

Measurement and Assessment of Virtual Internationalization Outcomes in Higher Agrarian Education

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Abstract: The paper deals with the application of information and communication technologies amid internationalization process in higher agrarian education. The purpose of this research is to evaluate virtual internationalization initiatives in Sumy National Agrarian University (SNAU), Ukraine. Analysis and systematization of the latest scientific works on digitalization in higher education and virtual academic programs proved that they are essential to connect students and educators worldwide in order to improve instruction, to enhance intercultural awareness across borders, to develop target languages knowledge and transversal skills, necessary for young professionals to be competitive in the information-based society. The findings of the survey stated that SNAU is integrating a growing number of international projects requiring the use of digital tools. Data on the inputs, outputs and outcomes of virtual internationalization programs from both official documents and questioning participants, students and faculty was collected and measured. Actual benefits (developing intercultural competence, accessing to global knowledge, lowering economic and environmental costs, improving foreign languages) and potential risks (brain drain, cultural homogenization and less diversity of languages and teaching modes, imbalance of resources) of virtual academic projects were assessed as well. It has been concluded that SNAU engagement in virtual international programs has contributed to the intensification of academic mobility, ensuring international standards for the quality of educational services, gaining international experience in the field of agrarian business and research due to implementation of ICT.

Keywords: *Digital tools; higher education; information and communication technologies; internationalization; virtual international programs.*

How to cite: Kobzhev, A., Bilotsekovets, M., Fomenko, T., Gubina, O., Berestok, O., & Shcherbyna, Y. (2020). Measurement and Assessment of Virtual Internationalization Outcomes in Higher Agrarian Education. *Postmodern Openings*, 11(1Supl1), 78-92. <https://doi.org/10.18662/po/11.1sup1/124>

1. Introduction

Increasing importance of internationalization in higher education has become one of the most significant indicators of postmodern society, concurrently with the development of globalized labor market, digitalization and knowledge formation technologies as a basis of world economy.

Nowadays, internationalization is not solely represented by the spatial mobility of learners and instructors, but it is embodied in various forms, among them: franchising of projects and programs, establishment of subsidiary educational associations abroad and transnational e-learning platforms. Under such circumstances, modern information and communication technologies (ICTs) are regarded as a crucial point for the irrevocable spread of internationalization.

The objectives, posed for this survey, included the investigation of the capacities of ICTs, applied for education purposes, the ways they are implemented to intensify ties in the frames of university cooperation and to form highly-qualified future professionals. More specifically, the research focused on virtual international programs, empowered by digital tools, their potential risks and actual benefits, evaluated from the point of view of their participants.

The following research was held in Sumy National Agrarian University (SNAU), Ukraine. Data on internationalization strategies and practices by means of ICT implementation was collected from both official documents provided by university's authorities and information from questioning students, who had participated in various international virtual projects.

Internationalization is among SNAU's strategic directions as well as the implementation of ICT into the educational process. Currently, there are 31 contracts with education and scientific institutions on cooperation with foreign partners from 22 countries. According to the International department service database, in 2017 304 students took part in international programs, in 2018 401 students participated in international programs and in 2019 the quantity of the students-participants increased to 503 (Sumy National Agrarian University [SNAU], 2019). But the special attention in the course of the study was paid to experiences of students and faculty who had taken part in virtual international projects.

2. Literature review

Numerous empirical investigations have justified the theory that ICT is a key issue for internationalization in the market of educational services

because it gives access to qualitative information which is necessary for the students, who have decided to study abroad. Various ICTs, including the Internet, promote internationalization since they are capable of getting over space and time limitations, thus supporting the direct international academic collaboration (European Association of Distance Teaching Universities [EADTU], 2010). International education programs by means of ICT are aimed to connect students and lecturers worldwide in order to amplify their intercultural awareness and develop transversal skills, required for obtaining occupations in the information-based society. Such programs promote the Internet connection between academic establishments in different parts of the world; train scholars in the application of technology to develop teaching and learning approaches; intensify regional and global partnerships among state, commercial and non-profit associations; maintain telecommunication networks in the field of academic research (Strenger et al., 2017).

These modern trends have led to the formation of the concept of “transnational education”, that involves all types of higher education programs, training courses sets and educational on-line projects, in which the students stay in one country, but the awarding institution is located in another one (Adam, 2001). Currently, franchising, corporate education establishments, branch and virtual campuses, twinning projects, distance research training laboratories are covered by this concept. Their main purpose is to provide students with the opportunity to enrich their cross-cultural experiences while being engaged in the learning activities regarding real research, engineering and technical problems solving in on-line studies, so that they carry out experiments, measure and assess their results, having joined a research group in a foreign university with the help of the Internet (Magzan et al., 2009).

Apparently, the introduction of transnational education programs came into being due to the development of ICT and other digital technologies. They have reduced the boundaries for knowledge formation and international and intercultural dialogue maintenance. So, the ongoing adoption and application of digital technologies by an academic institution is accelerating its internationalization process, as, for instance, mobile devices, social media, new cloud computing aptitudes and many others are the evidence that digitalization is prospering and impacting world globally (Carroll, 2015).

The information society, which is globally networked and functioning due to modern digital technologies, is constantly impacting academic process and organizational strategies as well as upgrading the transfer of research data and formation of knowledge, that has resulted in

distant electronic learning (e-learning) development. Digital learning platforms enable connecting learners, instructors, and scholars from different countries without being located in the same place, in this way education services distribution is no longer time or place restricted because of the latest ICT that also considerably reduces expenses and support interaction and collaboration of faculty worldwide (Amirault, 2012).

Most researchers regard the role of universities as the main institutional structures of the information society, because they ensure the accumulation, dissemination, generation and effective use of global knowledge. Several studies on digital learning and digital universities have proved, that while the emergence of digital teaching and learning is a current tendency in higher education worldwide, the underlying processes that enable universities to function, such as recruitment, student administration, student services, credit administration, budget allocation, controlling, project management, staff administration, staff development etc. need digital based functioning for their efficient fulfillment as well (Hochschulforum Digitalisierung, 2016).

Several leading European universities, among them: Nottingham University (Great Britain), Sorbonne (France), etc. have stated in their long term strategies (2019–2030) that in order to develop and improve their education services they need to engage the broader scope of digital and virtual strategies into their agenda, in the form of modern virtual universities creation. They have installed Lecture Capture in more than 1000 teaching rooms globally. The Smarter Computing initiative has contributed to the upgrading of Windows 10, installment of Office 365 on-line tools and the application of Skype for Business enabled the instant voice and video connection all over the world. Due to evolution of digital technologies, these academic institutions have become a prominent illustration of digitalization in global education (Sorbonne University, 2019; University of Nottingham, 2017).

The development of modern information technologies stimulated the promotion of virtual internationalization in higher education applying up-to-date pedagogical approaches, that consist of technologies and tools for on-line meetings and collaborative work in real time via the Internet (Sköld, 2012). The theoretical and practical e-learning techniques are constantly evolving to correspond the demands of virtual pedagogy. Teaching assignments must be framed regarding the latest innovative pedagogic approaches, so that students, who take part in international programs, get the opportunity to improve their transversal skills and completely utilize the patterns of a multimodal intercultural dialogue

(European Association of Institutions in Higher Education [EURASHE], 2011).

Virtual or web conferencing is one of the most widely used tools for virtual internationalization of higher education. Virtual conferencing enables educators, lecturers and students worldwide to conduct on-line presentations, collaborate in processing documents and applications, synchronously browse sites, videos, and images, as the latest studies have showed that the academic environment nowadays is globally connected due to the virtual space, in which learning activities can be enriched with the international participation, information can be mutually compiled and processed by the members of the international scientific community (Oester et al., 2017). Modern researchers have concluded that virtual conferences enable scholars worldwide to benefit from digital communication, because of the following advantages, such as collaboration, independent from time and space restrictions; engagement into a widely spread network with international and regional professionals and experts located all over the globe (León et al., 2018).

So, as it was found out that higher education institutions are submitted to the serious stress, caused by the globalized markets of educational services, and resulted in the broadening scope of internationalization initiatives. It is ICT, that has provided them for the great extent with effective tools for supporting and coordinating institutional international activities, meeting the high standards of education quality level and indulging collaboration with academic establishments worldwide because of the following positive factors: instant linking, expenses lessening, avoiding time and distance restrictions, and enhancing opportunities for intercultural personal growth (Martin, 2018).

3. Methodology

3.1. Methods.

The following methods were used to achieve the objectives of the research: comparative analysis and systematization of Ukrainian and European regulatory documents in the field of development and reforms of higher education, in particular, concerning virtual internationalization and digitalization; theoretical analysis of international pedagogical and methodological literature on the issues of the research.

Determination of the internationalization outcomes requires ways to measure and assess the initiatives put forth, so both the quantity and quality of initiatives will be supported with concrete evidence. Measurement, in this

study, is used to observe institutional or programmatic performance while assessment is focused on students' achievements and views (Green, 2012, p. 2).

Measurement was fulfilled toward the following indicators: inputs (reserves, represented by the stakeholders and strategies, policies and programs that are applied to reform the internationalization process); outputs (various activities carried out in the internationalization agenda of an institution); outcomes: modification or improvement of the academic process (Green, 2012). In order to measure internationalization efforts in SNAU, such tools as interviews with faculty and study of documents were applied.

A direct assessment tool, embedded course assessment, was used to evaluate students' foreign language proficiency improvement in the process of e-learning; an indirect tool, interviews with students was applied to assess actual benefits and potential risks of virtual internationalization programs participation.

3.2. Participants.

The research was conducted from September 2018 to June 2019 on a sample of 68 students from Sumy National Agrarian University. The participants were recruited on a voluntary basis, they were about the same age (from 21 to 23 years old). All of them got already a Bachelor degree of: Management in Agriculture (52%), Accounting and Taxation in Agrarian Sector (11%) and Economics in Agriculture (37%), 7 of them were international students. All respondents were 1st year students in their MBA (Master of Business Administration) program.

4. Findings

4.1. Measurement.

The survey, focused on virtual internationalization programs currently offered in SNAU, was aimed to analyze inputs, outputs and outcomes of a wide array of programs relating to international education, as detailed below. They ranged from various virtual professional training programs to distance learning and to foreign languages proficiency tests. The programs listed demonstrate what is currently available to SNAU students and faculty.

Table 1. Virtual internationalization programs inputs and outputs

Program	ICT Input	ICT output
“From Theoretical-Oriented to Practical Education in Agrarian Studies” (TOPAS) funded by the EU Erasmus+ program	<ul style="list-style-type: none"> • MOOCs (Massive Open Online Courses) – training courses with massive interactive participation; • Socrates mobile application for effective control over the knowledge gained by students; • Kahoot service for interactive quizzes, polls and discussions creation; • Interactive multimedia wall Padlet, etc. 	The project results in the creation of a virtual databank on agricultural management issues. This databank consists of information on production inputs, costs and outputs of major agricultural crops of participating countries and offers valid data for agricultural management study courses (Erasmus+UA, 2019)
Regio MAX International Virtual Project	<ul style="list-style-type: none"> • Diamond FMS software of the Dutch company “Diamond” for optimization of large agrarian holdings calculations; • the Rise program of the Swiss company Nestle for farms activity diagnostics. • Web-conferencing with international faculty and participants 	The students are sent to take practice at agricultural enterprises, to collect production data and to teach managers of these enterprises how to work with the Regio MAX software. The Project results in the creation of a joint international analytical database, accessible online for all enterprises and businesses involved in the Project; it serves as a platform for sharing experiences, applying the benchmarking in planning and assessing potential opportunities
PTE Academic: Pearson English Language Test, a computer-based test of English for study	<ul style="list-style-type: none"> • Artificial intelligence, test results are graded by a computer; • Telecollaboration in the field of language learning; • Online Intercultural 	Students and faculty’ high level of foreign language proficiency is supported and proved, PTE is accepted for study applications by thousands

abroad	Exchange	of academic programs around the world
E-learning on the platform Moodle	<ul style="list-style-type: none"> • Globally networked learning on the platform Moodle in SNAU has 2457 e-courses developed in four languages (Ukrainian, English, German, Russian), for 5185 Ukrainian and international students 	Digital academic process organization provides students with the opportunity to combine theoretic training at the university with practical activities at modern enterprises of agricultural holdings in Ukraine and abroad

Source: Authors own conception

The study of documents highlighting the internationalization activities in the frames of the virtual international programs and interviews with their participants, faculty and stakeholders, singled out the following virtual internationalization outcomes:

- enhancing institutional engagement in business collaboration with national, regional, and global agricultural holdings and stakeholders;
- possibility to participate in international scientific and business projects to conduct research on actual issues in Ukraine and abroad and profit from the expertise and perspective of prominent scholars from all over the world;
- positive impact on the institutional strategies and internationalization policies, improved academic process, teaching quality assurance through sharing research and educational experiences across national borders.

4.2. Assessment.

The embedded course assessment revealed that the majority of students, who had learnt foreign languages by digital means on the Moodle platform, increased significantly their knowledge levels; 45 per cent of them achieved sufficient level and 21 per cent of students expressed a high level of a foreign language command. At the same time, the foreign languages knowledge levels of students, who were taught with traditional methods only, were mostly low (38 per cent) and initial (31 per cent) (Bilotserkovets & Gubina, 2019).

An indirect assessment of benefits and risks of joint virtual academic projects, based on the interviews with students-participants of virtual internationalization programs, revealed that 100 per cent of the respondents

viewed the participation in virtual internationalization programs as enhancing the opportunity for students to study and work in an international environment and for faculty to understand different academic cultures and attune their teaching better, to develop intercultural competence for collaborative learning between students across national borders.

85 per cent of the students highly appreciated the opportunity to be taught in a foreign language by a lecturer from a foreign university, to share opinions and to broaden their outlook by recognizing other scientific traditions, improving simultaneously the foreign languages command.

100 per cent of the interviewees admitted the inclusive potential of virtual internationalization programs at lowering economic and environmental expenses, so that they can achieve high performance and afford many opportunities at a low cost. These programs provide students with a great opportunity to offer easier and wider access to intercultural classes by cutting out travel costs.

At the same time, the respondents singled out a number of potential risks, caused by virtual internationalization programs. Among them the respondents claimed brain drain (56 per cent); the prevalence of the English language leading to cultural homogenization, loss of local values, linguistic and cultural diversity, absence of diverse educational models if all educational institutions are turning into a unified mode of a classroom (28 per cent); an imbalance of resources, caused by different financial conditions in universities-partners in various countries (67 per cent).

Table 2. Benefits and Risks of Virtual Internationalization Programs

Benefits	considered by students, %
Developing intercultural competence	100%
Accessing to the global knowledge	85%
Lowering economic and environmental costs	100%
Improving foreign languages	85%
Risks	considered by students, %
Brain drain	56%
Cultural homogenization and less diversity of languages	28%
Imbalance of resources	67%

Source: Authors own conception

So, the following outcomes were found out after the interviews data processing:

- better preparation of students as future members of a globalized labor market by offering a more accessible form of international experience for students who are not able, or prefer not to go abroad;
- improved quality of teaching and learning as well as research due to implementing internationalization in the curriculum as a means of teaching, as well as transversal skills and competencies acquiring;
- enhancing intercultural, environmental and economic awareness of students and staff, providing wider access to multilingual classrooms, international education and global knowledge by cutting out travel costs.

5. Discussion

The role of ICT in the internationalization process is still disputable. While some researchers consider ICT to be no more than an auxiliary tool in internationalization issues (Thune & Welle-Strand, 2005), other scholars have stated that digitalization organizationally and pedagogically impacts these issues, because globalization in higher education has significantly transformed the economic, marketing and socio-cultural trends in the international society (Knight & Liesch, 2016).

The global virtual educational internationalization can bring out a range of benefits at different levels (for instance: students, academic programs, research collaborations) and from different perspectives (institutional and strategic), among them are the following:

- due to the innovative ICT application, more students become aware of global issues, cultural diversity and international affairs (Denson et al., 2010);
- the phenomenon of internationalization is considered to be the effective strategy to heighten the international ranking and create competitive image of the university (Chan & Dimmock, 2008);
- internationalization is also considered as a source of profit because of fee-paying foreign students (Knight & de Wit, 1995).
- virtual mobility enables exchanging experience and knowledge that improve the quality of the academic process (Lewis & O'Dowd, 2016).

The full scope of virtual internationalization's penetration in higher education worldwide cannot be underestimated. Currently, the achievements of digital pedagogy have stimulated the new initiatives for universities, attracting new investments, amplifying their global scope and directing their strategic planning (Rüland, 2017).

Availability of modern ICTs affected the evolution of virtual internationalization processes in higher education. Carrying out their own international goals, universities have improved their performance in the international education market. In this regard, European Association of Distance Teaching Universities (EADTU), initiated the development of the E-Bologna project that has been successfully functioning since 2003. This international digital project enabled the creation of an electronic environment in Europe for the implementing of the Bologna process through the use of ICTs. In terms of internationalization, the most important is the ICT component related to the implementation of the virtual mobility scheme for students, teachers and research workers of European universities, as well as their curricula and courses (European Association of Distance Teaching Universities [EADTU], 2019).

Though the phenomenon of global educational internationalization has undeniable benefits it has also some negative aspects. Low quality education, commercialization, brain drain, loss of linguistic and cultural diversity is identified as the major risks that are associated with global internationalization (Kirk et al., 2018). Behind internationalization efforts the education institutions' profit motive can be seen. And their goals can be more of commercial than academic character, such as issues surrounding financing, including the risk of too much dependence on fee-paying students.

Another pivotal problem is quality insurance. Certain researches have claimed that the quality standards of some international educational programs are not sufficient. The educational internationalization should include licensing, registration and recognition by the corresponding countries. Moreover, the quality of students' academic experiences within digital learning, international programs joining and certificates obtaining should be also nationally and internationally standardized and maintained (Institute of International Education, 2016).

Such modern approaches allow to provide conditions for improving the efficiency of the education system, which can only be achieved through the use of ICT, as well as through the development and implementation of new models of internationalization of higher education that meet the requirements and standards of information society. Therefore, the emergence of a concept – “virtual internationalization in higher education” – is apparent and can be defined as ICT implementation to create a unified virtual educational space that enables collaborative learning, communication and interaction between students and faculty from geographically separated and/or different cultural backgrounds. It is an effective tool for inclusion

and offering more students and faculty to acquire an international experience of being ‘internationalization at home’ activities participants.

6. Limitations

This research was carried out in SNAU, the biggest agricultural institution of higher education in the north-east of Ukraine, so the findings were limited to this sample.

The time period for this research was limited with the term from September 2018 to June 2019, because of comprehensive organizational changes in SNAU that occurred by implementation of virtual international programs in the university’s agenda, as well as the significant increase in the quantity of participants among the faculty and students.

This study used mostly the exploratory and descriptive methods, and therefore did not seek to assess the quality of virtual international programs. It was a major methodological limitation of this research, as the qualitative findings were highly context- and case-dependent, giving no opportunity to generalize beyond the study itself.

Researcher bias was a potential limitation to this study as well, since the validity and reliability of the results depended on the skills of researchers in conducting and interpreting interviews, data collection, and overall analysis.

The analysis of findings was carried out to verify the obtained data by cross-checking and member-checking. The reliability factor for all the questionnaires, diagnostic methods had a value from 0.85 to 0.91 (at $p < 0.01$), that proves their high reliability (measurement and assessment results were processed to find out the validity and reliability of the questionnaires). Approximately small sample (68 participants) were under review, so, the margin of error (at the 95% confidence level) for this research, was about 3%.

7. Conclusion

The contribution of this study is an analysis of the role of ICT, implemented in the process of internationalization in higher agrarian education. This process is regarded as an incorporation of various international aspects into the research, teaching and administrative activities of higher education institutions by means of modern digital technologies in a unified virtual academic space.

The study focused on measurement and assessment of outcomes of virtual internationalization in SNAU, Ukraine, including academic

cooperation and student mobility programs, their benefits and risks. It has been found out that SNAU provides its students and faculty with a number of virtual international projects, ICT-enabled education programs and activities that provide transcendence of time and distance for international academic cooperation, rapid connection and cost-saving opportunities, possibility to improve their foreign language proficiency, to participate in international scientific and business projects and profit from the expertise and assistance of well-known scientists worldwide. At the same time, certain potential risks, such as brain drain, the prevalence of the English language, loss of local values, an imbalance of resources, etc. were pointed out.

Therefore, the following recommendations are viewed as essential for the enhancing the international prestige of SNAU: ensuring international standards for the quality of educational services and promoting the development of systematic quality control of educational services; expert evaluation of international research projects, in particular by attracting international grants for joint research; involvement of foreign scientists and business representatives in scientific events (webinars, round table discussions), expanding collaboration with foreign colleagues by means of creating an e-portal.

References

- Adam, S. (2001). Transnational education project. Report and recommendations. https://bmbwf.gv.at/fileadmin/user_upload/Bologna_Grundsatzdok/Vo_n_Bologna_bis_Prag/Transnationale_Bildung.pdf
- Amirault, R. (2012). Will E-Learning permanently alter the fundamental educational model of the institution we call “the university”? In Y. L. Visser, M. Simonson, L. Visser & R. Amirault (Eds.), *Trends and Issues in Distance Education: International Perspectives* (2nd ed., pp. 157-173). Information Age Publishing
- Bilotserkovets, M., & Gubina, O. (2019). Target language teaching by means of E-Learning: A case study. *Revista Romaneasca pentru Educatie Multidimensionala*, 11(4), 1729. <https://doi.org/10.18662/rrem/154>
- Carroll, J. (2015). *Tools for teaching in an educationally mobile world*. Routledge.
- Chan, W. W., & Dimmock, C. (2008). The internationalization of universities: Globalist, internationalist and translocalist models. *Journal of Research in International Education*, 7(2): 184-204. <https://doi.org/10.1177/1475240908091304>
- Denson, N., Loveday, T., & Dalton, H. (2010). Student evaluation of courses: what predicts satisfaction? *Higher Education Research and Development*, 29(4), 339-356. <https://doi.org/10.1080/07294360903394466>

- Erasmus+UA. (2019). Homepage. <https://www.erasmus-topas.eu/>
- European Association of Distance Teaching Universities (EADTU). (2019). Homepage. <https://eadtu.eu>
- European Association of Distance Teaching Universities (EADTU). (2010). White Paper, (2010). *In praise of virtual mobility: How ICT can support institutional cooperation and internationalisation of curricula in higher education*. From https://cebem.org/cmsfiles/publicaciones/movinter_white_paper.pdf
- European Association of Institutions in Higher Education (EURASHE). (2011). European cooperation in education through virtual mobility: A best-practice manual. www.eurashe.eu/wp-content/uploads/2011/10/Virtual-Mob-Best-practice.pdf
- Green, M. F. (2012). Measuring and assessing internationalization. [http://www.nafsa.org/_downloads/measuring_assessing.pdf](http://www.nafsa.org/File/_downloads/measuring_assessing.pdf)
- Hochschulforum Digitalisierung. (2016). The digital turn: Hochschulbildung im digitalen Zeitalter. <https://hochschulforumdigitalisierung.de/sites/default/files/dateien/abschlussbericht.pdf>
- Institute of International Education. (2016). "Top 25 Institutions Hosting International Students, 2015/16.", Open Doors Report on International Educational Exchange. <http://www.iie.org/opendoors>
- Kirk, S. H., Newstead, C., Gann, R. & Rounsaville (2018). Empowerment and ownership in effective internationalisation of the higher education curriculum. *Higher Education* 76(6), 989-1005. <https://doi.org/10.1007/s10734-0180246-1>.
- Knight, G. A., & Liesch, P. W. (2016). Internationalization: From incremental to born global. *Journal of World Business*, 51(1), 93-102. <https://doi.org/10.1016/j.jwb.2015.08.011>
- Knight, J., & de Wit, H. (1995). Strategies for internationalization of higher education: historical and conceptual perspectives. http://lisbon2011.bolognaexperts.net/sites/default/files/yesinternationalis_knight_and_de_wit.pdf
- León, F. M., Barberán, J. M., Pérez-Jorge, D., & Olivenza, J. J. L. (2018). A case study: Videoconference in academic tutoring. *Asian Social Science*, 14(2), 49. <https://doi.org/10.5539/ass.v14n2p49>
- Lewis, T., & O'Dowd, R. (2016). Introduction to online intercultural exchange and this volume. In R. O'Dowd & T. Lewis (Eds.), *Online intercultural exchange: Policy, pedagogy, practice* (pp. 3-20). Routledge.
- Magzan, M., & Aleksis-Maslac, K. (2009). ICT as an effective tool for internationalization of higher education. The 13th World Multiconference

- on Systemics, Cybernetics and Informatics, July 10-13, 2009, Orlando, Florida, USA. <https://files.eric.ed.gov/fulltext/ED532504.pdf>
- Martin, D. A. (2018). Shaping the digital future in education – together. *International Journal of Engineering Pedagogy (ijEP)*, 8(2), 7-9. <https://doi.org/10.3991/ijep.v8i2.8228>
- Oester, S., Cigliano, J. A., Hind-Ozan, E. J., & Parsons, E. C. M. (2017). Why conferences matter – An illustration from the international marine conservation congress. *Frontiers in Marine Science*, 4. <https://doi.org/10.3389/fmars.2017.00257>
- Rüland, D. (2017). Marketing strategies for German higher education institutions. <https://hochschulforumdigitalisierung.de/en/themen/>
- Sköld, O. (2012). The effects of virtual space on learning: A literature review. *First Monday*, 17(1). <https://doi.org/10.5210/fm.v17i1.3496>
- Sorbonne University. (2019). Sorbonne University: Strategic Plan 2019-2023. <http://www.sorbonne-universite-Strategic-Plan-2019-23.pdf>
- Strenger, N., May, D., Ortelt, T., Kruse, D., Frerich, S., Tekkaya, A., & Ermanb, A. (2017). Internationalization and digitalization in engineering education. *3rd International Conference on Higher Education Advances, HEAd'17*, Universitat Politècnica de Valencia, Valencia, Spain. <http://dx.doi.org/10.4995/HEAd17.2017.5289>
- Sumy National Agrarian University (SNAU). (2019). Last news. <http://www.snau.edu.ua/>
- Thune, T., & Welle-Strand, A. (2005). Worldwide virtual education. An empirical study of ICT for and in internationalization processes in a business school. *Higher Education*, 50(4), 593–611.
- University of Nottingham. (2017). University of Nottingham: Global Strategy 2020. Review and Refresh. <http://www.global-strategy-review-and-refresh-july-2017.pdf>