DOI: https://doi.org/10.26565/2073-4379-2024-44-03
UDC 37.017.4:811.111(045)

ICT INTEGRATION IN EDUCATION: ALIGNING EXPERIENCES OF ESP LECTURERS IN ECONOMIC UNIVERSITIES

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In today's digital era, the integration of Information and Communication Technologies (ICT) into education is increasingly essential. This is vital for preparing students to meet the challenges of the modern workforce. This study investigates the experiences of English for Specific Purposes (ESP) lecturers in integrating ICT into the Economics curriculum. Its aim is to identify challenges, strategies, and opportunities for enhancing ICT integration in this context.

The study employs a mixed-methods approach. It combines survey data analysis with focus group discussions to explore lecturers' perspectives on ICT integration. The survey findings reveal a high level of confidence among lecturers in subject matter expertise and pedagogical knowledge. However, there's a notable gap in technological proficiency.

Results from the Kruskal-Wallis test indicated no statistically significant differences in teachers' ICT competence based on their academic degrees. However, significant differences were observed in the average scores for various components of ICT competence across different levels of work experience among the survey participants.

Focus group discussions highlight challenges such as limited access to ICT resources and inadequate institutional support. Additionally, they shed light on successful strategies for enhancing student engagement. These strategies include collaborative partnerships and innovative teaching methods.

The study underscores the pivotal role of integrating ICT into the Economics curriculum. It emphasizes the necessity for tailored professional development programs and institutional backing to tackle identified challenges and leverage opportunities for augmenting student learning outcomes.

The findings emphasize the significance of ongoing training workshops, access to up-to-date ICT tools and software, and collaborative engagements with seasoned colleagues. These aspects are crucial for facilitating the effective integration of ICT into the curriculum.

Keywords: *Economics curriculum, educational innovation, ESP lecturers, ICT integration, technology proficiency.*

Problem statement. The imperative to seamlessly integrate information and communication technologies (ICTs) into education, particularly within the domain of Economics curriculum, underscores the necessity for ESP lecturers to possess the requisite competencies in leveraging digital tools to enhance student learning [2;]. Effective integration of ICTs in pedagogy demands a nuanced fusion of technological proficiency, pedagogical insight, and subject matter expertise, a challenge not only for ESP lecturers but also for their educators [5]. Central to this discussion is the premise that a robust educational system equips graduates with the adaptability and lifelong learning skills essential for navigating a dynamic societal landscape [6].

Wood L. [18] assert that effective teaching precipitates meaningful learning outcomes. To equip ESP lecturers for success in their professional endeavours, it is imperative to furnish them with the requisite knowledge and skills [10]. Embedding technological pedagogy within professional development programs ensures that ESP lecturers gain hands-on experience and familiarity with instructional technologies, thereby enhancing their readiness to integrate these tools seamlessly into their teaching practices [10].

This study is motivated by the observed challenges faced by ESP lecturers in integrating technology into their teaching practices. While extant literature has examined various aspects of ESP lecturers' training experiences, there remains a dearth of research investigating how these experiences influence their ability to incorporate technology into teaching practices [7]. Therefore, this paper addresses this gap by examining the alignment of ESP lecturers' experiences with technology integration in their teaching practices. ESP lecturers encountered difficulties in adopting emerging technologies during their teaching experiences, owing to traditional training methods. Experience sharing meetings and author's observations found ESP lecturers' reluctance to utilise installed technology in classrooms, prompting attention to this issue.

Analysis of relevant research. The literature review provides a comprehensive examination of strategies aimed at enhancing ICT integration in education, particularly focusing on aligning the experiences of ESP (English for Specific Purposes) lecturers for integrating ICT into Economics curriculum education. The review

draws from a range of scholarly sources to shed light on the challenges and potential solutions concerning ICT integration in pedagogy [10; 12; 14].

The review underscores the significance of Technological Pedagogical Content Knowledge (TPACK) framework for ESP lecturers in effectively incorporating technology into teaching practices [8]. By synthesising qualitative evidence, Tondeur J. [16] propose six strategies to cultivate a conducive environment for ESP lecturers to enrich their experiences in technology integration. These strategies encompass role modelling, reflection, learning by design, collaboration, authentic experiences, and feedback.

Role modelling emerges as a critical strategy, emphasising the importance of ESP lecturers demonstrating proficient use of ICTs in teaching and learning contexts. However, the review highlights a significant challenge: the scarcity of ESP lecturers serving as effective role models due to limited exposure and competence in technology integration [10]. This finding underscores the need for targeted professional development initiatives to bridge this gap.

Reflection is identified as another pivotal strategy, enabling ESP lecturers to critically evaluate the benefits and limitations of ICT use in education [14]. By engaging in reflective practices, ESP lecturers can refine their instructional approaches and enhance their digital literacy skills. Nevertheless, the review underscores the time constraints faced by ESP lecturers in attending technology integration training, suggesting the need for more extensive support mechanisms and longer durations for practical experiences [7].

Learning by design emerges as a proactive approach to capacitate ESP lecturers, allowing them to select and design learning materials using digital technologies. However, the review notes a significant hindrance: the lack of relevant resources and opportunities for ESP lecturers to develop models independently [11]. This highlights the importance of institutional support and resource allocation to foster innovation and creativity among ESP lecturers.

Collaboration is identified as a valuable strategy for ESP lecturers, enabling them to work in groups to incorporate ICTs for learning [11]. However, the review underscores the necessity of formal partnerships with institutions to ensure consistency and coherence in technology integration practices (Supunya, 2023). Additionally, the potential of gamification in fostering collaboration and engagement among learners

is highlighted, suggesting innovative approaches to enhance student professional development initiatives [9].

Authentic experiences are emphasised as crucial for ESP lecturers, allowing them to apply technology skills in real-world settings [17]. Nevertheless, the review identifies a challenge: the limited opportunities for ESP lecturers to engage in authentic learning experiences due to curriculum constraints and resource limitations [3]. This underscores the need for flexible and adaptive curricular frameworks that prioritize experiential learning opportunities.

Feedback mechanisms are deemed essential for understanding ESP lecturers' digital competence development and addressing issues encountered in technology integration. However, the review underscores the importance of timely and meaningful feedback, suggesting a more active role for lecturers in facilitating discussions and providing guidance [3; 9]. Additionally, the review highlights the potential of peer feedback and dialogue to stimulate critical thinking and reflection among ESP lecturers [1].

Thus, the literature review provides valuable insights into the challenges and opportunities associated with enhancing ICT integration in education, particularly within the context of ESP lecturers in Economics curriculum education. By synthesising existing research findings, the review offers a foundation for future empirical investigations and professional development initiatives aimed at optimising technology integration practices in ESP pedagogy.

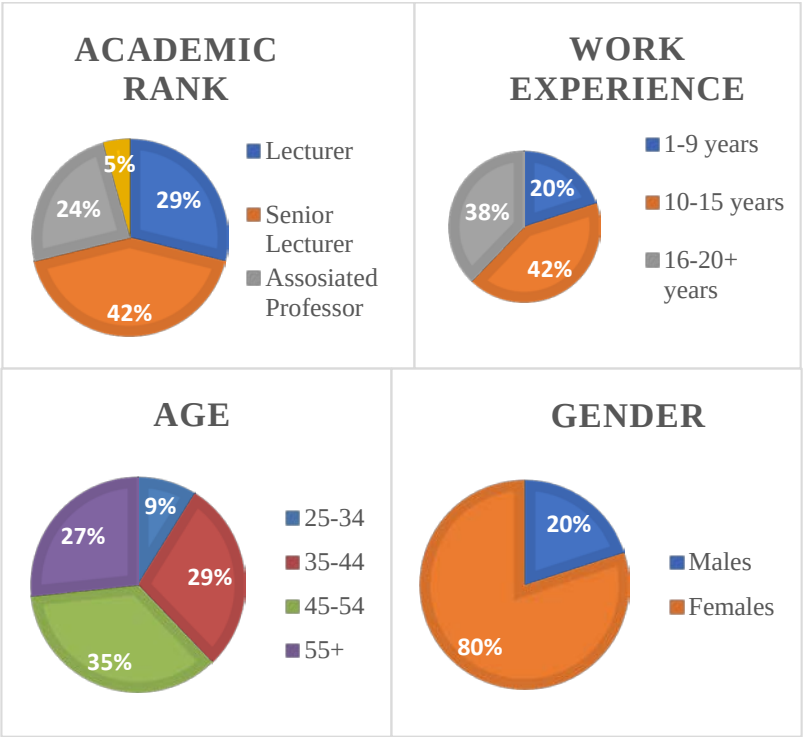
The aim of the study was to ascertain the degree to which the experiences of ESP lecturers (English Language) were aligned with the integration of Information and Communication Technologies (ICT) into foreign language curriculum for Economics curriculum programmes. The research questions guiding the investigation were as follows:

1. To what degree were ESP instructors provided with chances to conduct experiments involving ICTs?
2. What strategies were employed to enable ESP educators to incorporate technology into their teaching and learning methods?
3. To what degree did ESP instructors exhibit assurance and competence in employing ICTs during their teaching activities?
4. How can ESP lecturers describe the present state of integrating ICT (Information and Communication Technologies) into their teaching practices, considering challenges, successful strategies, and suggestions for improvement?

Research Methods. The study employed a mixed-methods approach, incorporating both quantitative and qualitative methodologies [4]. Quantitative data were gathered through the administration of the adopted TPACK survey questionnaire (see Appendix A, adapted from [12]), while qualitative insights were obtained through three focus group interviews (see Appendix B for the questionnaire). The survey data underwent descriptive statistical analysis to elucidate overall trends. Additionally, inferential statistics, particularly analysis of variance (the Kruskal-Wallis test), were employed to ascertain whether statistically significant differences existed in mean scores for various components of ICT competencies, including Technological Knowledge, Pedagogical Content Knowledge, Technology Pedagogical Knowledge, Technology Content Knowledge, and Technology Pedagogy Content Knowledge, across different lecturer cohorts delineated by varying levels of work experience and academic rank. The reliability of the TRACK tool was established by its authors [13], and Cronbach's α coefficient was computed to assess the reliability of the adopted TPACK survey questionnaire using scores obtained from the ESP lecturers' TPACK responses. The reliability analysis conducted using *Jamovi* software yielded a Cronbach's α value of .902 for the entire questionnaire, indicating high internal consistency and reliability of the research instrument.

Quantitative data analysis was conducted using *Jamovi* software (Version 2.2.5) (available at https://www.jamovi.org), while qualitative data from the focus group interviews were analysed using the trial version of the Atlas.ti web app (accessible via https://atlasti.com/atlas-ti-web). The interviews were utilized to elicit in-depth qualitative information. The survey questionnaire was distributed among ESP lecturers at the State University of Trade and Economics (SUTE), Kyiv National Economic University named after Vadym Hetman (KNEU), and KROK University of Economics and Law. Stringent measures were implemented to ensure confidentiality and obtain informed consent from all participants. The research comprised three focus groups, each consisting of six ESP lecturers from a single university mentioned.

The study employed two sampling methods: stratified sampling for quantitative data and purposeful sampling for selecting focus groups. The survey sample comprised 45 ESP lecturers with varying genders, ages, work experience, and academic ranks (see multiple Picture 1).



Picture 1. Distribution of the Surveyed Sample by Gender, Age, Work Experience, and Academic Ranks

Рисунок 1. Розподіл досліджуваної вибірки за статтю, віком, досвідом роботи та науковими званнями

The three focus groups consisted of 18 participants, also characterised by diverse ages, work experience, and academic ranks. Ethical considerations for this study involved obtaining informed consent from all participants and ensuring the confidentiality of their responses. Additionally, measures were taken to protect the privacy and anonymity of the ESP lecturers involved in the research.

Presentation of the main research material. The study addressed the three research questions by analysing the survey data using descriptive statistical analysis. Additionally, the fourth research question was explored through conducting focus group discussions. The study findings are presented in two sections: the first section presents the survey results focusing on the first three research

questions, while the second section discusses the outcomes of the focus group discussions aimed at addressing the fourth research question.

The analysis of data from the descriptive statistics table sheds light on the research questions posed regarding the experiences of ESP instructors in integrating ICT into Economics curriculum:

RQ 1. To what degree were ESP instructors provided with chances to conduct experiments involving ICTs?

The data indicates that ESP instructors demonstrated high confidence in their subject matter expertise (CK1) and familiarity with subject-specific language and procedures (CK2), with mean scores of 5.00 for both variables. However, their perceived ability to improve content knowledge (CK3) was slightly lower (M = 4.51), suggesting room for enhancement. This may imply that while ESP instructors feel comfortable with their subject matter, there may be limited opportunities for them to experiment and innovate with ICTs in their teaching practices. This interpretation aligns with the need for initiatives aimed at providing ESP instructors with more opportunities for hands-on experimentation with ICT tools and technologies.

RQ 2. What strategies were employed to enable ESP educators to incorporate technology into their teaching and learning methods?

The data indicates that ESP instructors expressed high levels of agreement with statements related to pedagogical knowledge (PK), particularly in assessing student performance (PK1) and adapting teaching based on student understanding (PK2-PK7), as evidenced by mean scores ranging from 3.87 to 4.93. However, their confidence in technological knowledge (TK) and its application in teaching was relatively lower, with mean scores ranging from 1.96 to 2.93. This suggests a potential gap in strategies employed to empower ESP educators in incorporating technology into their teaching methods. Initiatives aimed at enhancing ESP instructors' technological proficiency, such as targeted training workshops, access to updated ICT equipment and software, and collaborative opportunities with colleagues experienced in ICT integration, may be warranted to bridge this gap effectively.

RQ 3. To what degree did ESP instructors exhibit assurance and competence in employing ICTs during their teaching activities?

The relatively lower mean scores for technological knowledge (TK) highlight a critical area for improvement in terms of ESP instructors' assurance and competence in employing ICTs during their teaching

activities. With mean scores ranging from 1.96 to 2.93, ESP instructors demonstrated lower levels of confidence in their technological knowledge compared to their confidence in subject matter expertise and pedagogical skills. This reveals systemic challenges and areas for improvement, and suggests a need for targeted interventions aimed at building ESP instructors' confidence and competence in leveraging ICTs effectively in their teaching practices. Measures such as providing guidance on selecting and implementing appropriate ICT tools, creating opportunities for collaborative learning, and sharing of best practices, and offering ongoing support and professional development in ICT integration may contribute to enhancing ESP instructors' assurance and competence in employing ICTs during their teaching activities.

The data presented in Table 1 depicts the results of the Kruskal-Wallis Test, utilised to ascertain whether statistically significant differences existed in mean scores for different components of ICT competencies among survey participants, considering their academic ranks. These components include Technological Knowledge, Pedagogical Content Knowledge, Technology Pedagogical Knowledge, Technology Content Knowledge, and Technology Pedagogy Content Knowledge.

Rank	χ^2	df	p	ε^2
Lecturer	34.0	34	0.468	1.000
Senior Lecturer	34.0	34	0.468	1.000
Associated Prof	34.0	34	0.468	1.000
Prof	34.0	34	0.468	1.000

Table 1. Results of the Kruskal-Wallis Test Based on Academic Rank-Related Data.

Таблиця 1. Результати тесту Крускала-Уолліса на основі даних про академічне звання.

The results of the Kruskal-Wallis test reveal no statistically significant differences in ICT competencies among lecturers of different academic ranks, including Lecturer, Senior Lecturer, Associate Professor, and Professor. The test statistic (χ^2) for all groups is 34.0, with corresponding degrees of freedom (*df*) of 34, resulting in a p-value of 0.468 for each group. These *p*-values exceed the conventional significance threshold of 0.05, indicating that there is no evidence to reject the null hypothesis of no difference in mean scores among the academic rank groups. In essence, the Kruskal-Wallis test suggests that there are no significant variations in ICT competencies

based on academic rank within the sample. However, it's essential to interpret these findings cautiously and consider other factors that may influence ICT competencies, such as teaching experience, training opportunities, and individual aptitudes.

The information outlined in Table 2 illustrates the outcomes of the Kruskal-Wallis Test, employed to determine if there were statistically notable variances in mean ratings across various facets of ICT proficiencies among respondents, with consideration given to their levels of work experience.

Work Experience	χ^2	df	p	ε^2
1-9	52.0	34	0.028	1.000
10-15	19.0	34	0.033	1.000
16-20+	22.0	34	0.021	1.000

Table 2. Results of the Kruskal-Wallis Test Based on Working Experience-Related Data.

Таблиця 2. Результати тесту Крускала-Уолліса на основі даних про досвід роботи.

The results of the Kruskal-Wallis Test revealed statistically significant differences in mean scores for various components of ICT competencies across different levels of work experience among the survey participants. Specifically, for individuals with 1-9 years of work experience, the χ^2 value was 19.0 with a corresponding p-value of 0.028, indicating a significant difference. Similarly, participants with 10-15 years of work experience exhibited a χ^2 value of 52.0 and a p-value of 0.033, while those with 16-20+ years of work experience demonstrated a χ^2 value of 22.0 and a p-value of 0.021, both indicating significant differences. These findings suggest that varying levels of work experience may influence ICT competencies among ESP lecturers, highlighting the importance of considering experience levels when implementing training and support initiatives related to ICT integration in education.

Results Drawn from Focus Groups.

1. Description of ICT Integration in Teaching Practices.

Participants predominantly expressed negative sentiments regarding the integration of ICT (Information and Communication Technologies) into their teaching practices. They highlighted several challenges, including the lack of availability of technologies for interaction, insufficient computer laboratories on campus, limited internet access in

classrooms, and restricted availability of Wi-Fi for student use. Additionally, participants noted the inadequacy of hardware and software in lecture halls, often leading to situations where there are more students than available computers. Moreover, the absence of data projectors or smartboards in classes was cited as a common issue.

2. Main Challenges in ICT Integration.

Participants identified several key challenges encountered when attempting to integrate ICT into their teaching practices. One recurring issue highlighted was the need for self-directed learning to familiarise oneself with various technologies or technological tools before implementation. This requirement not only adds to the workload but also demands additional time and effort from educators. Additionally, concerns were raised regarding the financial aspect of ICT integration, particularly the necessity to pay subscription fees for using certain technologies. This financial burden may act as a barrier, especially for educators with limited resources or budget constraints.

3. Support or Resources.

The focus group participants expressed various opinions on the question regarding support or resources for enhancing ICT integration in the ESP curriculum:

a) More training workshops or courses on ICT integration.

Participants emphasized the importance of additional training workshops or courses focusing on ICT integration. They believed that such opportunities would be immensely beneficial, allowing them to enhance their understanding of various ICT tools and their effective integration into the ESP curriculum. Continuous professional development in this area was seen as essential to staying updated with the latest trends and best practices in educational technology.

b) Access to updated ICT equipment and software.

Access to updated ICT equipment and software was deemed crucial for effective integration into the ESP curriculum. Participants highlighted that having access to modern technologies and software would enable them to explore innovative teaching methods and provide engaging learning experiences for their students. They emphasized that with updated resources, they could better align their teaching practices with technological advancements, ultimately enhancing the quality of education delivered.

c) Collaborative opportunities with colleagues who are experienced in ICT integration.

The participants stressed the importance of collaborative opportunities with colleagues who have experience in ICT integration. They believed that such opportunities would greatly enhance their ability to effectively integrate ICT into the ESP curriculum. By sharing insights, strategies, and best practices, they felt they could learn from each other's experiences and leverage collective expertise to overcome challenges and maximize the benefits of ICT integration. They emphasised that collaborative partnerships foster a supportive learning environment and promote continuous improvement in teaching practices.

d) Guidance on selecting and implementing appropriate ICT tools for specific teaching goals.

Participants highlighted the need for guidance on selecting and implementing appropriate ICT tools tailored to specific teaching goals. They emphasised that clear guidance and support in choosing the right tools based on learning objectives and student needs would streamline the integration process and ensure alignment with educational goals. They stressed that having access to expert guidance would enable them to make informed decisions and optimise the use of ICT tools to enhance learning outcomes.

e) Other (please specify).

Additional support or resources suggested by participants included access to online repositories of educational resources, mentorship programs with experienced educators specialising in ICT integration, and opportunities for hands-on training sessions with ICT experts. Additionally, they mentioned that providing incentives or recognition for innovative ICT integration initiatives could incentivise educators to explore and implement new technologies in their teaching practices.

4. Successful Strategies for ICT Integration.

During the focus group discussion, ESP lecturers shared several successful experiences and strategies they have employed to integrate ICT effectively into their teaching within the realm of education in Economics. The following insights were provided:

1. Incorporation of Interactive Online Simulations: Some lecturers reported success in integrating interactive online simulations related to real-world economic scenarios into their teaching. These simulations allow students to apply theoretical concepts practically, enhancing their understanding of complex economic principles.

2. Utilisation of Multimedia Presentations: Lecturers highlighted the effectiveness of using multimedia presentations, such as videos and animations, to illustrate complex economic concepts visually. These visual aids help reinforce key ideas and make the content more accessible and engaging for students.

3. Integration of Online Research Projects: Several lecturers emphasised the success of integrating online research projects where students analyse economic data and trends. This approach encourages critical thinking and research skills while providing hands-on experience with real-world economic data.

4. Utilisation of Online Discussion Forums and Collaborative Platforms: Lecturers found value in utilising online discussion forums and collaborative platforms for group projects. These platforms foster peer-to-peer learning and collaboration, allowing students to explore diverse perspectives on economic issues.

5. Incorporation of Online Quizzes and Interactive Exercises: Lecturers reported success in integrating online quizzes and interactive exercises into their lessons to assess student understanding in real-time. These tools provide immediate feedback to students and help identify areas where additional support may be needed.

6. Implementation of Flipped Classroom Approaches: Some lecturers found success in implementing flipped classroom approaches, where students engage with online lectures or resources before class. This approach allows for more interactive discussions, problem-solving activities, and application of concepts during class time.

7. Utilisation of Educational Apps and Gamified Platforms: Lecturers highlighted the effectiveness of using educational apps and gamified platforms to reinforce economic concepts and principles. These tools add an element of fun and competition while promoting active learning and retention of key concepts.

8. Integration of Virtual Guest Lectures and Webinars: Lecturers found value in hosting virtual guest lectures or webinars with industry experts in economics. This provides students with valuable insights into real-world applications of economic theory, bridging the gap between theory and practice.

9. Creation of Multimedia Presentations and Infographics: Several lecturers reported success in creating multimedia presentations or infographics to visually represent complex economic data or theories.

These visual aids cater to different learning styles and enhance comprehension of abstract concepts.

10. Exploration of Social Media Platforms: Some lecturers experimented with incorporating social media platforms into their teaching, such as creating class groups on professional networking sites. This facilitated communication, collaboration, and knowledge sharing among students outside of the classroom.

5. Additional Assistance or Initiatives.

During the focus group discussion, ESP lecturers articulated several ideas and suggestions regarding additional assistance or initiatives that the university or educational institution could provide to support effective integration of ICT into Economics curriculum:

1. Dedicated ICT Training Programmes: Lecturers underscored the need for the establishment of dedicated training programs or workshops focused on ICT integration tailored to the specific needs of ESP lecturers. These programs would address various aspects of educational technology, ranging from basic ICT skills to advanced pedagogical strategies for incorporating technology into teaching.

2. Access to Specialised ICT Support: Participants emphasized the importance of specialised ICT support services within the university or educational institution. This support would encompass technical assistance, troubleshooting, and guidance on effectively integrating ICT tools and resources into teaching practices.

3. Investment in Up-to-Date ICT Infrastructure: Lecturers advocated for investment in up-to-date ICT infrastructure, including hardware, software, and network infrastructure. This investment would ensure access to modern computers, multimedia projectors, interactive whiteboards, and high-speed internet connectivity in classrooms and lecture halls.

4. Development of Digital Learning Resources: Participants highlighted the need for the development of digital learning resources specifically designed for Economics curriculum. This could involve the creation of interactive e-learning modules, multimedia presentations, online simulations, and digital textbooks tailored to the subject matter and curriculum requirements.

5. Promotion of Collaboration and Knowledge Sharing: Lecturers stressed the importance of promoting collaboration and knowledge sharing among colleagues regarding ICT integration. This could be achieved through the establishment of communities of practice, online

forums, or collaborative platforms where lecturers can exchange ideas, share best practices, and collaborate on ICT-enhanced teaching projects.

6. Recognition and Incentives for Innovation: Participants suggested the implementation of recognition programs or incentives to encourage innovation in ICT integration. This could include awards, grants, or professional development opportunities for lecturers who demonstrate outstanding achievements in leveraging technology to enhance teaching and learning outcomes.

7. Integration of ICT in Institutional Policies and Practices: Lecturers proposed the integration of ICT integration goals and strategies into institutional policies and practices. This would involve aligning strategic plans, curriculum frameworks, and assessment criteria to promote the systematic integration of ICT across all aspects of Economics curriculum.

8. Support for Research and Evaluation: Participants emphasised the need for support for conducting research and evaluation studies to assess the effectiveness of ICT integration initiatives. This could involve providing funding, resources, and expertise to conduct rigorous research studies, evaluate the impact of ICT interventions, and identify areas for improvement.

9. Professional Development Opportunities: Lecturers underscored the importance of ongoing professional development opportunities focused on ICT integration. This could include access to conferences, seminars, webinars, and online courses covering emerging trends, innovative practices, and research findings related to ICT-enhanced teaching and learning in Economics curriculum.

Conclusions. The findings of this study shed light on the present situation of ICT integration in Economics curriculum and provide valuable insights into the challenges and opportunities faced by ESP lecturers in this domain. Through a mixed-methods approach incorporating survey data analysis and focus group discussions, several key conclusions can be drawn. Firstly, the survey results revealed a high level of confidence among ESP lecturers in their subject matter expertise and pedagogical knowledge. However, there was a notable gap in technological knowledge and proficiency, indicating a need for targeted professional development initiatives to enhance lecturers' ICT competencies. This highlights the importance of continuous training workshops, access to updated ICT equipment and software, and collaborative opportunities with experienced colleagues to support effective ICT integration into the curriculum. Secondly, the focus group

discussions underscored the significant challenges faced by lecturers in integrating ICT into their teaching practices. Issues such as limited access to ICT resources, inadequate infrastructure, and the lack of institutional support emerged as prominent barriers. Addressing these challenges requires a multifaceted approach, including investment in ICT infrastructure, provision of technical support services, and the development of digital learning resources tailored to Economics curriculum. Furthermore, the focus group discussions provided valuable insights into successful strategies and experiences of ICT integration shared by ESP lecturers. Collaborative partnerships, innovative teaching methods, and the use of digital learning resources were highlighted as effective approaches to enhance student engagement and learning outcomes. Leveraging these strategies can help overcome barriers to ICT integration and create more conducive learning environments for students. Overall, this study underscores the critical role of ICT integration in enhancing Economics curriculum and preparing students for the demands of the digital age. By addressing the identified challenges and capitalising on the opportunities highlighted in this research, educational institutions can foster a culture of innovation and excellence in ICT integration, ultimately enriching the learning experience for ESP students and preparing them for success in today's digital economy. Further research is needed to explore additional factors influencing ICT adoption and its impact on student learning outcomes.

Future studies could investigate the effectiveness of specific ICT tools and strategies in enhancing student engagement and academic performance, as well as the role of institutional policies and support mechanisms in facilitating ICT integration. Additionally, longitudinal studies tracking the long-term effects of ICT integration on student success and employability could provide valuable insights for educational stakeholders and policymakers.

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Appendices

Appendix 1: TPACK Survey questionnaire (adapted from Rosenberg, 2012)

Demographic information:

Indicate information that applies to you:

Gender: ☐ Male ☐ Female

Age: ☐25-34; ☐35-44; ☐45-54; ☐55+

Work Experience: ☐1-9; ☐10-15; ☐16-20+

Academic Rank: ☐Lecturer; ☐Senior Lecture; ☐Associated Professor; ☐Professor.

Please indicate the extent to which you agree with each of the following statements on a scale of 5= Strongly Agree, 4 = Agree, 3 = Not Sure, 2= Disagree, 1= Strongly Disagree.

Content Knowledge (CK)

CK1. I am confident in the subject matter I teach.

CK2. I am familiar with the language, notation, and procedures unique to the subjects I teach.

CK3. I continuously enhance my content knowledge in the subject areas I teach.

Pedagogical knowledge (PK)

PK1. I am proficient in assessing student performance in the classroom.

PK2. I can adjust my teaching methods based on student understanding.

PK3. I can adapt my teaching style to accommodate diverse learners.

PK4. I employ various methods to assess student learning.

PK5. I utilise a range of teaching approaches in my classroom.

PK6. I am knowledgeable about common student misconceptions.

PK7. I effectively organise and manage classroom learning activities.

Technological Knowledge (TK)

TK1. I am resourceful in troubleshooting technical issues when using digital technology.

TK2. I quickly learn to use new digital technologies.

TK3. I regularly experiment with different software applications.

TK4. I possess knowledge of various digital technologies.

TK5. I have the technical skills necessary to integrate digital technology into my teaching.

TK6. I have had ample opportunities to work with diverse digital technologies.

Pedagogical Content Knowledge (PCK)

PCK1. I know a variety of teaching methods that are suitable for teaching subject content.

PCK2. I can adjust my teaching to make it more inclusive.

PCK3. I know how to develop effective lessons that match syllabus defined learning outcomes.

PCK4. I know how to develop efficient lessons that will help to ensure that all topics are completed in the required time.

Technology Pedagogical Knowledge (TPK)

TPK1. I can select effective teaching strategies to guide student learning in my subject areas.

TPK2. I create opportunities for individualised learning using digital technology.

TPK3. I facilitate online discussions for student engagement.

TPK4. I promote online collaboration among students for project-based learning.

TPK5. I design online activities providing immediate feedback to students.

Technology Content Knowledge (TCK)

TCK1. I am acquainted with computer simulations and models to enhance student understanding.

TCK2. I utilise animations or videos to clarify complex concepts.

TCK3. I employ mind mapping or concept mapping software to illustrate relationships between concepts.

Technology Pedagogy Content Knowledge (TPCK)

TPCK1. I integrate pedagogy and technology to align with the content being taught.

TPCK2. I leverage technology to enhance the quality of lesson content.

TPCK3. I design technology-enhanced lessons cantered on student learning.

TPCK4. I create lessons accommodating students of varying abilities.

TPCK5. I develop technology-enhanced lessons allowing students to learn at their own pace.

TPCK6. I utilise digital technology to foster active student engagement.

TPCK7. I employ technology to streamline lesson delivery while achieving learning outcomes.

TPCK8. I utilise technology to provide students with rehearsal and practice activities offering immediate feedback.

Appendix B. Focus Group Questionnaire

1. How would you describe the situation with integrating ICT (Information and Communication Technologies) into your teaching practices?
2. What are the main challenges you face when attempting to integrate ICT into your teaching practices?
3. In your opinion, what support or resources would be most helpful for enhancing your ability to integrate ICT effectively into the ESP curriculum? Choose one or some suggested options below and provide your reasoning.
   a) More training workshops or courses on ICT integration.
   b) Access to updated ICT equipment and software.
   c) Collaborative opportunities with colleagues who are experienced in ICT integration.
   d) Guidance on selecting and implementing appropriate ICT tools for specific teaching goals.
   e) Other (please specify).
4. Can you share any successful experiences or strategies you've used for integrating ICT into your teaching within the context of Economics curriculum education?
5. What additional assistance or initiatives do you believe the university or educational institution could provide to support ESP lecturers in effectively integrating ICT into Economics curriculum education?

The article was received by the editors 28.02.2024.
The article was recommended for printing 29.03.2024.

In cites: Zatserkovnyi O. (2024). ICT integration in education: aligning experiences of ESP lecturers in economic universities. *Teaching languages at higher educational establishments at the present stage. Intersubject relations. 44*, pp. 38-59. DOI: https://doi.org/10.26565/2073-4379-2024-44-03

ІНТЕГРАЦІЯ ІНФОРМАЦІЙНИХ КОМП'ЮТЕРНИХ ТЕХНОЛОГІЙ В ОСВІТУ: ВИВЧЕННЯ ДОСВІДУ ВИКЛАДАЧІВ ІНОЗЕМНОЇ МОВИ ЗА ПРОФЕСІЙНИМ СПРЯМУВАННЯМ (ESP) В ЕКОНОМІЧНИХ УНІВЕРСИТЕТАХ

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У сучасну цифрову епоху інтеграція інформаційно-комунікаційних технологій (ІКТ) в освіту набуває все більшого значення для підготовки студентів до викликів сучасного ринку праці. Ця наукова студія аналізує досвід викладачів англійської мови за професійним спрямуванням (ESP) у контексті інтеграції інформаційно-комунікаційних технологій у сферу економічної освіти з метою виявлення викликів, розгляду стратегій та оцінки можливостей їх ефективного впровадження. Використовуючи змішаний методологічний підхід, дослідження комбінує аналіз результатів опитувань і дискусій у фокус-групах щодо поглядів викладачів на інтеграцію ІКТ у навчальний процес. Результати опитування свідчать про високий рівень упевненості викладачів у власній компетентності та педагогічних знаннях у поєднанні з помітною прогалиною в технологічних навичках. Результати тесту Крускала-Уолліса показали відсутність статистично значущих відмінностей в ІКТ-компетентності викладачів за їх вченими ступенями (викладач, старший викладач, доцент, професор). Однак були виявлені статистично значущі відмінності в середніх балах за різними компонентами ІКТ-компетентності на різних рівнях досвіду роботи серед учасників опитування. Обговорення у фокус-групах розкривають такі проблеми, як обмежений доступ до ресурсів ІКТ та недостатня інституційна підтримка. Проаналізовано успішні стратегії підвищення залученості студентів за допомогою партнерства та інноваційних методів викладання. Дослідження підкреслює ключову роль інтеграції ІКТ у навчальні програми з економіки та наголошує на необхідності розробки спеціалізованих програм професійного розвитку та інституційної підтримки для подолання виявлених викликів і використання можливостей для покращення результатів навчання студентів. Такі висновки підкреслюють важливість постійних навчальних семінарів, доступу до сучасних ІКТ-інструментів та програмного забезпечення, а також співпраці з досвідченими колегами для сприяння ефективній інтеграції ІКТ у навчальні програми.

Ключові слова: *викладачі англійської мови за професійним спрямуванням, володіння технологіями, економічна освіта, інтеграція ІКТ, освітні інновації.*

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Стаття надійшла до редакції 28.02.2024.
Статтю рекомендовано до друку 29.03.2024.

Як цитувати: Zatserkovnyi O. (2024). ICT integration in education: aligning experiences of ESP lecturers in economic universities. *Викладання мов у вищих навчальних закладах освіти на сучасному етапі. Міжпредметні зв'язки.* 2024. Вип. 44. С. 38-59. DOI: https://doi.org/10.26565/2073-4379-2024-44-03