

Developing soft skills in future foreign language teachers through ICT

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Abstract. Rapidly changing job markets require graduates to possess not only technical skills but also strong soft skills. This study investigates the development of soft skills in future foreign language teachers in Ukrainian universities, focusing on the potential of Information and Communication Technologies (ICT) as a tool. Using action research methods and mixed data collection, we explore (1) the current understanding of soft skills among teachers and students, (2) the perceived importance of different soft skills for future language teachers, (3) existing methods and challenges in soft skills development, and (4) the effectiveness of various ICT tools in promoting soft skills growth. The findings will inform the design of a model for integrating ICT into foreign language teacher education to enhance soft skills development, ultimately contributing to preparing graduates for successful careers in a globalised world.

Keywords: soft skills, foreign language teachers, ICT, critical thinking, communication, collaboration

1. Introduction

Significant changes in science, economics and society for the last two decades have influenced the development of the education sector, setting the objective of training employable professionals who can respond to today's challenges and adapt to various working conditions. Recently, in Ukrainian higher education, soft skills and their importance for the employability of graduates are frequently discussed [2, 22]. According to the opinion polls, most employers prefer a candidate who has developed soft skills, while purely professional skills (hard skills) are of primary importance for only 20% of the employers [15]. This is because having professional knowledge and skills (hard skills) is not enough to perform a wide range of professional tasks. A person must have the universal skills needed in any activity: the ability to think critically, find the necessary information, work in a team, resist stress, rationally plan his or her time, etc.

The European Commission declared that “a large number of Europeans, particularly highly-qualified young people, work in jobs that do not match their talents and aspirations. At the same time, 40% of European employers report that they cannot find people with the right skills to grow and innovate” [21]. Council Recommendation on Key Competences for Lifelong Learning [4] was suggested as the way to help more people “acquire the core set of skills necessary to work

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and live in the 21st century with a special focus on promoting entrepreneurial and innovation-oriented mind-sets and skills” [21]. The issue is especially relevant to the Ukrainian context as more and more employers focus on European standards and requirements for employees’ hard and soft skills.

In Ukraine, the first sociological investigation of digital skills demonstrated that 53% of the Ukrainian population is below the average mark, and 15.1% of them do not have any digital skills at all [5]. Digital skills are soft skills for all except IT specialists; moreover, they can help develop other soft skills.

Such skills will be helpful not only in professional activities but also in everyday life. They will help arrange the living space better, solve various life issues, and establish relationships with others. The study of soft skills development has become increasingly popular among scientists. On the one hand, scientists and managers engaged in business research and looking for ways to train competitive workers discuss the feasibility of soft skills development. On the other hand, the importance of soft skills development is considered a significant advantage in the business sphere and in any other field, including education.

Teachers must develop their soft skills as they interact with various people daily: students, parents, and colleagues. They must build relationships with others, present themselves and their ideas, and have leadership qualities. The teachers face unpredictable situations daily, so they must act effectively inside and outside the school. The ability to efficiently behave in typical and critical situations is one of the characteristic features of the developed soft skills of a teacher [11]. New trends in education lead to changes, and the search for new models of future teachers’ training, which focuses on student-centredness, forms the image of a new generation teacher, teacher-facilitator, colleague, educator, project manager, communicator, researcher, and innovator. Without developed soft skills, it will be impossible for a teacher to perform this role.

The most prominent feature of the modern educational process is the active involvement of ICT in the classroom, which is undoubtedly an extreme need of the information society. The continuing development of digital technologies provides teachers with unlimited opportunities for the implementation, development and use of new methods and technologies in the educational process, helping to improve it, adapt to new labour market requirements, and make the process of acquiring knowledge by students more engaging and productive.

The use of ICT as one of the tools in the process of future foreign language teachers’ soft skills development has not been revealed in the research profoundly enough. There is a lot of research and scientific publications on the use of ICT in learning foreign languages in higher educational institutions or secondary schools. Nevertheless, the use of ICT as a means of soft skills development has not been sufficiently studied. Thus, our research topic is relevant in the context of recent world events and the challenges the higher education system faces today.

The *aim* of the article is to review the experience of future foreign language teachers’ soft skills development and to outline the effective ways of their development through ICT in Ukrainian universities.

2. Methods

The methodology of our investigation is presented with the standard procedure of action research as it is one of the most dynamic, flexible and effective ways of implementing new ideas in the education sphere.

According to Mertler [14] we are following such stages:

- Identifying and limiting the topic
- Gathering information
- Reviewing the related literature
- Developing a research plan
- Implementing the plan and collecting the data
- Analysing the data
- Developing an action plan
- Sharing and communicating the results
- Reflecting on the research process.

This paper presents the beginning stage of the study and action research cycle. So, it reveals the topic's relevance, discusses the world and Ukrainian experience within the issue, and describes the research plan and the first data obtained.

This research describes the attempt to accumulate the recent experience of the educational community to face the challenges of the new educational environment, to elicit what students and university teachers felt and how they reacted to emerging factors, to synthesise and communicate issues to be solved, and thereby to stimulate implementing the best practices of soft skills development through ICT. We suggest expanding the lens of focus from individual effective practices of university teachers to common use and creating a new model of future foreign language teachers' soft skills development in their training in Ukrainian universities.

We will involve all categories of stakeholders in our research as it is necessary to know the needs of students, university teachers, university management, their future school students, school administration, parents and authorities responsible for education on a national level. Thus, besides the literature review and practical experience study, we need qualitative and quantitative data and mixed methods to engage the stakeholders to elicit and synthesise all relevant data and create the model of future foreign language teachers' soft skills development through ICT.

In this article, we reveal our experience of finding the answers to such research questions:

1. What is 'soft skills'?
2. How have they been changing, and what influences their change?
3. Which soft skills are essential for future foreign language teachers?
4. What are the best practices for the development of soft skills?
5. What issues still need to be solved?
6. How can the use of ICT contribute to the development of soft skills?

The answers to these questions will help us to collect the necessary data and start designing the model of future foreign language teachers' soft skills development through ICT relevant to Ukrainian higher education.

3. Results and discussions

The concept of soft skills has become an integral part of the labour market in many areas of the economy, and there are some other closely related terms.

According to Cinque [3], researching the development of skills, which we call 'soft skills', provides a list of terms used by different organisations in different periods (figure 3).



Analysing these terms, we can see that they contain the words 'future', 'life', 'social', 'society', i.e. the presence of these skills is seen as a guarantee of the success in the life of a particular person, which leads to the success in society. The verbs 'transversal' and 'transferable' indicate the universal nature of these skills and the ability to use them in various activities. The term 'soft skills for talent' emphasises that developing soft skills gives a person more opportunities to realise his or her natural abilities and, as a result, increases success in career life and promotes self-realisation, which is the key to a harmonious and happy life.

The Oxford Dictionary defines 'soft skills' as "personal qualities of a person that contribute to successful communication with other people: the ability to work together, enthusiasm, emotional intelligence" [16]. At the same time, life skills are defined as "skills necessary or extremely useful for managing daily life: the ability to work in a team, solve problems, literacy and arithmetic skills. They also include such vital skills as the ability to cook or use a washing machine" [16]. Thus, although the terms 'soft skills' and 'life skills' are closely related, they differ. The term 'life skills' is more acceptable when discussing forming skills necessary for a person, primarily for independent living, adaptation to living conditions, and solving everyday problems. The concept of 'soft skills' is often used when training a person for future professional activities.

The concepts of soft skills and hard skills originated in the 1960s and 1970s in military affairs.

They were expressed in the doctrine of “Military Training Design Systems”: hard skills were used to denote machine skills and soft skills – to work with people and papers. Subsequently, the terms began to be actively used in business. Robles [18] considered the need to develop soft skills in students as one of the crucial factors in preparing them for successful business communication. Mitchell [15] wrote about the importance of integrating soft skills into business school curricula, which would contribute to the further successful employment of students and their competitiveness in the labour market of the 21st century. There is a growing talk about the need to develop soft skills in any profession and emphasise the need to include the development of soft skills in educational programs as one of the mandatory components, along with training for specialised professional skills.

Thus, modern education needs to train primary teachers with well-developed hard and soft skills who can contribute to their future students’ further effective development of these skills. That is why in the Regulations on Accreditation of Study Programmes in Higher Education, one of the critical sub-criteria (sub-criterion 2.6) is the following: “The study programme envisages the development of soft skills in students that meet stated objectives” [17], which will help graduates succeed in their workplace.

The ratio of soft skills and hard skills may differ for individual professions. Some professions provide accurate calculations, drawings, and experiments. In these professions, hard skills are more important because the level of their development mainly influences the result of the task fulfilled. Meanwhile, professions directly related to communication with people, planning, trade, and art require more focus on soft skills. However, it should be noted that, for example, researchers in a laboratory with advanced communication skills will have a better chance of professional growth, as they will be able to present themselves and their ideas better than their colleagues, whose soft skills are less developed.

Compared with hard skills, soft skills are based more on personal values, and in response to specific actions, the models of human behaviour are engaged. Developing soft skills is slower, and reaching a certain level is not guaranteed. Soft skills under certain conditions tend to reverse development, while hard skills have almost no such tendency [6].

Many universal skills may be needed in a profession and life. A study by Simona [20] among teachers in the UK, Denmark, Spain, Romania and Portugal identified such life skills as:

- Numeracy skills
- Literacy and communication
- ICT skills
- Interpersonal skills
- Use of foreign languages
- Entrepreneurship
- Job seeking
- Learning to learn

Most of these life skills can be attributed to soft skills. Among the proposed list, teachers had to choose the most important in their opinion. The study found that the most desirable skills to be included in school curricula were literacy and communication for Danish, British, Romanian and Spanish teachers, ICT skills for Portuguese and Romanian respondents, interpersonal skills

for British respondents, learning to learn for Danish Spanish and Portuguese teachers, use of foreign languages for Danish respondents. The most acceptable means to implement the involvement of these flexible skills in the curriculum, according to the author, are the method of case study and role-playing games [20].

The World Economic Forum in 2015 highlighted the ten most important qualities needed in 2020 for successful employment, the so-called Davos concepts [13]:

1. Complex problem solving
2. Critical thinking
3. Creativity
4. People management
5. Coordinating with others
6. Emotional intelligence
7. Judgement and decision making
8. Service orientation
9. Negotiation
10. Cognitive flexibility

This list has been transformed to a shorter one, so there are four competencies on it now [13]:

1. Critical thinking
2. Communication
3. Creativity
4. Collaboration

Each profession requires greater development of specific soft skills. Thus, in the typical program “Methodology of teaching English” for future teachers of English, the need to create opportunities to develop essential life skills (which correspond to our understanding of soft skills) that transcend subject boundaries is emphasised. According to the programme, these critical skills include [1]:

1. Communication
2. Collaboration
3. Creativity
4. Critical thinking
5. Information literacy
6. Intercultural awareness
7. Problem-solving
8. Time management

As skills differ, approaches, methods and tools for their development will differ. So that the teacher can work effectively with students and help them develop the skills mentioned above, he must plan the expected results and the program of action that will help students develop the

appropriate soft skills. The use of ICT in the educational process will significantly facilitate the formation of soft skills, and at the same time, students' awareness of the latest trends in higher education will be significantly enhanced with digital and ICT literacy. Kuybida et al. [12] states that developing digital skills is one of the conditions for developing the digital market of any country, a necessary condition for successful cooperation and interaction in 'innovation ecosystems'.

Nowadays, ICT plays a crucial role in the development of future foreign language teachers' soft skills. In our research, we will use such understanding of ICT – “a set of methods, production processes, software and hardware, integrated for collecting, processing, storing, transmission, demonstrating and the use of data in the interests of their users” [19]. The notion of ICTs will be considered not only as hardware and software but also as the more advanced scheme of [19]:

1. Theoretical principles (concepts and laws of computer science).
2. Methods of solving problems (modelling, system analysis, system design, methods of transmission, collection, production, accumulation, storage, processing, transmission and protection of information).
3. Means for achieving tasks:
 - hardware (personal computer and its components; local and global networks, modern peripheral equipment);
 - software (system, applied, universal, special, instrumental).

Nowadays, ICTs are widely used in the educational process. Due to the use of ICT, it has become possible to create virtual universities that do not require students to stay in the classroom but allow them to adjust their curriculum and study outside the city or country. This indeed provides more opportunities to implement a lifelong learning strategy to enrich people's knowledge and improve skills and abilities necessary for effective adaptation to new professional and living conditions.

ICT also promotes the implementation of interactive learning within the system “teacher – computer – student” and helps primarily to develop communication skills and the ability to establish emotional contact. Interactivity is a key feature of ICT in the learning process; it contributes significantly to implementing other didactic qualities of ICT, such as communication, adaptability, productivity and creativity [9].

Thus, we see that the essential didactic qualities of ICT coincide with the fundamental soft skills that a person must develop to be successful in today's world.

In the educational process, ICT can act as a subject of study, as a learning tool, as a means of managing the educational process, and as a tool for managing research and scientific and methodological work [9]. Speaking about learning foreign languages and preparing for future teaching activities in the context of developing students' soft skills, ICT would be considered a learning tool, a means for managing the learning process, research and methodological work.

The pandemic of 2020 promoted the massive use of virtual classrooms and video conferencing software. They are often used now as a tool for organisation classes while distance learning. For every teacher, such programs and platforms as Zoom, Google Meet, Panopto, and Microsoft Teams are valuable helpers. In the context of soft skills development, all of them contribute to communication skills development and team-building development. Being at a distance from

each other, students can continue communication and collaboration. Teachers can use these tools to split students into groups (break-out rooms), ask them to write messages in the chat (e.g. in pairs), share a screen, video, audio or files, etc. Using software for videoconferences facilitates future teachers' new understanding of classroom management in terms of making digital classroom as close to a physical one as possible.

ICT as a learning tool stands for various software, platforms, and Internet sources used while learning foreign languages and obtaining competencies for future teachers. One of the most useful foreign language learning tools is social services on the Internet, for example, social nets, blogs, mind maps, and imitators of 3D space, which are called Web 2.0 technology [8]. All these tools allow students to communicate with native speakers of foreign languages and representatives of different cultures and nationalities, which is much more helpful for learning and more effective than the study of this material with the help of coursebooks. It also promotes the development of such students' soft skills as communication, collaboration, negotiations, emotional intelligence, intercultural awareness, and others.

Mind maps or virtual boards are excellent tools for developing critical, systemic, and creative thinking, communication skills, and team-building. The term 'mind map' was proposed by Tony Buzan in the 1970s, and later, in 2007, the first program (MindMeister) for creating visualised schemes was made [7, 10]. There is a wide variety of such programmes at the modern stage of ICT development. MindMeister, Padlet, Jamboard, Miro, Coogle, Xmind, BubblUs, MindMup, and Canva are the most popular ones. These programmes can be used as auxiliary means for brainstorming to share thoughts and ideas online. Brainstorming is one of the most effective methods for developing critical and creative thinking. Mind maps can also be used for creating notes during lectures and conferences and for planning, which can significantly contribute to developing time management skills.

Graphic recording is used for the visualisation of information. Such new techniques of processing and presentation of information, such as scribing and sketch-noting, can become a good alternative to usual notes in paper notebooks or presentations. To make a video with the help of scribing or to write a lecture with the help of sketch-noting, one should analyse and choose the most important facts among the variety of information proposed by a lecturer or books and media. The future teachers should reconceptualise everything and present it in the most appropriate way. All these activities train their thinking, making it more creative and critical and training their ability to solve complex problems. Among programs that can be used for scribing are PowToon, GoAnimate, Sparkol Videoscribe, and Animaker; apps used for sketch-noting are Paper by Fifty Three, Explain Everything, Sketchbook Express, and Notability. These visualisation types are precious for students participating in project-based multimedia learning.

In both hard and soft skills development, the CLIL method will also be relevant as joint learning of foreign languages and computer science has a high potential for enhancing employable teacher training.

While considering ICT to be the means of achieving our research purposes, we studied the current situation of students' digital skills development. The survey results were realised by a team of researchers from Bogdan Khmelnytsky Melitopol State Pedagogical University, Kherson State Maritime Academy, and Dmytro Motornyi Tavria State Agrotechnological University. According to it "most of the students (40.6%) who participated in the survey would like to

study using the mixed learning technology (combining online, traditional technologies and self-study), 20.8% of the students prefer studying traditionally (lectures and practical lessons in the classroom), 13.9% of the students would like to study in groups (to get the project task and work on the result), 9.9% of the students would like to study on an individual schedule, 8/9% of the students would like to study distantly, 5.9% of the students have pointed out that there is no matter what technology is used” [23]. The investigation took place before the pandemic. Now, we know that students and teachers face many challenges primarily associated with the lack of digital skills.

We surveyed teachers and students of Bogdan Khmelnytsky Melitopol State Pedagogical University to learn the level of awareness of soft skills development methods and identify the essential skills. Ten teachers and 53 students took part in the survey. The survey was conducted using Google Forms. Two questionnaires with similar questions were proposed for each group.

1. Do you know what soft skills are?
2. How can you define soft skills?
3. What skills from the suggested list are important in today’s professional and everyday life? (several possible answers). If necessary, add to the list.
 - a) Complex Problem Solving
 - b) Critical Thinking
 - c) Creativity
 - d) People Management
 - e) Coordinating with Others
 - f) Emotional Intelligence
 - g) Judgment and Decision making
 - h) Service Orientation
 - i) Negotiation
 - j) Cognitive Flexibility
4. What skills from the suggested list are important for a future foreign language teacher? (several possible answers). If necessary, add to the list. (The same list)
5. Have you attended trainings, seminars, or webinars covering soft skills development?
6. What classroom methods and techniques would you like the teachers to use to improve your soft skills? (a question for students) / What classroom methods and techniques do you use to develop students’ soft skills? (a question for teachers)
7. What ICT would help you to improve your soft skills? (a question for students) / What ICT do you use to develop students’ soft skills in the classroom? (a question for teachers).

The study revealed that 90% of teachers know what soft skills are; among students, the figure was lower; only 47.8% answered that they know exactly what soft skills are.

Among the skills a person needs in everyday life, most teachers chose Critical Thinking (100% of respondents) and Cognitive Flexibility (80%), as well as Coordinating with Others (80%), Judgment and Decision making (70%) and Complex Problem Solving (70%).

Coordinating with Others (84.9%) was in the first place for students. Other important features in the opinion of students are Judgment and Decision making (83%) and Creativity (77.4%).

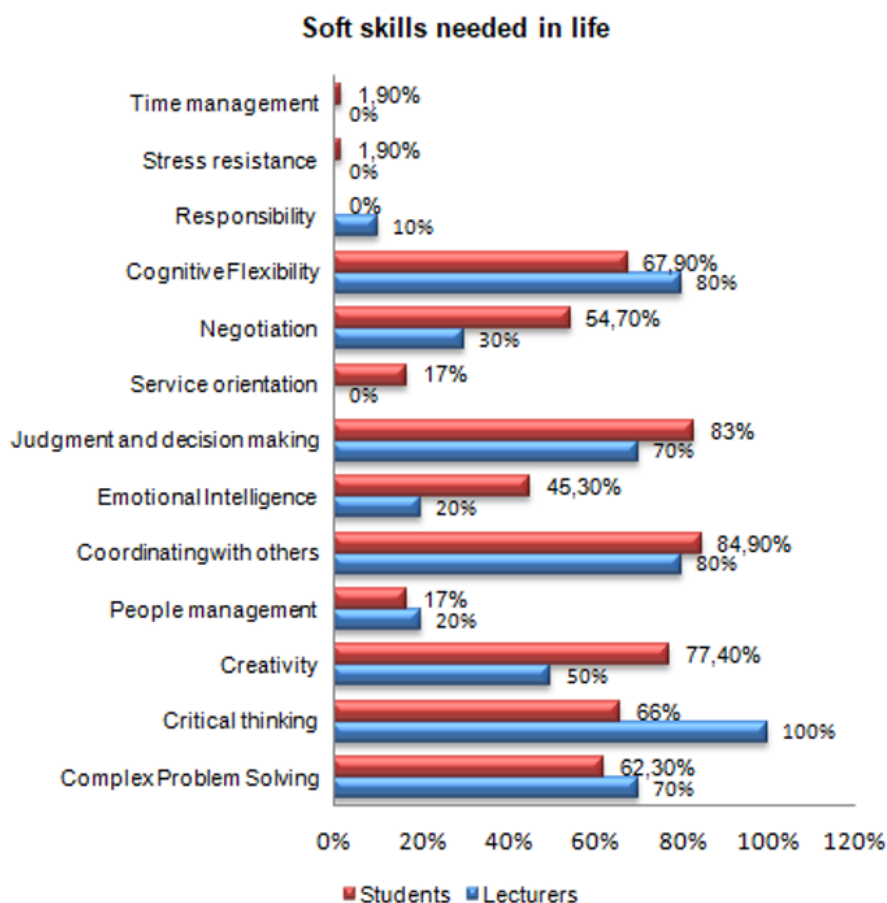


Figure 1: Students’ and lecturers’ attitude to soft skills needed in life.

In the questions about the skills necessary for a future foreign language teacher, Creativity (90%) and Coordinating with Others (90%) are preferable from the teachers’ point of view. Teachers also consider Critical Thinking (80%) and Cognitive Flexibility to be essential qualities for future teachers.

Almost similar results on this issue were obtained in a survey of students: they consider Coordinating with Others (86.8%) and Creativity (86.8%) the most valuable skills for future teachers, as well as Cognitive Flexibility (69.8%) and Negotiation (52.8%).

The survey also revealed that only 40% of teachers and 17.8% of students attended training, seminars, and webinars dedicated to soft skills development.

Teachers demonstrated greater awareness of the methods and techniques used to develop soft skills (group work, project technology, problem-based learning, role-playing games, business games, discussions, interactive communication, micro-teaching, and work in variable groups). As for students, most respondents did not have a clear idea of the methods that can enhance soft skills development. Only a few students could answer clearly (group work, business games, creative tasks, research projects, trainings, interactive games and technologies). However,

almost all respondents mentioned methods and techniques related to creativity and active interaction between people. Some students expressed their wish to develop time management and public speaking as rather important skills.

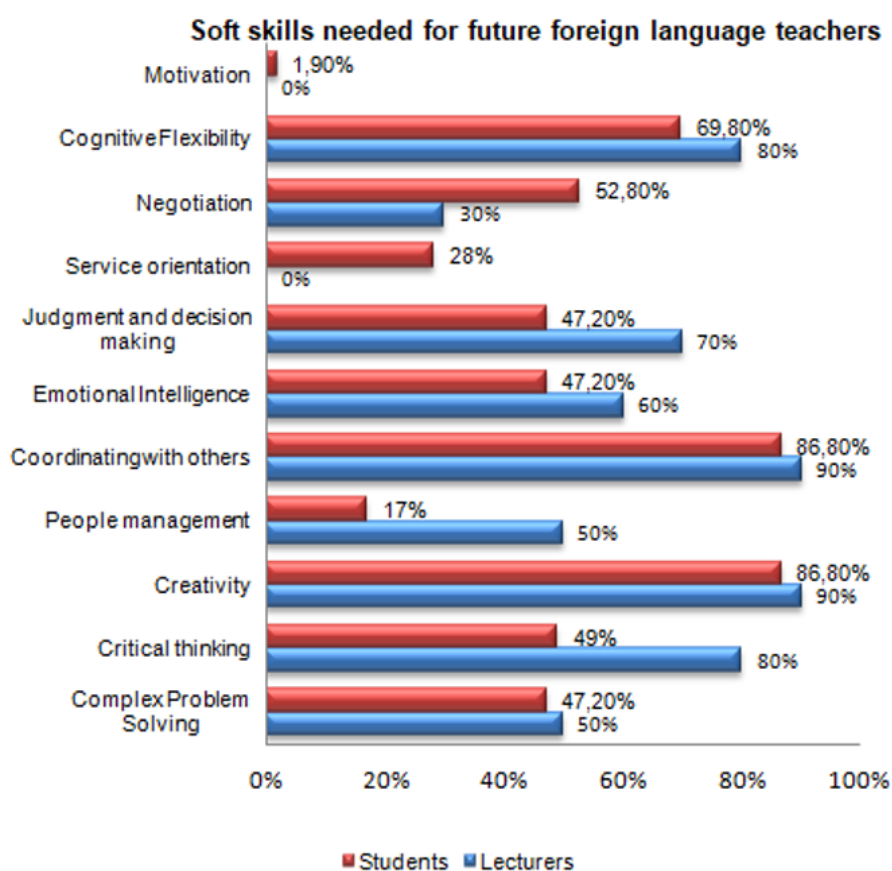


Figure 2: Students’ and lecturers’ attitude to soft skills needed in professional activity.

Among ICT-assisted methods and techniques used by teachers in class to develop soft skills, there are web quests, E-learning, Google Forms, Google Docs, Jamboard, audio and video materials, case method, review and analysis of Internet pages on the problem, computer testing, multimedia equipment, emailing, social networking, TED talks. Some other items were mentioned, though they can be called neither methods nor techniques.

Many students found it difficult to answer this question. Some of them mentioned artificial intelligence, various messengers, social networks, video conferencing, viewing of developing content, information portals, mobile applications, media broadcasts, webinars, trainings, and interactive quests.

Thus, having analysed the survey data, we can conclude that teachers and students have almost the same idea of future foreign language teachers’ soft skills. Both groups of respondents replied that the focus should be on developing creative thinking, creativity and the ability to cooperate with others. However, we observed a lack of awareness and understanding among

students about soft skills development methods, techniques and tools. Thus, paying more attention to this issue in the educational process and integrating soft skills development into educational programmes' content and aims is necessary.

Based on the information we collected and mentioned above with the further study of the topic, we plan to develop a model for soft skills development of future foreign language teachers, mainly associated with modern ICT. It is planned to implement the developed model into the educational process of applicants for higher education at Bogdan Khmelnytsky Melitopol State Pedagogical University, who studies in the speciality 014.021 Secondary education (English language and literature) and check its effectiveness.

Now on our list of soft skills to primarily develop are those offered in the typical "Methodology of teaching English" program for Bachelor's degree [1]: communication, collaboration, creativity, critical thinking, information and digital literacy, intercultural awareness, problem-solving, time management. Step by step, we will add other soft skills to this list as modern reality is highly dynamic and requires flexibility and quick reaction to everyday educational challenges.

Among methods and technologies to be used first and foremost are the following:

1. Problem-based learning
2. Case-study method
3. Interactive learning technologies
4. Game technologies
5. Blended learning technologies and m-learning technology

In implementing the soft skills development model, we will focus on classroom and distance learning within the curriculum of the study programme. Besides activities in physical or virtual classes, there will be a particular focus on students' self-study, dealing with their learner autonomy and other skills. One more component of our model will be linked to students' extracurricular activities. For these purposes, a list of recommended ICT tools will be created to support students.

Our research plan comprises the idea of creating an educational centre or a hub which will be a territory for cooperation, collaboration and sharing experience, a place for discussing issues related to the methodology of teaching foreign languages and various issues related to the educational process, current trends in education, of the national and world level, small-scale and large-scale investigations. It is possible to involve not only students and teachers of Bogdan Khmelnytsky Melitopol State Pedagogical University but also stakeholders: school teachers, methodologists, and representatives of various educational and cultural organisations. Other universities, schools and colleges can also be involved in the cooperation.

Students can develop soft skills such as communication, cooperation, and critical thinking to expand their intercultural and international awareness by participating in the educational hub. Participation in seminars, trainings, etc., will allow students to prepare for future professional activities and expand their understanding of modern professional requirements, combining their learning and research. A special sequence of workshops with ICT-assisted professional development activities will be delivered so that future teachers can handle their soft skills and be ready for that.

4. Conclusions

Our literature review and surveys revealed that creativity, critical thinking, collaboration, and communication are among the essential soft skills needed for 21st-century foreign language teachers. Interactive methods like problem-based learning, case studies, and games hold promise for developing these competencies. Based on these insights, our model will focus on building these priority skills through active learning approaches.

The model will take an integrated approach across curriculum, self-study, and extracurricular activities. The curriculum will embed soft skills development into course objectives and class activities. Self-study will provide customised ICT tools to support skills growth through interactive modules and simulations. Extracurriculars like workshops and seminars at our educational hub will allow hands-on practice and collaboration.

This educational hub will allow students, instructors, and stakeholders to share expertise and experiences applying the model. We envision it becoming a centre of excellence for soft skills development, not just at our university but spreading effective approaches nationwide.

We will collect ongoing feedback from participants to optimise the model over time. Evaluation methods will include surveys, focus groups, and comparative assessment of soft skills competencies. Our goal is to develop an adaptable model that can meet the evolving needs of students and employers.

In the coming months, we will finalise the model's components, collaborate with partners on implementation, and develop our evaluation strategy. Our next key milestone will be piloting the model with students in Spring 2024.

This research could provide a blueprint for integrating soft skills across Ukrainian higher education curricula if successful. Our model leverages the power of human-centred ICT approaches. With time, we hope to see our efforts contribute to greater employability and success among university graduates. This underscores the potential broad impacts of finding effective solutions to develop soft skills.

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