Investigating the Opportunities for Digitalization in Academic Writing and Information Literacy Course

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SUMMARY

The paper examines the degree of digitalization of Academic Writing and Information Literacy (hereafter AW & IL) course in the countries of the post-Soviet era. Numerous research demonstrated that digital transformation has taken place toward the teaching of AW & IL in most of the developed countries and beyond, yet little is studied about the digitalization in countries of the former Soviet Union that have passed a long way to align their education with the globe. Keeping up with the four main categories of digitalization, the paper will look at its application as a part of curriculum development, assessment, students' competency, and university maintenance. The paper employs a phenomenological approach confirmed through the qualitative analysis of 18 in-depth interviews conducted with AW & IL instructors from nine countries. The study revealed that recently AW & IL course has moved through partial digitalization, providing that the university stakeholders do not exert any necessary support.

Keywords: Academic writing, assessment, digitalization, communication, information literacy, technology

INTRODUCTION

The development and diffusion of information and communication technologies have drastically transformed the way people write (De Oliveira & Silva, 2013; Guerin et al., 2020; Ito et al., 2009; Warschauer, 2008). Access to technology may improve student engagement, thereby increasing time spent on the task (De Oliveira & Silva, 2013, p.105). Today, education has reached the point when most first and second-year university students are mainly digital natives, that is a categorization of a person born or brought up during the age of digital technology (Becker, 2018). Digital natives are supposed to be familiar with computers and the Internet from an early age. However, practice shows that being familiar and being literate are not necessarily the same thing. As a result, the stereotype of digital nativity may turn into a fallacy for the young generation, who is not always exceptionally skilled in technology used for educational purposes. On the other hand, since increasing numbers of students are using laptop computers, tablets, and smartphones for note-taking and as replacements for traditional textbooks, it is important for faculty members to explore ways of making these devices an integral part of the learning process, rather than a mere distraction (Buller & Cipriano, 2015, p.37). A drastic engagement of technology in the teaching of Academic Writing and Information Literacy (AW & IL) was observed in the countries of Western Europe and the United States (Allison, 2008; Gottschalk & Hjortshoj, 2004; Herring, 2011; Lea & Street, 1998). However, little is known about the countries of the former Soviet Union where the teaching of AW & IL has acquired a stable position within the last two decades. As suggested by Mammadova (2022), the integration of technology into the teaching of AW & IL courses normally happens in four main directions: (a) in the course syllabus design considering the tools to promote information literacy and digital literacy (Burkhardt et al., 2010; Becker, 2018; Cordel, 2013); (b) in fostering collaboration among students with the focus on communication and task implementation tools (Barkley et al., 2014; Chen et al., 2021; Rimmershaw, 1992); (c) course assessment and feedback provision utilizing the recent software that fosters integrity during the grading process (Phuong Pham, 2021; Sarcona, 2020; Spector et al. 2016); (d) overall university support to provide student academic services that include multiliteracy centers, online consulting services, IT literacy sessions and some others (Herring, 2011; Kilgore & Cronley, 2021; Sheridan & Inman, 2010). Although several studies (Afinogenov, 2013; Korotkina, 2014; Kerr, 1982, 1991) have extended some commentaries on the general situation of technology use in the present-day classes in the post-Soviet countries, we identified little existing research that has systematically examined its application within the four earlier-indicated directions in the teaching of AW & IL course. The goal of the present study was to address this gap in the existing literature.

Integration of technology into the AW & IL course syllabus design

Today, when education has acquired a new digital paradigm, a key challenge for educators is linking learner needs, pedagogy, and technology to construct more interactive, engaging, and student-centered environments that promote 21st - century skills and encourage self-directed learning (Parker et al., 2013). In other words, instructors should be certain of their technological, pedagogical, and content knowledge – TPACK (Avidov-Ungar and Amir

2018). Planning a course is one of the key steps in the teaching process. To design an AW & IL course, we need to identify learning outcomes, and determine what content should be taught and how it should be organized and assessed (Coffin et al., 2002; Mammadova, 2022). Digitalization of the AW & IL course takes place when the instructor considers the types of a digital classroom (Trentin, 2016; Breen, 2018; Pedersen, 2018; Zheng et al. 2020; Miller et al., 2021), uses digital tools to promote effective learning (Spector et al., 2016; Reid Chassiakos & Stager, 2020), directs students to digital materials (Cordel, 2013; Churchill, 2020), and takes advantage of digital tools to promote input and output (Jewitt, 2005; Archer, 2010). Top Hat Glossary (tophat.com/glossary) defines a digital classroom as typically one that incorporates electronic devices and software into the learning environment. A digital classroom is where a physical classroom extends into a digital space. Current research demonstrates that today instructors of AW & IL course make use of various digital classroom types including online bichronous classroom (Brady & O'Reilly, 2020; Turnbull et al., 2021), hybrid classes (Trentin, 2016; Pedersen et al., 2018), blended classes (Bliuc Goodyear & Ellis, 2007; Han & Ellis, 2021), flipped classroom (Love et al., 2015; Zheng et al., 2020) and even hyflex class (Beatty, 2019; Miller et al., 2021; Vilhauer, 2021). The use of digital tools to promote effective learning foresees the application of multimedia tools like wiki, online journals, audio, videos, PPT slide decks, computer-based graphics, recorded audios, video clips, and many others (Coffin et al., 2002; Mammadova, 2022).Such platforms can be excellent for instructors to pace students' workflow and be aware of the process. Students should also be able to use digital forums to get prepared for digital academic life. The ability to compile a portfolio is another key skill that students should possess. Portfolios provide a way for learners to demonstrate their progress and to reflect on what has changed and what can be improved. According to Blackboard Academy (2020), learners may produce a series of works in different formats —graphic images, text, oral arguments, video production, etc.—and then gather artifacts in one place. Finally, effective guidance toward the use of digital literacy and information literacy (Churchill, 2020) is another point to be considered when designing a syllabus.

Facilitating collaboration among students using technological tools

Collaborative learning (CL) is an umbrella term for a variety of educational approaches involving a joint intellectual effort by students, or students and teachers together. Usually, students are working in groups of two or more, mutually searching for understanding, solutions, or meanings, or creating a product (Smith & MacGregor 1992, p.1). Scholars (Gottschalk & Hjortshoj, 2004; White, 2007; Hartley, 2008; Chen et al., 2021) distinguish several types of collaboration in AW & IL class: collaborative reading (Chen et al., 2021), collaborative writing (Rimmershaw, 1992; Yim et al., 2014), group projects (Vander Schee & Birrittella, 2021), collaborative presentations (Mammadova, 2022), peer-review (Mulder et al., 2014), peer-feedback (Huisman, 2018; Phuong Pham, 2021), and peer-assessment (van den Berg et al., 2006; Zakharov et al., 2021). Digital tools, both synchronous and asynchronous, prove to be the best to establish communication among the group members. The social network analysis applied to interactive web-based collaborative learning has become more and more important in recent years (Chen et al., 2021, p.849). Those involved in literacy instruction are increasingly asked to help students be cosmopolitan users of communication tools (Sheridan & Inman, 2010, p.7). Among the most sophisticated communication tools are Web Conferencing Tool, discussion boards, wikis, and social media. However, practice shows that despite all these tools, online word processors are best to foster effective collaboration among team members. *Google Docs, Zoho Writer, Share Point, Pages, Dropbox Paper, Evernote*, etc. are excellent to allow all group members to work simultaneously on the same document. Robinson (2017) emphasized the essence of *Google Keep* and *Evernote*, both used to digitalize documents. *Evernote* is a free, cloud-based software service designed for creating, organizing, and archiving various media files. *Google Keep* is a more recent cloud-based note-taking app with a simple interface that may be more appealing to users. Peer assessment and feedback are usually achieved through the use of Google docs, or educational software like *Banner, Kahoot, Blackboard*, and many others.

The use of technology for grading and feedback purposes in AW & IL classes

Changes in pedagogical approaches with the use of technology have broadened the grading and feedback topic. Higher educational institutions have adopted learning management systems (LMS) that provide a means to connect students and faculty online and are intended to provide a more efficient assessment process (Sarcona Dirhan, and Davidson 2020). With technological advances, computer-assisted assessment tools have been developed to automate the submission and assessment processes and help students benefit from learning how to give and receive meaningful reviews (Zakharov et al., 2021). Scholars (Gottschalk & Hjortshoj, 2004; Spector et al., 2016; Ross & LeGrand, 2017), distinguish between blog posts, a summary of readings, responses to study questions, tests, journals, quizzes, online exams, presentations, portfolios, and paper submissions among the most typical AW & IL graded assignments. In turn, Mammadova (2022) suggests various tools to support grading and feedback for each assignment. This typically includes the use of a word document with its "new comments" and "voice comments" function, the implementation of *Google Docs*, and the use of the software. Phuong Pham (2021) reveals that feedback provided via blogs may be quite effective and convenient as it can be done at any time and by anyone, including peers. Google Docs or Share Point remain the most effective tools to provide feedback both by

instructors and peers, mainly through sharing and comparing the work and using various highlighters to point out the spots for improvement. Quizzes are successfully designed and graded via online platforms like Mentimeter, Kahoot, Quizlet, and many others. Finally, a combination of any synchronous LMS platform (e.g. Banner, Blackboard Collaborate, Microsoft Teams, Zoom) with *Google Docs* where instructors can have an online meeting and simultaneously indicate the errors using the *Google Docs* link, is one of the most effective and convenient ways to help students improve their writing.

The role of universities to provide students with academic and technical support

The role of instructors is unprecedented in fostering a climate conducive to the use of technology in the class. However, we cannot overlook the role of the university in the delivery of academic and technical support to students. The international scholarship (Grix & Watkins, 2010; Sheridan & Inman, 2010; Herring, 2011; Thaiss et al., 2012) draws on several university departments that complement the digitalization of AW & IL course: writing and multiliteracy centers, online consulting services, library mentorship department, and IT literacy department. Because the theory and practice of teaching writing have changed over the past decades, writing programs have embraced digital, networked writing (Hicks, 2010, p.159). In this respect, Writing Centers have also invested in and helped students use communication technologies for decades, whether those technologies were electronic typewriters or desktop computers (Sheridan & Inman 2010, p.8). In some universities, Writing Centers work to establish the basics about how to post to the blog and wiki, how to record with the iPod, and how to edit and post a podcast (Hicks, 2010). For this, many Writing Centers today have been renamed into Multiliteracy Centers as well as Online Consulting Services which not only provide students with writing services but facilitate their technological use and involvement in their studies. Multiliteracy Center can be both a part of the infrastructure that supports new media composing and a space where students critically reflect on and learn to exploit the infrastructural resources available to them. Multiliteracy centers help students work on web pages, digital slide presentations, desktop-published documents (flyers, posters, brochures, chapter books), digital videos, and digital animations. There is a large body of literature that mentions the role of online consulting services in AW & IL course. These services can provide unlimited support to writers through online handouts, but that support is inconsistent with principles of consulting that many centers consider fundamental (Sheridan & Inman, 2010, p.194). Among the advantages of online consulting services, is being reachable from any place and mainly at any time during the day (Mammadova, 2022). It is also vital for libraries and librarians to connect academic users to online research services and resources that lead to successful academic careers (Harlow & Hill 2020). Academic libraries select, acquire, synthesize, disseminate, interpret, apply and archive information. At the same time, they enable users to navigate, discover, obtain, understand, use and apply information (Ismayilov, Ismayilov, and Mammadova 2019). These, in turn, require new competencies and skills from librarians working in educational institutions. Instruction librarians involved in research instruction (by any name) understand that students need to be able to create and store folders and files on a computer or tablet, on-campus shared drives, or courseware such as Blackboard, and on the web. Finally, the newly suggested IT literacy department is another asset for AW & IL course. In the study of Yu and Durrington (2005), the instructors of the courses indicated that the students were not competent in the operation of computers at the necessary levels. To this end, Mammadova (2022) draws on the ICT department that would organize ICT sessions for technologically illiterate students to prevent technological illiteracy.

The present study

It is apparent from the existing literature that the teaching of AW & IL globally has moved to a new stage of digitalization, and it seems impossible to teach the discipline without the use of basic technological tools. The purpose of this study was to explore the degree of digitalization in AW & IL classes in the countries of the former Soviet Union and see how the exploitation of technology affects the quality of their teaching.

Sub-questions include:

SQ1: What digital components do instructors include in the course design and syllabi?

SQ2: Do the instructors distinguish between information literacy and digital literacy? If so, how?

SQ3: What's the role of digitalization in course grading and feedback?

SQ4: How do instructors describe the students' competencies in course-related tech-tools exploitation?

SQ5: How do instructors view the role of the university in fostering digital environments across the university?

METHOD

For this study, we employed a phenomenological approach (Gill, 2014; Reid et al., 2005). Phenomenological research aims to understand the collective perspective of university instructors who share the same teaching experience. In the case of the present study, participants shared the experience of teaching AW & IL to first- and second-year university students where students are supposed to have access to most of the technological tools. Through in-depth interviews with our participants, we strived to provide a rich description of the digital facilities

used in the teaching of AW & IL. The central research question guiding the present study was: How do the instructors evaluate the degree of digitalization of their AW & IL classes and what impact digitalization of the course has on its effective implementation?

Participants

Following approval from the universities' chairs, we contacted potential participants by emailing current faculty members and inviting them to participate in interviews detailing their AW & IL teaching experiences. In the invitation email, we enclosed a consent form and informed the participants about the aim of the current study. Out of apprehension that the focus of the instructors on the use of technology in their classes would have resulted in obtaining a biased sample, we deliberately distorted the focus of the study from the digitalization of AW & IL to the general tendencies of teaching academic writing to university students. The invitation was sent to twenty-seven instructors from various universities in the countries of the former Soviet Union, however, only eighteen of them responded to the query. Following the interview, we employed a non-probability judgmental sampling approach (Marshall, 1996) by asking participants to answer a set of questions. Eighteen university instructors from nine post-Soviet countries including Azerbaijan, Georgia, Belarus, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan, and Uzbekistan who currently teach AW & IL participated in this study during the Fall 2021 semester. This sample size is consistent with guidelines for conducting phenomenological research, earlier suggested by Reid et al. (2005) and Gill (2014). Two instructors from each indicated country working at different universities participated in the study (n18 = 2x9). Most of the participants were females (n=13) and others were males (n=5). The average age rate scored 46.4. Sixteen participants reported being local instructors (n = 16) with the average teaching experience rate scoring at 22.9. Collectively, participants taught first or second-year university students coming from various majors in humanities, social sciences, information technology, etc. Additionally, three instructors reported teaching AW & IL as a part of an intersectional course/discipline, six of them teach it as a stand-alone discipline, and the other six teachers keep on delivering the component as a part of EFL teaching. The average period of teaching AW & IL scored at 9.4. For an overview of participants' demographics, please, see Table 1 in Appendix.

Data collection

Data collection took place in two stages. A pilot study was conducted to process the interview protocol. Later, using the agreed interview protocol, semi-structured open-ended interviews were conducted. The interviews were conducted online using the Blackboard Collaborate academic platform.

Pilot study

We conducted a pilot study in September 2021. Two colleague-instructors who teach AW & IL to first and second-year university students within the last eight years participated in one-on-one interviews that took approximately 45 min each. The purpose of the pilot study was to acknowledge the engagement of each aspect of digitalization in the AW & IL class. The pilot interviews brought several modifications to the interview questions, including items on digital assessment tools and technology-generated feedback. As a result of the pilot study, ten open-ended questions constituted the interview protocol (please consult Table 2 in the Appendix).

Participant interviews

The researcher conducted one-on-one interviews in a virtual meeting room on Blackboard Collaborate digital platform. A total of eighteen interviews were evenly distributed within the eighteen days in October, one interview per day. Each interview ranged between 45 and 55 minutes. Participants also completed a brief demographic survey. All interviews were recorded on Blackboard Collaborate inner video recording and subsequently transcribed by the researcher. The participants were assigned by a specific code, e.g. AZE1, where the letters stand for the country of representation and the number denotes a sequence number. Participants were never called by their names, and no legal names have been ever attached to the interview data.

Data analysis

Having conducted the interviews, we employed the phenomenological data analysis approach suggested by Reid et al., 2005 and Gill, 2014. We utilized a coding procedure (Gibbs, 2007) to identify the evolving themes in the interview response data. We were able to categorize the data from more descriptive to more specific perspectives. The researcher extracted valid statements from the interview transcripts. Each statement represented an individual utterance provided by a participant that was relevant to answering the research questions guiding the current study. Having extracted a total of 354 significant statements, we applied an initial coding process to the valid statements. We identified major categories of information contained in the data. For instance, a statement like: 'We have been using Moodle to grade students' written submissions' get the initial code 'Grading'. Another example is a statement like: 'We normally provide reviews, comments, and feedback using Google Docs or software alike' received the initial code 'Feedback'. We also used focused coding to combine initial codes that overlapped with each other. In this way, the number of focused codes was reduced to 14. Having reviewed all the codes, the researcher combined the focused codes into themes based on similarities in context. For example, statements that

were coded as 'Grading' and 'Feedback' were merged to create the 'Implementation of distinct grading and feedback by AW & IL instructors' theme. To this end, we have merged the themes up to six, which ranged from the general integration of technology to AW & IL classes up to the most specific software used for AW & IL class in particular. Finally, the respondents were emailed to verify the validity of the findings and check if the results depict the general teaching experiences and concepts of the instructors.

FINDINGS

The present study explored how AW & IL instructors in the present-day post-Soviet classes exploit technology to enhance their courses. Based on the interviews, we found that the instructors (a) regularly incorporate technology into their teaching, (b) require basic IT skills from students, (c) rely on WhatsApp messenger as a facilitator in collaborative groups, (d) use distinct ways for grading and feedback, and (e) apply to free-access software to cover the deficiency of university digital facilities. The following subsection will explore each of these items in more detail.

Instructors regularly incorporate technology into their teaching

Instructors in our sample regularly use technology for AW & IL teaching purposes. Respondents 1 and 8 (codes: *AZ1* and *KG2)* believe that 'nowadays technology is an inseparable part of teaching AW & IL and that it is impossible to teach it without digital tools.' Just like its colleagues in other countries, *TJ2* 'tries to make sufficient use of technology.' Respondent 9 (code: *KZ1*) adds that 'despite teachers' strong desire to utilize as many technological tools as possible, the university is not well equipped with basic ones. Therefore, teachers often address to handouts or just a black/whiteboard.' Although instructors indicate an integral part of technology in curriculum design, many of them use distinct tools for different purposes. Our participants indicated that they use technology for the following purposes: document (files, information) sharing, assignment submission, presentation of new materials, discussion of the topics, teaching material retrieval, topic discussion, organization of consultations, keeping in touch with students (communication), grading and feedback, quizzes, and implementation of online synchronous classes (particularly during the times of Global Pandemic). Interestingly, the tools used to fulfill each of the tasks differ from respondent to respondent. In this vein, the tools used for sharing the documents and files are e-mail (codes: *AZ1, AZ2, BY1, GE1, TJ1, UZB1*), WhatsApp, and Telegram (codes: *AZ1, KG1, TJ1, UZB2*), educational platforms like *Blackboard*, *Moodle*, *Google Classroom*, and *Zoom* (codes: *AZ2, GE2, RU1, UZB2*). The majority of the respondents (codes: *AZ1, BY1, GE1, KG1, KG2, KZ1, RU1, TJ1, TKM1, UZB2*) use slide decks to present new materials. Apart from these, instructors exploit *YouTube* (codes: *AZ1, BY2, KZ1*), various educational websites (codes: *AZ1, TKM1*), videos (codes: *AZ2, TKM1*), and *Prezi* (code: *KG2*). Although most of the respondents left the question unanswered, some of them mentioned that the teaching materials they use are regularly retrieved from educational websites (codes: *AZ1, KG1*), *YouTube* (code: *BY2*), online books (codes: *GE2, RU2*), corpus (code: *KZ1*), and SPCE Storage (code: *TJ2*). Only a few respondents use technology for topic discussion. Two of the respondents (codes: AZ2, GE1) use discussion boards inside educational platforms like Blackboard and Moodle. Two others (codes: KZ1, TKM2) use *Facebook* and *YouTube* blogs for topic discussions. Our participants indicated an unprecedented role of technology during the pandemic. To this end, synchronous meetings as well as material presentation, discussions, and general classroom interaction normally take place on educational platforms such as Zoom, Microsoft Teams, Blackboard Collaborate, Google Classroom, and Online Course System. Respondent 16 (code: TKM2) uses *Facebook Live*, which is distinct from other respondents. Finally, to reach out to their students, most teachers indicated learner communities within non-educational software such as Facebook Messenger, Instagram, LinkedIn, Viber, and WhatsApp. As one of the respondents puts it: 'Last year I was using some social networking sites to reach out to my groups of students' (code: *TJ1*). Some instructors keep to conventional e-mails, though. Thus, although each instructor goes for self-selected digital tools, all of the respondents reported using technology in their daily teaching experience. Such observations are consistent with generally accepted digital traits in present-day AW & IL classes (Coffin et al., 2002; Thaiss et al., 2012; Mammadova, 2022).

AW & IL instructors require basic IT skills from students

Study participants believe that students need to have basic technological skills. 'The effective use of digital learning tools by students increases their engagement in the lesson' (code: *AZ1*). It is the opinion of many of these instructors that students at least must be able to type, create, edit, store and manage files. It is also important to send e-mails, prepare slide decks and create folders on the desktop. Several instructors mentioned the use of educational platforms, the ability to find information on the internet, and the basic use of Microsoft Office programs. Among the least necessary activities are the use of Google Docs, Zotero, and Mendeley, reading from e-Books, the use of corpora, compilation of electronic portfolios, access to online dictionaries, and wikis. Interestingly, two of the respondents do not require any IT skills. Respondent 9 (code: *KZ1*) says 'we never require any specific IT skills as it is not the main goal. Students use their basic knowledge.' Likewise, respondent 14 (code: *TJ2*) says: 'In my classes, students mostly need to create Word documents and practice typing. I do not require other IT skills.' Students have total permission to use mobile phones, laptops, and tablets for educational

purposes. Being consistent with respondent 1, instructors agree on the following: 'I allow and encourage my students to use all available technology for educational purposes, namely mobile phones, tablets, laptops.'

WhatsApp messenger – facilitator in collaborative groups

Although the instructors enumerated diverse tools to be included in the teaching and learning process of the AW & IL course, few tools have been offered for collaborative group works. We should initially mention that nearly all respondents believe in the unprecedented role of group work for AW & IL classes. For example, respondent 1 (code: *AZ1*) believes that 'group work encourages students' participation in the lesson and makes them more active and involved.' Likewise, respondent 10 (code: *KZ2*) states that they 'do engage [our] students in group work, but [we] never suggest any particular technological means to collaborate.' Respondent 6 (code: *GE2*) says:

'As long as we use communicative teaching methodology, student collaboration in sessions and out-of-class is normally part of every lesson. Before COVID-19, in physical classrooms students always worked in pairs or groups; they were offered eLearning 'Forum' for collaboration outside the class. Today, due to the pandemic, all the work has been done online. For three semesters so far, I have been using the electronic platform (eLearning) 'Forum' function, Zoom – breakout rooms, and Padlet – for peer review and writing collaboratively.'

Overall, the instructors mentioned Microsoft Teams, Blackboard Collaborate, Google Docs, and Zoom as possible means of collaborative work and communication among students, particularly during times of pandemic. However, the most commonly accepted means of communication remains WhatsApp Messenger.

'We have a group on WhatsApp where students discuss the assignment, share materials, and do work together.' (code: *TJ2*)

Wi-Fi connectivity and the availability of the WhatsApp application, in particular, strengthen students' peer support, communication skills, and capacity for teamwork (Mammadova, 2018). To this end, such observation is consistent with students' preferences to use WhatsApp messenger for communication purposes, sharing materials, informing other students about class changes, and asking for clarification. However, considering a wide variety of communication tools (Mammadova, 2022), this is not an exhaustive tool for group work implementation, and none of the participants mentioned the most common ones (Robinson, 2017) that allow group members to work simultaneously (e.g., *Zoho Writer, Share Point, Pages, Dropbox Paper, Evernote*, etc.).

AW & IL instructors use distinct ways of grading and feedback

Respondents' reactions to the ways to submit a paper, grade it and give feedback are not homogeneous. Most of the respondents call it a tricky question since they do it in a variety of ways. Sixteen instructors admit that they accept handwritten papers since that is the most convenient way to provide grading and feedback. Respondent 12 (code: *RU2*) states:

'While checking my students' papers, I make some notes at the bottom of their essays. I also mark the errors in red or highlight some pieces in students' work. If some students do not understand their mistakes, I explain them orally during the lesson. For this, I usually share the screen and discuss the mistakes of each student with the whole group. It helps others to avoid the same mistakes in the future.'

However, recently, in line with physical paper submissions, most of the teachers require an electronic version of the papers. To check the paper for plagiarism, students need to type their text in word and submit it via e-mail, WhatsApp messenger, any social networking site, or an educational platform. Some instructors also mentioned the possibility of a scanned handwritten version submitted to Moodle. Instructors who provide in-line/online grading and feedback regularly apply to a review function in a word document. Two instructors mentioned voice feedback in a word document, and two other instructors indicated Turnitin as a fairly convenient platform to check for plagiarism, detect language errors and highlight the parts that need revision.

Application of free-access software to cover the deficiency of university digital facilities

Information literacy and digital literacy are not competing for concepts; they are complementary areas for students in higher education. Digital literacy concepts and skills can provide the fundamentals of managing digital environments that students need to succeed in information literacy and their other areas of study (Cordel, 2013; Becker, 2018). That is, information literacy and digital literacy are not the same things. However, our respondents do not distinguish these two notions, considering them self-excluding. To this end, we will not treat these two phenomena as complementing ones, but as similar notions that represent the flow of new information coming from traditional and/or digital sources. Most of the instructors admit that the main source for class materials is Google, Google Scholar, and Google Books. As respondent 1 (code: *AZ1*) says, 'we try to use all available resources of information such as textbooks, Google resources, and online dictionaries.' Respondent 3 (code: *BY1*) explains that 'the teacher is the sole source of support for the students at our university.' That is because most universities do not possess any electronic library that would connect the teachers and students with the most recent databases such as JStore, Ebsco, Taylor & Francis, ProQuest, and many others. The existence of a digital library has been proved

by three instructors (codes: *AZ2, BY2, GE1*). One respondent (code: *AZ1*) mentioned a resource center with limited access to some databases. Besides, the majority of our instructors frequently apply to online reference generators, free-accessed plagiarism detector software (e.g., Turnitin, PlagScan, PlagTracks), and other tools that they get for free or buy for their own expenses. That is because few universities provide general academic support to AW & IL classes. Several teachers mention a Writing Center as a space where students can get additional feedback on their written assignments. Respondent 6 (code: *GE2*) who manages a writing center says the following:

'The Centre for Academic Writing was established in 2014, and I have been running it since then. The Centre provides a wide range of support to university students in the form of supplementary one-semester academic writing and information literacy courses. We also run regular free tutorials, workshops, and seminars for our university students and academic staff. We offer free teacher development and training support to all interested university personnel who are willing to teach academic writing. We also deliver free short, intensive training courses for the Centre's teaching staff. We have developed programs and also offer our services to external students and academicians for some honorarium.'

Two instructors mentioned computer labs for those students having no own device. One instructor indicated the existence of a writing space inside the library area to use some databases. Three instructors mentioned the academic writing training courses for instructors to maintain the sustainable development of AW & IL instructors. Despite this, the primary answer to the question of whether the university provides any technical support to teach AW & IL was marked as 'No'.

Can we really talk about a complete digitalization of AW & IL course at the university level?

Finally, we wanted to know whether the instructors feel a substantial move in AW & IL course from a more traditional to a fairly digitalized mode. The majority of the respondents mentioned a partial digitalization of the course since some of the aspects like grading and feedback, free access to international sources, availability of library database, and some others need careful consideration. Overall, the process of digitalization does not seem structured, but rather chaotic.

CONCLUSION AND DISCUSSION

The present study investigated how instructors evaluate the degree of digitalization of their AW & IL classes and what impact digitalization of the course has on its effective implementation. Findings revealed that technology has become an integral part of AW & IL course. The instructors interviewed unanimously agreed that they exploit the tools in this or that way. However, our interviews indicated that different tools, academically conventional or/and unconventional, may be used for the same purpose. Several of these instructors noted that the digital components considered by the course syllabi are electronic files and materials, discussion platforms, communication tools, online quizzes, educational platforms, and many others. Yet, due to the distinct reachability and affordability of the tools, their selection varies from instructor to instructor. When addressing the question globally (Chen et al., 2021; Coffin et al., 2002; Mammadova, 2022; Thaiss et al., 2012), there are no unique tools applied by international instructors of AW & IL. However, the international community of AW & IL instructors avoids non-academic tools like *WhatsApp, Telegram, and Facebook Live* as sources of communication, or *YouTube* as the main source of information retrieval.

Instructors do not distinguish between information literacy and digital literacy (Becker, 2018; Burkhardt et al., 2010; Cordel, 2013). Both are perceived as the 'flow of new information coming from traditional and/or digital sources.' To cover information literacy necessities, these instructors mainly use *Google Books, Google Scholar, and Google,* less frequently university library and, seldom university library databases. Studies (Tatomir & Durrance, 2010) show that AW & IL classes are normally furnished by the information coming from the university library and its databases, however, in our study it became clear that most universities are bearers of old physical library collections with no access to the present-date academic databases such as JStore, Ebsco, EconBiz, Taylor & Francis, ProQuest, and many others. Neither do they enrich their libraries with due updated publications in the field.

One of the most underdeveloped digital aspects of the AW & IL course is grading and feedback. Instructors' dedication to old traditions such as physical paper submission/collection, red-ink marking, and providing short written feedback at the bottom of the paper are factors inhibiting the digitalization of the process. Scholars (Phuong Pham, 2021; Zakharov et al., 2021) reveal that the absence of a unique academic platform does not necessarily mean the avoidance of digital tools to be used for paper submission. Tools like *Google Docs, SharePoint, Turnitin*, and some other free-accessed tools are good starting points to digitalize the assessment process. Additionally, the availability of voice feedback (Sarcona et al., 2020), written feedback, and finally, the combination of both, works well in the enhancement of the process. Unfortunately, only a few participants admitted to using these tools.

Another point to mention is the essence of basic technological skills possessed by the students. Providing that most participants have considerably incorporated technology into their teaching process, most of them disregard students' (in)capabilities to respond to technological challenges used for academic purposes. Such realities make

us assume that present-day students are perceived as digital natives (Becker, 2018; Moustafa, 2017), which is a fallacy in an academic sense. As Becker (2018) puts it, younger generations might have the technical skills but lack the refined cognitive skills to find, evaluate, create, and communicate. To this end, instructors should ponder the tools they use for the course and the ways to exploit them effectively both by the instructors themselves and their students. Alternatively, we cannot overlook the role of universities as key stakeholders in the educational process. Unfortunately, not all universities involved in the present study are furnished with the necessary tools to ensure the complete digitalization of the course. The absence of writing and multiliteracy centers (Kinkead & Harris, 1993; Sheridan & Inman, 2010; Thaiss et al., 2012), digital libraries, and library databases (Ismayilov et al., 2019; Pihl et al., 2017), IT training departments, available educational platforms (LMS) such as Moodle, Banner, Blackboard Collaborate (Brady & O'Reilly, 2020; Turnbull et al., 2021), and simply free public-wide Wi-Fi, are the key limitations indicated by the instructors. The results of the study demonstrate that some universities have got either partial access to the earlier-mentioned tools, or have no access at all. This, in turn, makes teachers act out of their own affordability to get access to the most convenient aids. Despite all, we can state that AW & IL course offered at universities in the post-Soviet republics has shifted to a new fairly digital mode, though many steps should be taken to hone this process and bring it to the due level. Likewise, the instructors of the AW & IL course are currently in search of new ways and techniques to successfully incorporate this technology in their teaching, which will impact the course flow on its own.

Limitations and future research

Although our study contributes to a deeper understanding of the degree of digitalization in AW & IL course in post-Soviet Republics, there were a few limitations. First, future research should include more universities and all countries of the former Union. AW & IL course being a fairly young independent discipline in those countries, it was not easy to reach many instructors. Second, the number of questions designed for the interviews is relatively short, which means that the checklist does not capture the full range of instructors' experiences and preferences. Future research should employ broader data collection strategies, such as multiple rounds of interviews to afford participants more time to share their experiences and observations to capture instructors' experiences with digital tools. Moreover, an empirical study based on observations and experiments could be relevant to get accurate results. Findings from the present research are based on the experiences of a relatively small number of course instructors. Finally, this research may be pursued by the next study that would understand the impact of digitalization on the quality of AW & IL course, and, as a result, students' academic performance.

Conclusion

The use of technology in teaching AW & IL has been well documented in global academics (Coffin et al., 2002; De Oliveira & Silva, 2013; Mammadova, 2022; Thaiss et al., 2012), but little is known about the digitalization of AW & IL course in the countries of former the Soviet Union. The present study addressed this literature gap and uncovered that instructors have been making attempts to keep up with the times using various tools to digitalize the course in many senses. The notable shortage we observe is that universities do not support or hardly support the instructors in adopting a uniform approach towards addressing necessary tools to digitalize the AW & IL course. That is mainly the absence of unique academic platforms, a lack of updated library sources including the database, and other free-accessed tools to facilitate the assessment and communication processes. Such a partial digitalization of the course somewhat accelerates the quality of the course delivery, increasing the motivation among the students. Yet, the use of technology in a chaotic and disorganized way impedes a smooth and flawless delivery of the course. To this end, the stakeholders should gather to reflect on some uniform tools to establish the climate conducive to the complete digitalization of the AW & IL course. Such a structured approach will open horizons for other countries to fully implement digitalization into the teaching of the course.

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Appendix

Table 1. Participants' demographics and teaching programs

Numerical Number	Participants' codes	Age	Sex	General teaching experience	Years of teaching AW & IL	Program
Respondent 1	AZ 1	45	female	22	16	intersectional discipline
Respondent 2	AZ 2	38	female	6	4	stand-alone discipline
Respondent 3	BY 1	36	female	13	12	EFL
Respondent 4	BY 2	62	female	39	20	intersectional discipline
Respondent 5	GE 1	53	female	30	5	stand-alone discipline
Respondent 6	GE 2	58	male	35	25	EFL
Respondent 7	KG 1	43	female	20	20	EFL
Respondent 8	KG 2	30	male	7	5	EFL
Respondent 9	KZ 1	47	male	24	5	EFL
Respondent 10	KZ 2	72	female	49	10	intersectional discipline
Respondent 11	RU 1	48	female	25	7	stand-alone discipline
Respondent 12	RU 2	43	female	20	5	stand-alone discipline
Respondent 13	TJ 1	44	female	21	19	stand-alone discipline
Respondent 14	TJ 2	43	female	20	3	EFL
Respondent 15	TKM 1	42	male	19	4	stand-alone discipline
Respondent 16	TKM 2	35	male	12	1	EFL
Respondent 17	UZB 1	59	female	36	6	stand-alone discipline
Respondent 18	UZB 2	38	female	15	3	EFL

Table 2: Final Interview Protocol

(1) Do you somehow incorporate technology into your teaching (material delivery)? (e.g., using slides, multimodal images, wikis, online board discussions, sharing documents via e-mail, etc.)
     If so, please, specify. Otherwise, what are the methods of lesson delivery?
(2) Do you use social networking sites or any digital platforms in your curricula? (e.g., Facebook, Google Docs, YouTube, Microsoft Teams, Zoom, etc.)? Please, specify.
(3) Do you require your students any particular IT skills? (e.g., create and manage files, use databases, spreadsheets, and word-processing software; create and store folders and files on a computer, edit files, etc.). If so, please, describe. Otherwise, specify your requirements.
(4) Do you allow your students to use technology for educational purposes, both in class and out-of-class? (e.g., mobile phones, tablets, laptops, etc.) Please, describe your approach and visions.
(5) What are the ways of student paper submission? (e.g., they submit a handwritten assignment; they type the assignment, print it, and submit it into a teacher's folder; they submit it online via email or any educational platform, etc.) Please, describe your way and explain your choice.
(6) What are the ways of grading your students' papers and providing feedback? (e.g., do it on a physical paper; use word software with its "review" function and comments, provide voice feedback, etc.) Describe your way.
(7) Do you engage your students in collaboration (group work, group assignments, etc.)? If so, what are the ways your students collaborate? (meet face to face; use Google Docs or software alike; use mobile applications like What's App; use educational platforms, etc.)
(8) How do you define information literacy and digital literacy? Do you use any of the following? (highlight all necessary options)?
•   library database (e.g., JStore, Ebsco, etc.)
•   reference generators (MLA, APA, etc.)
•   plagiarism detectors (Turnitin, PlagTracks, PlagScan, etc.)
     Please, comment on the tools you and your students use to get information literacy (Google, online library, physical library, etc.)
(9) Does University provide any academic support? (e.g., Writing Center, Writing Space, Multiliteracy Center, etc.)? If so, what kind of support do they get?
(10) Do you think teaching Academic Writing and Information Literacy has become more digitalized? If so, please, comment.
Optional: Any general comments?

NOTE: I confirm the manuscript includes a description of all necessary ethics approvals, including the name of the ethics committee, its respective institution, and the approval number given.