

INTEGRATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN ONLINE TEACHING OF ACADEMIC ENGLISH IN HIGHER EDUCATION IN UZBEKISTAN

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ИНТЕГРАЦИЯ ИНФОРМАЦИОННО-КОММУНИКАЦИОННЫХ ТЕХНОЛОГИЙ В ОНЛАЙН-ОБУЧЕНИЕ АКАДЕМИЧЕСКОМУ АНГЛИЙСКОМУ ЯЗЫКУ В ВЫСШЕМ ОБРАЗОВАНИИ УЗБЕКИСТАНА

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Abstract. Information and Communication Technologies (ICT) have been steadily integrating into higher education of Uzbekistan for the last thirty years. The COVID-19 pandemic has significantly accelerated this process, leading all universities to adopt distance education. This article reports on the results of the case study analysis of three international universities in Tashkent and their integration of ICT tools in Academic English courses during the pandemic. Previously, no universities in Uzbekistan had experience in delivering online courses, so each university had to choose its approach. Universities opted both for synchronous and asynchronous online sessions using various videoconferencing tools and learning management systems. The Technological, Pedagogical, and Content (TPACK) framework was used to reflect on teachers' experiences with ICT. The results suggest that while teachers have developed digital literacy skills and felt comfortable using technology, they had to introduce certain changes to pedagogical decisions and material development for Academic English. Some of the successes of teaching English online included availability and access to the materials 24/7 and timely delivery of assessments. In contrast, the challenges of teaching English online indicated a lack of student engagement, increased cases of cheating and plagiarism, and difficulties with the materials design. Nevertheless, the transition to online teaching strengthened the development of digital literacy skills and online English courses Uzbek universities should focus on online English teaching methods, development of online assessments, and materials design for online classes. The article proposes a set of recommendations for research, practice, and policy to facilitate integration of the ICT tools for Academic English and higher education in Uzbekistan.

Keywords: ICT; case study; TPACK; digital literacy; Academic English; teacher engagement.

Annotatsiya. Annotatsiya. Axborot kommunikatsiya texnologiyalari (AKT) so'nggi 20 yil davomida O'zbekiston oliy ta'lim tizimiga izchil integratsiyalashmoqda. COVID-19 pandemiyasi bu jarayonni sezilarli darajada tezlashtirdi va barcha universitetlarni masofaviy ta'limga o'tishga olib keldi. Ushbu maqolada pandemiya davrida Toshkentdagi uchta xalqaro universitetning amaliy tahlili natijalari va ularning AKT vositalarini Akademik ingliz tili kurslariga integratsiyalashuvi haqida so'z boradi. Ilgari O'zbekistondagi hech bir universitetda onlayn kurslarni o'tkazish tajribasi yo'q edi, shuning uchun har bir universitet o'ziga xos yondashuvni tanlashi kerak edi. Universitetlar turli xil videokonferensiya aloqa vositalari va ta'limni boshqarish tizimlaridan foydalangan holda sinxron va asinxron onlayn sessiyalarni tanladilar. Texnologik, pedagogik va kontent (TPACK) asosi o'qituvchilarning AKT bo'yicha tajribasini aks ettirish uchun ishlatilgan. Natijalar shuni ko'rsatadiki, o'qituvchilar raqamli savodxonlik ko'nikmalarini rivojlantirib, texnologiyadan foydalanishda o'zlarini qulay his qilishgan bo'lsalar-da, akademik ingliz tili uchun pedagogik qarorlar va

materiallarni ishlab chiqishga ma'lum o'zgarishlar kiritishlari kerak edi. Ingliz tilini onlayn o'qitishning ba'zi yutuqlari 24/7 materiallar mavjudligi va ulardan foydalanish va baholashlarni o'z vaqtida yetkazib berishni o'z ichiga oladi. Aksincha, ingliz tilini onlayn o'qitishdagi qiyinchiliklar talabalarining faolligi yo'qligi, aldash va plagiat holatlarining ko'payishi va materiallarni loyihalashdagi qiyinchiliklarni ko'rsatdi. Shunga qaramay, onlayn o'qitishga o'tish raqamli savodxonlik ko'nikmalarini va ingliz tili onlayn kurslarini rivojlantirishni kuchaytirdi. O'zbekiston universitetlari ingliz tilini onlayn o'qitish usullariga, onlayn baholarni ishlab chiqishga va onlayn darslar uchun materiallarni loyihalashga e'tibor qaratishlari kerak. Maqolada akademik ingliz tili va O'zbekiston oliy ta'limi uchun AKT vositalarini integratsiyalashuviga ko'maklashish maqsadida tadqiqot, amaliyot va siyosat bo'yicha tavsiyalar to'plami taklif etilgan.

Kalit so'zlar: AKT; tematik analiz; TPACK; raqamli savodxonlik; Akademik ingliz tili; o'qituvchining ishtiroki

Аннотация. Информационно-коммуникационные технологии (ИКТ) неуклонно интегрируются в высшее образование Узбекистана на протяжении последних тридцати лет. Пандемия COVID-19 значительно ускорила этот процесс, вынудив все университеты перейти на дистанционное обучение. В этой статье сообщается о результатах анализа кейсов трех международных университетов в Ташкенте и их интеграции инструментов ИКТ в курсы академического английского языка во время пандемии. Ранее ни в одном вузе Узбекистана не было опыта проведения онлайн-курсов, поэтому каждому вузу приходилось выбирать свой подход. Университеты выбрали как синхронные, так и асинхронные онлайн-сессии с использованием различных инструментов видеоконференцсвязи и систем управления обучением. Технологическая, педагогическая и содержательная структура (TPACK) использовалась для отражения опыта преподавателей в области ИКТ. Результаты показывают, что, хотя преподаватели развили навыки цифровой грамотности и чувствовали себя комфортно, используя технологии, им пришлось внести определенные изменения в педагогические решения и разработку материалов для академического английского. Некоторые из успехов онлайн-обучения английскому языку включают наличие и доступ к материалам в режиме 24/7, а также своевременную доставку оценок. Напротив, проблемы с преподаванием английского языка в Интернете указывали на отсутствие вовлеченности учащихся, увеличение случаев мошенничества и плагиата, а также трудности с дизайном материалов. Тем не менее переход к онлайн-обучению усилил развитие навыков цифровой грамотности и онлайн-курсов английского языка. Узбекские университеты должны сосредоточиться на онлайн-методах обучения английскому языку, разработке онлайн-оценок и разработке материалов для онлайн-классов. В статье предлагается набор рекомендаций для исследований, практики и политики, способствующих интеграции инструментов ИКТ для академического английского языка и высшего образования Узбекистана.

Ключевые слова: ИКТ; тематическое исследование; TPACK; цифровая грамотность; академический английский; вовлеченность преподавателей.

Introduction. The spread of COVID-19 led to mass closures of schools and universities in many countries worldwide (16). Traditional education systems had to be converted into online mode, and the government of each country faced the problem of transitioning to distance learning. Depending on circumstances and conditions, each country had its approach to addressing this emergency situation. For example, China was the first to adopt Suspending Classes Without Stopping Learning policy so that all learners could continue education even during the pandemic (10). More than 1,000 universities in China embraced the online education, delivering classes to more than 1.18 billion university students. However, there was a concern about the students' engagement in online sessions and quality of education (10).

Despite the fact that universities in the USA quickly reacted to the spread of the pandemic by eliminating face-to-face learning and switching to online instruction, teachers and students experienced high levels of stress. The shift to online instruction was unexpected and appeared alongside other problems of everyday life: losing close people, being sick and isolated, and experiencing financial difficulties (6). In France, teachers received access to such online resources as teaching platforms and self-guided trainings (4); however, valid and reliable online assessment of students' learning was still an issue to combat in French universities (7). Some other researchers (5) reported that conversion to online learning was highly challenging for Indonesian teachers and learners because many students living in remote areas experienced unstable Internet connections. The problem was solved by adapting a learning platform that was suitable for all learners.

The transition to online education started on March 16, 2020, in Uzbekistan, when the first case of COVID-19 was diagnosed. The Uzbek government announced a lockdown in the country, and all educational institutions had to switch to online learning. The Special Republican Commission on Preparation of the Program of Measures to Prevent the Spread of Coronavirus in the Republic of Uzbekistan announced the suspension of all Uzbek universities from the educational process for three weeks. Later, the suspension had been prolonged due to the continuous spread of COVID-19 in the country. As a result, all state and international universities were obliged to make an emergency plan to switch from offline learning to online. Each university opted for its own way of transition depending on its facilities and conditions. Such factors as unstable Internet connection, digital literacy of students and teachers, and availability of electronic devices among students and professional staff, to name a few, were considered while implementing the changes into the educational program to make it suitable for online learning. One of the major problems observed in Uzbekistan was access to the Internet. Hence, the transition to online learning and teaching was aggravated by online education being the first experience for educators in Uzbekistan (1; 2). In order to overcome this issue, teachers in Uzbekistan shared lessons recordings and communicated with learners in messengers (1;

2). Despite all the challenges, the educational process was continuous even during the pandemic.

The unprecedented transition to distance learning in higher educational institutions in Uzbekistan indicated the necessity of properly integration Information and Communication Technology (ICT) in the teaching process. Numerous research studies shed light on implementing ICT tools in education. For example, researchers from China (18) reported that the quality of online classes depends on teachers' beliefs and perceptions of ICT, teaching experience, views, and background knowledge. Examination of three university teachers' formative assessment practices of online writing indicated three types of engagement with ICT: disturbing, auxiliary and integral. The disturbing type of engagement with ICT refers to a low-level engagement when a teacher has limited experience, motivation and beliefs in the benefits of implementing ICT tools in the writing classroom for assessment purposes. The auxiliary type of engagement is a medium-level engagement when a teacher understands the benefits of ICT tools and believes they might be engaging and helpful during online writing lessons. However, this teacher lacked confidence and in-depth knowledge of ICT use. Finally, the integral type of engagement refers to a high-level engagement when another teacher feels confident and knows how to employ the ICT tools in online lessons. The authors indicated that the integral type of engagement requires teachers to have experience, confidence, and high motivation to use ICT tools. To reach the integral type of engagement and avoid problems with online classes, it is suggested to consider implementing professional development workshops at universities and involving companies to develop ICT tools to be user-friendly for educators.

Students experienced decreases in their scores during the final exams across educational settings. For example, researchers from the U.S. (12) pointed out that students' low results from the final exams during the pandemic in American universities were due to teachers' limited experience in conducting online classes. As it was an emergency shift from face-to-face teaching to online mode, some teachers did not have sufficient digital literacy to implement some of the ICT tools. The online classes became boring, and students' engagement decreased drastically from active to passive. The research findings show that student performance plunged not because of gender, race, or first-generation status but due to the pedagogical competence and experience of the instructors in applying such ICT tools as polling software or peer interaction during online classes. These studies suggest that teacher plays a significant role in delivering educational messages to students or making the lesson more interactive and useful, even in online learning environments. For this reason, it is very important to train academic staff at educational institutions to adapt ICT tools during online teaching.

The research findings in the reviewed countries suggest various degrees of success with ICT implementation during this pandemic.

This article focuses on the ICT integration in three higher educational institutions in Tashkent. Specifically, we report the initial results of innovative online teaching experiences in Academic English (AE) courses. To understand ICT integration, we use the Technological, Pedagogical and Content Knowledge framework (TPACK) (9).

Technological, Pedagogical and Content Knowledge (TPACK)

The Technological, Pedagogical and Content Knowledge (TPACK) approach posits that technology, pedagogy and content should be seamlessly integrated to promote technology-enhanced teaching (9). Content knowledge refers to teachers' comprehensive knowledge of the domain they teach, for example, Academic English. Pedagogical knowledge refers to the knowledge of the teaching methods, which leads to the intersection of Pedagogical Content Knowledge in the form of the methods and techniques used to deliver content within a certain domain. Technology knowledge goes beyond digital literacy and refers to how technology can facilitate or hinder teaching practices. Teachers should have a strong knowledge of the subject matter and what technologies are instrumental in moving this discipline forward. The intersection of technological and pedagogical knowledge reflects how teaching and learning can change with the use of particular technologies.

TPACK suggests that all three components of the technology, pedagogy, and content are intertwined and interact to deliver successful technology-infused teaching and learning. The use of technology should be constructive – teachers should know what kinds of technology promote or impede learning. A recent modification to the TPACK framework brings XK – contextual knowledge to the forefront, which refers to “organizational and situational constraints that teachers work within” (11, 77). TPACK is content or discipline-specific; therefore, technological, pedagogical, content and contextual knowledge will vary (8). To examine online teaching experiences in Academic English classes across three universities in this study, we applied the TPACK framework.

Methods. The case study design was applied to examine the ICT integration across three universities. Case study research aims at investigating phenomena in authentic settings (17). In this study, we used reflections of three Academic English teachers representing three universities: Inha University in Tashkent (IUT), Management Development Institute of Singapore in Tashkent (MDIST), and Westminster International University in Tashkent (WIUT). In addition to the reflections, we examined the ICT artifacts such as access to and availability of learning management systems (LMS), video conferencing, and other types of software to deliver instruction online. We also used teaching materials and internal documentation of universities in regard to the teaching and logistical decisions applied to online teaching. We chose the Academic English course

because three of us – the authors of this article – taught AE courses during the pandemic.

Below we describe the setting of three universities, followed by the approaches to online teaching they adopted. Later, we present the experiences of teaching Academic English online through the lens of the TPACK framework (9).

Setting. All three participating institutions are international universities where English is used as a medium of instruction. IUT, MDIST, and WIUT offer undergraduate and postgraduate courses in business and technology across various schools. Details are provided in Table 1. However, WIUT and MDIST have diverse courses like law, fashion, design, and marketing. IUT has a Korean-like education system, while WIUT and MDIST follow a British-like system. The number of students in all three universities ranges between 1,500 to 5,000, and faculty numbers range from 50 to 170. All three universities are located in Tashkent, the capital of Uzbekistan.

Table 1.

Participating Universities

University	Schools	Programs	Students #	Faculty #
IUT	School of Logistics and Business Administration	Undergraduate	1680	50
	School of Computer and Information Engineering	Postgraduate		
MDIST	School of Business and Management	Foundation Year	3700	50
		Undergraduate		
	School of Banking and Finance	Postgraduate (MBA)		
	School of Tourism and Hospitality			
	School of Fashion and Design			
	School of Language and Communication (FY)			
WIUT	School of Business and Economics	Foundation year	4,659	170
	School of Law, Education, and Technology	Undergraduate Postgraduate		

Approaches to Online Teaching

All three universities had their approach to delivering online lessons. Table 2 provides more details in regard to technology and decisions. At IUT, the university administration and academic department decided to record lessons. Teachers were allowed to record lessons at the university recording room, use the Zoom platform, or record voiced PowerPoint Presentations (PPTs). Moreover, all teachers were encouraged to use the E-class system and Telegram to interact with students or announce assignment information. The E-class was an official learning management system in IUT to communicate and assess students' academic performance

during the pandemic semesters. In addition, IUT offered two more systems, such as plagiarism tracker software Turnitin and the IUT online education system, to share teaching materials with students.

In MDIST, it was decided to deliver classes via the Zoom platform. The sessions were recorded and uploaded to the Blackboard system for students from remote areas. The recordings helped students who could have problems attending Zoom classes at designated times due to the Internet or electricity outages.

WIUT used the Big Blue Button (BBB) as a video-conferencing tool and WIUT Learning Board as the learning management system to deliver synchronous sessions. That is, online classes were offered in real time using BBB. Both students and teachers could access BBB through WIUT Learning Board, which was also used for uploading recorded sessions and other learning materials.

All three universities finished the Spring 2020 semester online. In IUT, the Fall 2020 semester was offered online, whereas, in Spring 2021 partially in person (6 weeks) and partially online (8 weeks). However, the midterm and final examinations for most subjects were conducted offline at the end of the semester (weeks 15 and 16). WIUT started the academic year 2020-2021 online. In this way, for the first eight weeks students attended classes online, and then they were given an opportunity to come back to campus for an in-person instruction. MDIST was the only university out of the three where English was taught online during the whole academic year of 2020-2021.

Table 2.

Technological Solutions					
University	LMS	Video Conferencing	Supporting Software	Other Solutions	
IUT	E-class, IUT online education system	Zoom	Telegram Turnitin	Ucell Traffic	Internet
WIUT	WIUT Learning Board	Big Blue Button	Turnitin		
MDIST	Blackboard	Zoom	Telegram Turnitin		

Results. As mentioned above, the TPACK (9) framework was used to reflect on online teaching experiences in AE across three international universities in Uzbekistan. The experiences are discussed in terms of the changes in technology, pedagogy, and materials design as well as the successes and challenges resulting from these changes.

Technology. All three universities opted to use learning management systems (LMS) and video conferencing software (Table 2). In addition, each university continued relying on internal university systems giving access to LMS, rosters, scheduling, and university emails. One of the widely used technologies was Telegram

messenger, which was used for making announcements, clarifying questions, and other communication. IUT also had an agreement with one of the cellular companies in Uzbekistan – UCell, which allowed them not to charge students for Internet traffic when using IUT's LMS. All three universities organized short professional development courses for academic staff to learn how to use new technologies. However, only WIUT could organize small sessions on the pedagogy of teaching online, which turned out to be not as successful as planned due to low teacher enrollment.

Pedagogy. Pre-pandemic teaching of AE relied on the tenets of the Communicative Language Teaching (CLT) pedagogy across all three universities (13; 15). Due to the online mode of instruction, instruction turned out to be more teacher- rather than learner-centered. For example, while WIUT and MDIST opted for synchronous sessions via video conferencing software, at IUT teachers had to record their lectures and upload them onto LMS. While IUT teachers also had weekly synchronous meetings, they could not organize discussions or other learner-centered activities due to low attendance and participation. While AE teachers across three universities tried to engage students by creating polls, using breakout rooms, and practicing games in Kahoot, student engagement could have been higher, partially due to the slow Internet connection, especially in remote areas of Uzbekistan.

Materials Design. Some changes were also introduced in the Academic English curricula across three universities. While all three universities have little freedom regarding the curricula because they have to be approved by 'parent' universities, specific changes had to be introduced due to the online nature of instruction. For example, MDIST faculty had to simplify tasks and assign longer assignments such as reading and writing as homework. In contrast, IUT faculty had to make their final assessments harder to decrease instances of plagiarism. In addition, all three universities switched to electronic submission of all assessments and adopted Turnitin to check for plagiarism.

Successes. The changes introduced during the pandemic have resulted in several successes. For example, while faculty members received superficial training on using technology while teaching, we observed a noticeable increase in digital literacy in all three universities. For example, teachers became technologically savvy in using various features within LMS, such as creating and facilitating online discussions. In addition, teachers became more confident in using such tools within video conferencing as breakout rooms for small group discussions or polls to check for comprehension. This might be due to exposure to various types of technology in their teaching, which went beyond what was available through universities. As a result, AE teachers across three universities felt more motivated to use technology when teaching than before the pandemic.

Challenges. Nevertheless, there were a host of challenges as well. The number one issue across the three universities discussed in

this article and across the country, was the unstable Internet connection. This resulted in such difficulties as turning off cameras and microphones during classes which led to low student engagement. This, in turn, led to poor student-teacher rapport because teachers did not know students' faces and names. Another major issue was the lack of professional development on using technology when teaching Academic English online, which limited teachers' abilities in terms of the materials design and planning of learner-centered classes. Finally, we noticed increased plagiarism rates across three universities, resulting in students' poorer performance online compared to traditional face-to-face AE classes.

Discussion and Recommendations

Online teaching experiences across three Uzbekistan universities resulted in many successes and challenges. The analysis of the experiences through the lens of the TPACK framework revealed that teachers increased their digital literacy skills. As a result of online teaching, teachers had to adapt learning and assessment materials to meet the learning goals. In terms of pedagogical decisions, instruction became teacher-centered. In this way, while the role of technology has increased, there was no evidence of seamless integration of technology, pedagogy, and content to deliver successful online instruction. Poor integration of the ICT tools with online teaching across three international universities in Tashkent might be due to the limited experiences of faculty members with teaching online, which echoes the findings in China and the U.S. (12; 18). In this way, integrating the ICT tools across the three universities discussed in this article resulted in the auxiliary level of engagement (18). Teachers were exposed to different types of technology; however, they needed more confidence and experience to apply the tools in their classes.

To promote the successful integration of ICT in education, higher educational institutions in Uzbekistan should change how online teaching and learning are approached. Below, we provide some recommendations for research, policy, and practice.

In terms of research, there is a great need to conduct exploratory studies of teachers' and students' experiences with online education in Academic English courses, which can shed more light on how to move the online education of AE forward. Hence, these exploratory studies can inform quasi-/experimental studies examining the effectiveness of blended and a/synchronous interventions of teaching AE online across grades and settings. Another important area of research is professional development studies examining the best ways of teaching pre- and in-service teachers on teaching AE online.

The results of the research studies outlined above will also inform policy decisions in regard to teaching and learning AE online. For example, the presidential decree Digital Uzbekistan 2030 (3) outlines only the development of digital literacy skills. Nevertheless, online teaching of foreign languages includes more skills, as suggested by the TPACK framework (9). Hence, new policy decisions

in terms of teaching AE online may lead to concerted efforts of the Ministry of Education and higher educational institutions to organize and deliver professional development sessions on how to teach AE online across all educational levels.

Finally, we still recommend starting teaching AE online with the digital literacy sessions targeted both for faculty and students. These sessions should focus on ethical behaviors in online environments and the consequences of plagiarism. Hence, all students should be required to have a minimum set of technological tools, such as functioning microphones, headsets, and stable Internet to take AE classes online. Also, even when educational institutions do not provide structured professional development on teaching AE online, teachers should be quick to work together on researching and trying out new techniques. These can include new materials design methods, increasing student engagement, and delivering complex materials. These ideas motivate some teachers to undertake action research.

The list of recommendations outlined above is not exhaustive, but we believe these are the first needed steps for a setting like Uzbekistan. Seamless interaction among research, practice, and teaching can move the online teaching of AE forward and provide enriching experiences both for students and faculty.

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