodology followed the logical chain:

- Exploration of the topic in Phase 1,
- E-course construction in Phase 2,
- E-course implementation in Phase 3, and
- E-course evaluation in Phase 4.

The exploratory empirical study was implemented in 2022-2023.

The empirical study was enabled by the research question: What is the e-course evaluation by e-course trainers, e-course participants, and experts?

The sample was composed of six e-course trainers, 15 e-course participants, and two experts from two different countries.

The empirical study was built on the triangulation method referred to data collection (Zaščerinska, 2013). The method of triangulation means that the data were collected from the three different sources:

- From the e-course trainers,
- From the e-course participants, and
- From experts.

The methods of data collection were an online survey for the e-course participants, focus group interview with the e-course trainers, and semi-structured interviews for the e-course experts. The data from the online survey were analysed via the descriptive statistics with the use of mean and frequency analysis as well as ranking (Ahrens & Zascerinska, 2020), while from the semi-structured interviews – via content analysis. It should be noted that, on the one hand, ranking refers to a course evaluation used for the advancement of the evaluated course (Ahrens & Zascerinska, 2020), and, on the other hand, ranking tends to emphasise vertical differences between the options or candidates (Marginson & van der Wende, 2007). Thereby, there is the triangulation of the methods for data analysis, too. Table 1 summarizes the use of the triangulation methods in the present work.

Table 1 Summary of the use of the triangulation methods in the present work (the authors)

Nr.	Triangulation methods in data collection	Triangulation methods in data analysis
1.	Focus group interview with the e-course trainers	Mean analysis
2.	Online survey for the e-course participants	Frequency analysis
3.	Semi-structured interviews with the e-course experts	Ranking

Source: The COMSUS project.

The present work is based on the leverage of the triangulation method from the data collection aspect as well as the data analysis perspective. The use of the

triangulation method means the synthesis of the data, information, and knowledge obtained from different sources and aimed at testing the research results' validity.

The data were analysed and interpreted by the researchers who carried out the present work (Ahrens, Purvinis, Zaščerinska, Micevičienė, & Tautkus, 2018).

Research Results

For the enrichment of HEIs teaching staff competence in sustainable communication of higher education institutions in social media, the e-course “The power of social media in the professional development of teachers: personal brand, tools for educational products, promotion of sustainable development values” (<https://cursos.lusofona-x.pt/courses/course-v1:LusofonaX+COMSUS+00/course/>) was created by the COMSUS (“Development of sustainable communications of higher education institutions in social media”) project members (<https://comsus.eu>) in 2022. The e-course was based on the new development model of sustainable communication. The new development model of sustainable communication implies that the sender and the receiver simultaneously communicate with each other (Ahrens et al., 2023). The information provided by the sender and the receiver meets, interacts, and enriches (Ahrens et al., 2023).

The aims of the e-course “The power of social media in the professional development of teachers: personal brand tools for educational products promotion of sustainable development values” are to rise HEIs' teaching, staff academic and scientific staff awareness-raising about environmental and climate change challenges, develop skills in social media marketing as an instrument of personal brand development, a tool for educational products, promotion of sustainable development values.

The methodology of the e-course is based on the European Sustainability Competence Framework (European Commission, 2022). The e-course fosters a sustainability mindset by helping users develop the knowledge, skills and attitudes to think, plan and act with empathy, responsibility, and care for our planet (European Commission, 2022).

The e-course uses European Sustainability Competence Framework, GreenComp, as a reference framework for sustainability competences (European Commission, 2022), because GreenComp:

- Provides a common ground to learners and guidance to educators, ensuring a consensual definition of what sustainability as a competence entails;
- Is designed to support education and training programs for lifelong learning;
- Is written for all learners, irrespective of their age, education level and in any learning setting – formal, non-formal and informal;

- Shows a general reference model that everyone involved in lifelong learning can use to design learning.

The e-course “The power of social media in the professional development of teachers: personal brand, tools for educational products, promotion of sustainable development values” consists of five Modules:

1. Social media inspirational campaigns.
2. Building of Personal brand of university teachers through social media.
3. Social media tools for education.
4. Promotion of sustainable development values through social media.
5. Social media in decision making: becoming a change maker and an influencer.

Each module has a focus on three main points:

1. Module: Social media inspirational campaigns:
 - A social media campaign for HEI social media marketing strategy.
 - Creation of ideas for social media inspirational campaigns.
 - Specific outcomes in social media inspirational campaigns that can be tracked and measured over a specific period of time.
2. Module: Building of Personal brand of university teachers through social media:
 - Social media impact on academic identity (mental health) construction.
 - Building a personal brand on social media.
 - Promotion of personal brand in social media.
3. Module: Social media tools for education:
 - Social media as an educational tool.
 - Social media platforms.
 - Social media for networking with key stakeholders.
4. Module: Promotion of sustainable development values through social media:
 - Impact of social media on sustainable development and 17 sustainable aims: green and digital transition, diversity, equity and social inclusion, cultural identity and others.
 - Social media for diversity, equity and social inclusion.
 - Social media impact on cultural identity construction.
5. Module: Social media in decision making: becoming a change maker and an influencer:
 - Social media: gatekeeper, decision maker, champions, influencer and influencer blocker.
 - Etiquette as important factor for partnership building with followers.
 - Ethics in social media.

Each Module includes:

- List of main questions to study,
- Curriculum (learning outcomes, description of content, teaching methods, resources, duration);
- Training contents;
- Teaching methodology for online training.

The e-course dedicated to HEIs' teaching academic and scientific staff have a total duration of 20 hours:

- 15 hours of group study, and
- 5 hours of independent work of learners.

The e-course is structured in modules and units.

Each unit is planned for

- 3 hours of group study, and
- 1 hour of independent work of learners.

The e-course was also followed by a Handbook created for the e-course trainers.

The implementation of the e-course started in July 2023. The e-course was implemented in selected European countries, namely Germany, Poland, Portugal, Turkey, and Ukraine. All these countries are the COMSUS project members. The e-course was implemented with the HEIs teaching staff in the English language.

After the pilot of the e-course, a focus group interview with six e-course trainers was organised in December 2023. All the e-course trainers agreed that the e-course is a success. The trainers stressed that the strengths of the e-course are

- Interesting and modern e-course content,
- Logical and sequential composition of the e-course, and
- User-friendly platform where the e-course is made available.

The analysis of the e-course evaluation by the six e-course trainers allows summarizing that the e-course was positively evaluated by the e-course trainers.

After the pilot use of the e-course, the 15 e-course participants in Germany filled in the online survey. For Questions 1-5 of the online survey, the 5 point Liker scale was used for measuring. Table 2 presents the overview of the survey results.

Table 2 Summary of the participants' survey results (the authors)

Survey Question	Mean	Ranking
How would you rate the structure of the e-course?	4.8	1
How would you rate the content of the e-course?	4.6	2
How would you rate the length of the e-course?	4.6	2
How would you rate the exercises?	4.6	2
How would you rate the level of difficulty of the e-course?	3.8	3

Source: The COMSUS project.

n=15

The results of the open-end question “What did you like most about the course?” are shown in Table 3.

Table 3 Summary of the participants’ survey results about the e-course strengths (the authors)

E-course characteristics	Frequency	Ranking
1. Topic depth	8	1
2. Interesting	1	4
3. Practical	5	2
4. E-course	1	4
5. E-course flow	4	3
6. Interactive	1	4

Source: The COMSUS project.
n=15

The results of the open-end question “What could be improved?” are shown in Table 4.

Table 4 Summary of the participants’ survey results about the e-course updates needed (the authors)

E-course characteristics	Frequency	Ranking
1. Nothing	13	1
2. To organise the real online meetings with some influencers who can share knowledge about the course	1	2
3. more explanations and videos in particular topics	1	2

Source: The COMSUS project.
n=15

The results of the open-end question “Did you encounter any problems?” are shown in Table 5.

Table 5 Summary of the participants’ survey results about the e-course updates needed (the authors)

E-course characteristics	Frequency	Ranking
1. No	12	1
2. Problems with receiving a certificate for completion of the e-course	3	2

Source: The COMSUS project.
n=15

Table 6 summarizes the Top 3 features, strengths, and weaknesses of the e-course based on the analysis of the online survey for the e-course participants.

Table 6 Summary of Top 3 features, strengths, and weaknesses of the e-course (the authors)

Nr.	Features	Strengths	Weaknesses
1.	Structure	Topic depth	Certification on the e-course completion
2.	-Content -Length -Exercises	Practicality	-
3.	Level of difficulty	E-course flow	-

Source: *The COMSUS project.*

The analysis of the e-course evaluation by the 15 e-course participants allows summarizing that the e-course was positively evaluated by the e-course participants.

Finally, a semi-structured interview was organised with two experts in November 2023. One expert was from Portugal, the other was associated with Turkey. The experts were interviewed separately. Both experts found the e-course interesting and useful. Mostly their comments referred to some text organisational aspects such as the use of bullet point or full sentences in the text of the e-course, and similar. Overall, the e-course is positively evaluated by two experts.

Table 7 summarizes the e-course evaluation by trainers, participants and experts of the e-course.

Table 6 Summary of e-course evaluation by trainers, participants, and experts (the authors)

Category	Trainers	Participants	Experts
Number of respondents	six	15	two
Evaluation	Positive	Positive	Positive

Source: *The COMSUS project.*

n=23

The application of the triangulation method to the obtaining the final evaluation of the e-course allows finding that the e-course was positively evaluated by trainers, participants, and experts.

Discussion

There is an urgent need in developing and updating any subject courses in general and e-courses in particular with linkages to sustainable development in general and the just green transition towards climate neutrality in particular. This would help connect HEIs with stakeholders from different business companies, governmental institutions, youth organisations, NGOs, etc to ensure sustainable development of HEIs and other organisations. Currently, such courses and e-course are emerging and are under construction. Integration of the content related to the just green transition towards climate neutrality into courses show the high-

priority need in educators training to integrate sustainability into education and training (European Commission, Joint Research Centre, GreenComp, 2022).

Literature analysis shows that there is no clear understanding of the two terms, namely sustainability communication and sustainable communication. The difference between these two terms was proposed as a process for sustainable communication and process result for sustainability communication (Ahrens et al. 2023).

Conclusions

HEIs sustainable communication in social media is attracting more attention from the theorists, practitioners, learners, and stakeholders. HEIs sustainable communication in social media is beneficial for all the involved as it supports just green transition, e.g. by lowering the carbon emissions by, for example, commuters, aimed at reducing climate impact and mitigating climate change.

The literature analysis allows concluding that sustainability communication in social media is still under-estimated by higher education institutions as this topic is under-explored.

The empirical study allows drawing a conclusion that the e-course “The power of social media in the professional development of teachers: personal brand, tools for educational products, promotion of sustainable development values” for HEIs teaching staff was positively evaluated by the e-course trainers, the e-course participants, and the e-course experts.

The use of the triangulation method for the data collection and analysis allows considering that the researchers’ conclusions on the positive evaluation of the e-course “The power of social media in the professional development of teachers: personal brand, tools for educational products, promotion of sustainable development values” for HEIs teaching staff is valid.

The positive evaluation proposes that the e-course “The power of social media in the professional development of teachers: personal brand, tools for educational products, promotion of sustainable development values” for HEIs teaching staff is effective and efficient.

The present research is limited by the number of published scientific works on the topic of HEIs sustainable education in social media. Another limitation is the number of respondents who take part in the online survey, focus group interview and semi-structured interviews. A limitation also refers to the European countries in which the e-course was implemented. The leverage of the e-course was also limited by its availability only in the English language. Thereby, translation of the e-course teaching and learning materials into other languages would help increase the number of the e-course participants.

Further work tends to increase the number of respondents in each of the group, namely e-course trainers, e-course participants, and experts. Involvement

of more European countries into the empirical study is proposed. Comparative studies of different countries are intended as well.

Acknowledgement

Project "Development of sustainable communications of higher education institutions in social media" (COMSUS), KA220-HED - Cooperation partnerships in higher education, Project Number KA220-HED-B9271F3F. Duration: 1 September 2022 - 31 August 2024. Coordinator: Fundacja im. Zofii Zamenhof, Poland.

References

- Ahrens, A. & Zascierinska, J. (2020). Comparison of Teacher's and Students' Ranking of English for Academic Purposes Sub-Topics. *Education. Innovation. Diversity*, 1(1), 16-25. DOI: <https://dx.doi.org/10.17770/eid2020.1.5328>
- Ahrens, A., Purvinis, O., Zašcerinska, J., Micevičienė, D., & Tautkus, A. (2018). *Burstiness Management for Smart, Sustainable and Inclusive Growth: Emerging Research and Opportunities*. IGI Global. Pages: 226. DOI: 10.4018/978-1-5225-5442-4
- Ahrens, A., Zascierinska, J., Bikova, A., Aleksejeva, L., Zascierinskis, M., & Gukovica, O. (2023). A New Development Model of Sustainable Communication for Higher Education Institutions. *Education. Innovation. Diversity*, 2(6), 30-48. DOI: <https://doi.org/10.17770/eid2023.1.7175>
- Ahrens, A., Zašcerinska, J., Amanzholova, S., Aleksejeva, L., Zašcerinskis, M., Aleksejeva, A., Gukovica, O., & Abjalkiene, I. (2021). A Multi-sided Needs' Analysis for Designing a Master Programme in the Field of Information Technologies at a University in Kazakhstan. In: Scientific printed works of 10-th International Scientific Conference «Perspectives of Economic and EU Development», 23-25 June 2021, pp. 9-12.
- Ahrens, A., Zašcerinska, J., Lange, C., & Aleksejeva, L. (2021). A Comparative Analysis of Processes of Conceptual Change for the Enhancement of Implementation of Green Energy Education and Training. *International Journal of Information and Education Technology (IJJET) vol. 11*, no. 1, pp. 47-51, 2021. doi: 10.18178/ijjet.2021.11.1.1488
- European Commission, Joint Research Centre, GreenComp. (2022). *The European sustainability competence framework*, Publications Office of the European Union. Retrieved from <https://data.europa.eu/doi/10.2760/13286>
- Mackey, J., Gilmore, F., Dabner, N., Breeze, D., & Buckley, P. (2012). Blended learning for academic resilience in times of disaster or crisis. *J. Online Learn. Teach.* 8, 122–135.
- Marginson, S., & van der Wende, M. (2007). To Rank or To Be Ranked: The Impact of Global Rankings in Higher Education. *Journal of Studies in International Education, Vol. 11*, No. 3/4, 306-329. DOI:10.1177/1028315307303544.
- Versteijlen, M., Wals, A.E.J., & van Wee, B. (2023). Design and evaluation of a sustainable blended study programme in higher education. *Front. Educ.* 8:1222962. DOI: 10.3389/educ.2023.1222962
- Zašcerinska, J. (2013). Analysis of Needs in Students' Communicative Competence within English Studies for Academic Purposes from Educators' View. *Scientific Papers University of Latvia Volume 790 Pedagogy and Teacher Education*, p. 86-97. Published by Latvijas Universitāte, Rīga, Latvia.