PRACTICAL APPLICATION OF INFORMATION TECHNOLOGIES IN SOCIAL WORK STUDIES

Rita Virbalienė

Vilniaus Kolegija / Higher Education Institution (VIKO), Vilnius, Lithuania

Diana Mačiuikienė

Vilniaus Kolegija / Higher Education Institution (VIKO), Vilnius, Lithuania

Violeta Jegelevičienė

Vilniaus Kolegija / Higher Education Institution (VIKO), Vilnius, Lithuania

Asta Januškevičiūtė

Vilniaus Kolegija / Higher Education Institution (VIKO), Vilnius, Lithuania

Abstract. Applying flexible and innovative teaching methods allows to improve the content of learning and education, as well as its quality and relevance. Efforts are made to provide as many opportunities for distance learning and virtual mobility as possible by using the benefits provided by new technologies, improving the training process and adapting it to each individual. A case study strategy was chosen, as the study consists of one separate object which is one higher school that implements the Social Work study program. The conducted research is of the "one-time cross-section" type, as it is dedicated for a specific purpose, namely, the modernization of the social work study program. In 2022 - 2023, semi-structured interviews were made with students of the Social Work Program participating in an international project on the application of innovative technologies in social work. The purpose of the research is to reveal aspects of the practical application of information technologies in the process of social work studies. Based on the findings obtained during the interviews and the research presented in the theoretical part about the application of information technologies in the study process, information technologies were divided into three groups of tools: technical tools, digital content creation tools, communication, and collaboration tools. The research found that the following technical tools are used the most and most often during lectures: computer, smartphone, camera, sound speakers, microphone with integrated speaker, Bluetooth headphones, projector, printer, high-speed Internet connection and wireless (wifi) network. It was found that students use text editors, calculators, the tools for video creation, presentation creation, quiz creation and survey assessment programs during lectures. Most often, 3-5 times a week, students use the following means of communication and collaboration: social networks, audio, and video storage, learning environments, laboratories, conferences, chat programs.

Keywords: information technology, social work, study process.

Introduction

The role of higher education institutions is to increase participation in the higher education system by implementing innovations and leveraging new trends

in the use and integration of open educational resources into teaching and learning (Zuhairi, Rokhiyah, & Zuhairi, 2019). Learning, supported by technology, is adapted to enable distance learning by utilizing technology to organize learning, ensure interaction of any type, and carry out other learning-related activities online. This type of learning includes distance, virtual, electronic, mobile learning on social networks, where learning content is delivered in a virtual learning environment, all facilitated through the use of information and communication technologies (Teresevičienė et al., 2015). The application of technical tools in the study process has been addressed in scientific articles by: Brown & Mbati (2015); Dahlstrom et al. (2015); Al-Emran, Elsherif, & Shaalan (2016); Brooks (2016); Sung, Chang & Liu (2016); Cross, Sharples & Healing (2019); Rokhiyah, Zuhairi, & Zuhairi, (2019); Fox (2019); Bidarra & Sousa (2020); Yıldız et al. (2020). The possibilities of applying digital content creation tools in the study process have been analyzed by: Brown & Mbati (2015); Rienties et al. (2018); Alessio et al. (2018); Cabi (2018); Rokhiyah, Zuhairi, & Zuhairi, (2019); Walshe & Driver (2019); Rupp et al. (2019); Vettehen et al. (2019); Shadiev, Wang & Huang (2020).

Research has identified the communication and collaboration tools applied and how their usage evolved in the study process: Kaklauskas and Kaklauskienė (2012); Gedvilienė, Kankevičienė, and Balynienė (2012); Trepulė and Daukšienė (2016); Prakapienė and Prakapas (2018); Reinecke et al. (2018); Chang, Shih & Lu (2018); Rokhiyah, Zuhairi & Zuhairi (2019); Bozna & Firat (2019); Ucar & Goksel (2019); Ademi, Loshkovska & Chorbev (2019); Misevičienė, Rimavičius & Makackas (2020).

Research methodology and participants

The research was conducted based on the principles of neo-positivism philosophy, which supports the need for quantitative research to reveal the actions of society or certain social groups (Šupa, 2021). The development of neo-positivist knowledge relies on careful observation and measurements of objective reality (Židžiūnaitė, Sabaliauskas 2017). This approach helps to explore the practical application of information technologies in the process of social work studies. To provide a more comprehensive understanding of the information technologies applied in the study process by social work program students, a case study strategy was chosen. This is because the study comprises a single distinct object – a single university implementing the Social Work Studies program. A qualitative study was conducted using a semi-structured interview method, allowing for the exploration of students' experiences and the identification of real situations in which students apply information technologies in the study process.

Practical application of information technologies in the process of social work studies

Students of the Social Work program utilize laptops during lectures, using them for tasks, projects, finding, organizing, and storing necessary information, as well as connecting to remote lectures or consultations through Zoom and Teams programs. Research participants indicated that they use laptops for notetaking and writing other texts using the Microsoft Word program during lectures. They create files, edit videos, make presentations, view visual materials, and connect to the university's website. Statements illustrating the analysis include: "I use it for writing various study assignments, taking notes during lectures. I also use programs on the computer that help to work in groups if it is not possible to do the tasks in person" (N 1); "Needed for accumulating information, writing texts, searching for information, attending lectures" (N-3). Desktop computers are used in information technology lectures and for completing study assignments because it is easier to focus when working with a desktop computer. "I find it easier to focus and complete study assignments at a desktop than with a laptop. I sit down and write an essay or another written work, and I'm done. With a laptop, I get distracted or can't concentrate" (N_9). Desktop computers are also used during assessments to share slides or video materials. The research participants indicated that they use smartphones during lectures to capture information provided by the lecturer during the lecture and information that may be needed in the future for accumulation, summarization, and organization: "I jot down the essential points mentioned by lecturers on a particular topic" (N-7), "To systematize information" (N 3). Participants in the study note that they save information by taking photos of slides or other presented information: "During lectures, I use it when I need to take photos of information" (N_5). They also mentioned that they use smartphones during lectures to quickly find necessary information, with one of them citing searching for laws or other documents as an example: "I connect to Wi-Fi during lectures when I need to find information, such as laws or other documents" (N-11). Mobile phones are not only used to search for information but also to share it with other students: "It helps to communicate with classmates, search for information quickly, and also share it, take photos of the necessary information" (N 12). The participants in the study indicated that they use smartphones to participate in online lectures, naming Teams and Zoom programs, in order to communicate with lecturers and colleagues. Research participants mentioned that they use smartphones during lectures to perform tasks: "I use it as an alternative to a computer, prepare tasks, communicate with colleagues, summarize the taught theory" (N 7). They use it for time tracking and planning, checking the lecture schedule and email, and browsing social networks. Research participants indicated that they use cameras to join online lectures. One of them noted that turning on the camera helps to participate more actively in the lecture, but it is easier to absorb knowledge when all students' microphones and cameras are turned off: "It helps during lectures to participate more actively, communicate. However, it's easier to absorb knowledge when all students'... cameras are turned off (otherwise they somewhat disturb, interfere, distract), and only the lecturer is visible and speaking, slides are presented" (N 6). During lectures, they use speakers to watch videos or presentations with sound, to hear what the lecturer allows: "During assessments, to share slides and video material"(N 6), "To hear what the lecturer allows" (N 4), also during online lectures. They used a microphone with an integrated speaker when participating in online lectures: "when lectures were held remotely" (N-15), research participants clarified that they used the microphone to answer questions, discuss tasks: "To answer questions, discuss tasks" (N 19). Additionally, research participants noted that the microphone allows for more active participation in online lectures, but it is easier to absorb knowledge when all students' microphones and cameras are turned off: "...it's easier to absorb knowledge when all students' microphones...are turned off" (N 17). During lectures, they use Bluetooth headphones to connect to online lectures: "During lectures, when lectures are held online" (N 11), "Helps during lectures to focus more on what the lecturer is saying, to isolate from external distractions/sounds" (N 14), to listen to the required information or video material without disturbing others: "When I need to independently find information, I use them so that I can watch video and/or audio recordings on Youtube, etc., without disturbing others" (N 12). They use a projector during lectures to see the material presented by the lecturer, slides: "I use it almost in every lecture because we are taught subjects with slides, which are shown via a projector" (N_15). Other research participants indicated that they use the projector to share their slides, video material, and present intermediate tasks: "To present intermediate tasks, projects" (N 7). They use a printer and copier during lectures when they need to print or copy necessary documents or print information related to lecture materials: "To print necessary documents" (N 8). Research participants identified that high-speed internet connection is necessary for completing tasks, working in virtual environments, preparing written assignments, responding to inquiries, participating in online lectures, and communicating with colleagues. Examples illustrating the analysis include: "It helps in studies to find the necessary information, perform tasks in a virtual environment, respond to inquiries, listen to lectures, and complete written (N 12);"Completing tasks, searching for information, communicating with colleagues" (N 4). During lectures, they use a wireless (wifi) network to access the internet, read literature, participate in online lectures or consultations via the Teams program, complete tasks, communicate with peers, and browse social networks. Examples illustrating the analysis include: "Access to everything is needed; without the internet, we couldn't gather information, communicate comfortably, we would lose access to all information sources,

websites, apps" (N_2); "For logging into lectures, searches, reading literature" (N-8); "When studying tasks need to be completed, finding information, consultations via Teams" (N 10).

Summarizing, it can be stated that, after analyzing the responses provided by the research participants, it was found that they use a computer, smartphone, webcam, speakers, microphone with integrated speaker, Bluetooth headphones, projector, printer, high-speed internet connection, and wireless (wifi) network during their studies.

Usage of digital content creation tools in the study process

The research revealed that during lectures, research participants use text editors to perform various tasks, complete assignments, take notes, and summarize the material presented by the lecturer. Examples illustrating the analysis: "I write down the information gathered during lectures and perform tasks assigned by the lecturers." (N 3); "Many of the study assignments are presented by preparing them through a text editor." (N-9); "To organize and create text for various tasks." (N_6). Spreadsheets are used during lectures to prepare projects, such as a "Personal Budget Plan," or to quickly perform calculations. Popular digital content creation tools include presentation software such as PowerPoint, Sway, and Prezi. Participants mentioned using these programs to complete tasks, prepare projects, and present them. Examples illustrating the analysis: "During sessions, it becomes one of the most important tools for presenting tasks to lecturers and colleagues." (N 15); "To read presentations prepared by lecturers and to create them myself." (N_7). Canva is used during lectures to create advertising banners, posters, and cards. These programs are used to create posters, brochures, and cards to spread ideas and share information: "Used to create posters, brochures, for special occasions, we can create a card, we can create a brochure to spread ideas, share information." (N 9). Video creation tools are used during lectures, with IMovie being given as an example. Participants mentioned using video creation software to create movies on specific topics. With the help of these programs, participants completed assigned tasks while studying the subject "IT in Social Work." The video creation program was used to create a presentation on the topic of the alphabet: "<...> in the language subject, we had to film an introduction and show <...> the alphabet. There are quite a few subjects in studies where video creation can be an alternative to simply creating slides." (N_4) Mind mapping software is used during lectures to highlight the most important points. Participants also used puzzle creation programs during lectures: "We learned during information technology classes so that in the future, when working with children, we could apply it in practice, educate them, and involve them in occupational activities." (N 5) Quiz creation programs like Kahoot are used during lectures: "Quiz

creation, we also did during the study period, during the information technology subject, played with colleagues, now at home with family members, or in social work, we can apply such a fun activity." (N_12) Survey, evaluation, and self-assessment creation programs such as Google Forms are used.

In summary, it can be stated that, upon analyzing the responses provided by the research participants, it was found that they utilize text editors, spreadsheets, create presentations, advertising banners, posters, cards, produce videos, mind maps, puzzles, quizzes, surveys, and assessment tools during their studies.

Usage of communication and collaboration tools in the study process

The research aimed to ascertain which communication and collaboration tools students use during their studies. During lectures, students utilize cloud technologies such as Dropbox, OneDrive, Google Drive, and file transfer as communication and collaboration tools to upload, save, and accumulate files "Needed to save and share information with students or lecturers" (N 15); "I accumulate assignment papers and other relevant information." (N 14). Participants in the study indicated that they share information and files among themselves using these programs, especially for larger files: "When transferring larger documents/projects" (N 9). Additionally, participants mentioned using cloud technologies for group work and communication regarding tasks and assignments among lecturers or group members. Participants noted that they use learning management systems during lectures, primarily citing the Moodle platform, where they easily find lecture materials and additional information: "You can find various materials in different formats for free, which greatly helps to complete tasks easier." (N 4). They use learning management systems for task execution: getting familiar with the task, reviewing task requirements and deadlines. "It's a great tool because lecturers provide all the necessary information, clearly present tasks and their deadlines. Everything is clear, simple, and organized." (N 9); "To complete tasks, review information if you weren't in lectures" (N 3). Participants also mentioned using learning management systems to access completed tasks and assignments to review their assessments: "Submitting tasks or checking my grades during assignments and learning" (N 12). They communicate with lecturers and group mates through learning management systems, and the information provided in the learning environment helps them plan their time and study process: "Tools help to communicate, plan time, store information" (N 15). During lectures, they use audio and video recording platforms, with most mentioning the YouTube app. They search for video material to delve deeper into the subject matter, seeking more information on a presented topic: "Looking for more information, deeper understanding of the subject" (N 12), "When you need to find information or simply video material learning about a certain topic. Because I remember faster when I review the

lecture topic with another topic." (N 19). They use video repository materials during lectures when recommended or shown by lecturers: "We often watch and analyze videos recommended by lecturers." (N_13). Additionally, they use video repository materials to complete tasks, incorporating them into presentations to make the presentation more varied and help remember the presented information: "Helps with preparing presentations, we insert a video during slides so that it's not boring to listen to only dry information, for relaxation, and to reinforce the material." (N 15). During lectures, they use conference and chat applications such as Zoom, Teams, Moodle, Google Meet, Messenger. They most commonly use these programs during distance learning to "Attend lectures and their study materials, for presentation of assignments." (N 13), communicate with study groups "When it's necessary to contact lecturers or group mates regarding tasks and assignments" (N_17) and for information gathering, collection "I receive, collect, and ask for information." (N 13). Participants mentioned using time planning apps during lectures (citing the Google Calendar app), where they mark exams, important dates, and synchronize their lecture schedule - allowing for productive time management: "I plan time constantly. I even have a schedule for studies where I write down lectures, tasks, and their deadlines." (N 2). During lectures, they use social media platforms such as Facebook, Instagram, Messenger to communicate with classmates or lecturers on certain study matters: "When it's necessary to contact lecturers or group mates regarding tasks and assignments" (N 1). Social media apps are useful for sharing information among classmates: "During lectures, we have a study group where we upload information, presentations, material useful for studies or assignments" (Participant 3). Participants use social media platforms to collaborate on project work with classmates: "For communication with group mates and preparation of various project works." (N 8).

In summary, it can be stated that, after analyzing the responses provided by the research participants, it was found that students use cloud technologies, learning management systems, laboratories, audio and video repositories, conference and chat applications, time planning tools, and social media during their studies.

Conclusions

In the process of social work studies, students make use of information technologies during lectures to find information. During lectures and practical sessions, students utilize smartphones and laptops, fast internet connections, and wireless WiFi networks. To print documents, information, and study materials, they use printers and copiers.

The most commonly used technical tools for tasks related to studies include: searching for information; reading learning materials and viewing visual content;

Sarancha, 2024. Algorithm for Ensuring and Implementing Social Projects in the Context of Globalisation (Comparative Aspect)

participating in discussion forums; using email; and reviewing learning assessments.

Active students actively engage with social media platforms, learning management systems, audio and video repositories, as well as conference and chat applications. Conference and chat applications, along with social media platforms, are most commonly used during remote lectures, for communication with lecturers and peers. Cloud technologies are used to upload, store, and accumulate documents.

References

- Ademi, N., Loshkovska, S., Chorbev, I. (2019). Reinforcing Motivation and Engagement by Behavioral Design in Learning Systems. *International open and distance learning conference proceedings book, 237-242.*
- Al-Emran, M., Elsherif, H.M., Shaalan, K. (2016). Investigating attitudes towards the use of mobile learning in higher education. *Computers in Human Behavior*, *56*, *93–102*. DOI: https://doi.org/10.1016/j.chb.2015.11.033
- Alessio, H., et al. (2018). Interaction of Proctoring and Student Major on Online Test Performance. *International Review of Research in Open and Distributed Learning*, 19(5), 165-185. DOI: https://doi.org/10.19173/irrodl.v19i5.3698
- Bidarra, J., Sousa, N. (2020). Implementing Mobile Learning Within Personal Learning Environments: A Study of Two Online Courses. *International Review of Research in Open and Distributed Learning*, 21(4), 181–198. DOI: https://doi.org/10.19173/irrodl.v21i4.4891
- Bozna, H., Firat, M. (2019). Evolution of Distance Education Theories in 21st Century. *International open and distance learning conference proceedings book*, 247-250.
- Brooks, D.C. (2016). *ECAR study of undergraduate students and information technology*. Retrieved from: https://er.educause.edu/~/media/files/library/2016/10/ers1605.pdf? la=en
- Brown, T.H., Mbati, L.S. (2015). Mobile learning: Moving past the myths and embracing the opportunities. *The International Review of Research in Open and Distributed Learning*, 16(2), 115–135. DOI: https://doi.org/10.19173/irrodl.v16i2.2071
- Cabi, E. (2018). The Impact of the Flipped Classroom Model on Students' Academic Achievement. *International Review of Research in Open and Distributed Learning*, 19(3), 203-221. DOI: https://doi.org/10.19173/irrodl.v19i3.3482
- Chang, B., Shih, Y.-A. & Lu, F.-C. (2018). Co-Construction Concept Through Cloud-Based Social Network Platform Design, Implementation, and Evaluation. *International Review of Research in Open and Distributed Learning*, 19(5), 238-253. DOI: https://doi.org/10.19173/irrodl.v19i5.3419
- Cross, S. et al. (2019). Distance Learners' Use of Handheld Technologies: Mobile Learning Activity, Changing Study Habits, and the 'Place' of Anywhere Learning. *International Review of Research in Open and Distributed Learning*, 20(2), 223-241. DOI: https://doi.org/10.19173/irrodl.v20i2.4040
- Dahlstrom, E., et al. (2015). *ECAR study of undergraduate students and information technology*. Retrieved from: https://library.educause.edu/resources/2015/8/~/media/24ddc1aa35a5490389baf28b6ddb3693.ashx

- Fox, E. (2019). Mobile Technology: A Tool to Increase Global Competency Among Higher Education Students. *International Review of Research in Open and Distributed Learning*, 20(2), 242-259. DOI: https://doi.org/10.19173/irrodl.v20i2.3961
- Gedvilienė, G., Kankevičienė, R., Balynienė, R. (2012). Kolegijų studentų socialinės tinklaveikos įrankių naudojimas. Studijos šiuolaikinėje visuomenėje. *Mokslo darbai*, 3(1), 65 73. Retrieved from: https://www.slk.lt/sites/default/files/studijos_2012_puslapiui.pdf
- Kaklauskas, L. ir Kaklauskienė, D. (2012). Virtualios aplinkos priemonių panaudos studijoms lyginamoji analizė. Studijos šiuolaikinėje visuomenėje. Mokslo darbai, 3(1), 119 128. Retrieved from: https://www.slk.lt/sites/default/files/studies_in_contemporary_society_2014.pdf
- Misevičienė, R., Rimavičius, V., Makackas, D. (2020). Vaizdo konferencijų platformų vertinimas studijų procese, Iš Rutkauskienė, D., Alta'20. *Advanced learning technologies and applications. Short learning programmes. Conference proceedings* (p.132 138). Kaunas: Kaunas University of Technology.
- Prakapienė, D., Prakapas, R. (2018). Socialinių tinklų naudojimas švietime: teorinės įžvalgos. *Šiuolaikinės visuomenės ugdymo veiksniai. 3 tomas.* P. 153 156. ISSN 2424–614X
- Reinecke, L., Meier, A., Aufenanger, S., Beutel, M.E., Dreier, M., Quiring, O., Müller, K.W. (2018). Permanently online and permanently procrastinating? The mediating role of Internet use for the effects of trait procrastination on psychological health and wellbeing. *New Media & Society*, 20(3), 862–880. DOI: 10.1177/1461444816675437
- Rienties, B., et al. (2018). Making Sense of Learning Analytics Dashboards: A Technology Acceptance Perspective of 95 Teachers. *International Review of Research in Open and Distributed Learning*, 19(5), 186-202. https://doi.org/10.19173/irrodl.v19i5.3493
- Rokhiyah, I., Zuhairi, A., Zuhairi, F.R. (2019). Using Blended Learning to Enrich Student Learning Experience in a Post-Graduate Course for In-Service Teachers. *International open and distance learning conference proceedings book*, 143-154.
- Rupp, M.A., et al. (2019). Investigating learning outcomes and subjective experiences in 360-degree videos. *Computers & Education*, 128, 256-268. DOI: 10.1016/j.compedu. 2018.09.015
- Shadiev, R., Wang, X. & Huang, Y. (2020). Promoting Intercultural Competence in a Learning Activity Supported by Virtual Reality Technology. *International Review of Research in Open and Distributed Learning*, 21(3), 157–174. DOI: https://doi.org/10.19173/irrodl.v21i3.4752
- Sung, Y-T., Chang, K-E., & Liu, T-C. (2016). The effects of integrating mobile devices with teaching and learning on students' learning performance: *A meta-analysis and research synthesis*. *Computers* & *Education*, 94, 252–275. DOI: https://doi.org/10.1016/j.compedu.2015.11.008
- Šupa, M. (2021). Socialiniai tyrimai apie elektroninius nusikaltimus: globali paradigmų takoskyra bei jos raiška Lietuvoje. *Informacijos mokslai*, 91, 41-58.
- Teresevičienė, M., et al. (2015). *Technologijomis grindžiamas mokymas ir mokymasis organizacijoje*. Monografija. Kaunas: Vytauto Didžiojo universitetas.
- Trepulė, E., Daukšienė, E. (2016). *Socialinių tinklų naudojimas suaugusiųjų švietime. Kaunas: Vytauto Didžiojo universitetas.* P. 1 8. Retrieved from: https://epale.ec.europa.eu/sites/default/files/2016-epale-lt-00097.pdf
- Ucar, H. & Goksel, N. (2019). Staying Motivated on Facebook: Supplementary Activities Enhancing Online Learners' Motivation and Engagement. *International open and distance learning conference proceedings book*, 283-288.

- Sarancha, 2024. Algorithm for Ensuring and Implementing Social Projects in the Context of Globalisation (Comparative Aspect)
- Vettehen, P.H., Wiltink, D., Huiskamp, M., Schaap, G., & Ketelaar, P. (2019). Taking the full view: How viewers respond to 360-degree video news. *Computers in Human Behavior*, 91, 24-32. DOI:10.1016/j.chb.2018.09.018
- Walshe, N., & Driver, P. (2019). Developing reflective trainee teacher practice with 360-degree video. *Teaching and Teacher Education*, 78, 97-105. DOI: 10.1016/j.tate. 2018.11.009
- Yıldız, G., Yıldırım, A., Akça, B., Kök, A., Özer, A. & Karataş, S. (2020). Research Trends in Mobile Learning. *International Review of Research in Open and Distributed Learning*, 21(3), 175–196. DOI: https://doi.org/10.19173/irrodl.v21i3.4804
- Židžiūnaitė, V. ir Sabaliauskas, S. (2017). *Kokybiniai tyrimai. Principai ir metodai*. Vilnius: leidykla Vaga.
- Zuhairi, A., Rokhiyah, I., & Zuhairi, F. R. (2019). Using Online Tutorials to Engage Student Learning Biology at a Distance. *International open and distance learning conference proceedings book*, 155-168.