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Implementation of 21st Century Skills in EFL Classroom: Perceptions of Lecturers and Students

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Abstract

Twenty-first century skills refer to a broad set of skills that are critically important in the educational system to meet the complex and rapid changes around the world. Of particular concern in the context of Afghanistan is the failure to produce graduates with the essential competencies necessary for success in the workplace. In education, incorporating these skills is important to meet the current and future demands of society. This study investigates Afghan lecturers' and students' perceptions toward the implementation of 21st century skills in EFL classrooms. Quantitative approach was used, whereby data were collected through questionnaires from 197 participants at three public universities in Afghanistan. The Statistical Package for Social Science (SPSS) version 25 was used for descriptive and inferential analyses. The findings revealed that all of the eight 21st century skills were implemented to some degree in the EFL classrooms. In addition, the level of implementation varied between key skills, subcategories, and specific practices listed within each domain whereby none of the skills were fully and consistently incorporated into the classroom. The findings of this study will provide EFL lecturers and students, educationists, and curriculum developers with insights into implementing 21st century skills at tertiary level education.

Introduction

Today major changes occur not only physically but also socially and economically in the world. These changes put pressure on educators how to prepare students for an unknown future (Serdar, 2015). Globally, educationists, curriculum designers, and policymakers have changed curricula including teaching, learning, and assessing methods to adapt to 21st-century life and the future. Education and life become more globalized and digitized (Boholano, 2017). In other words, it appears that what was taught to students and the way it was taught are no longer relevant and useful in the actual world (Bebell & Kay, 2010). Thus, the government and education authorities including schools, colleges, and universities, must equip students with resources, skills, and facilities that support professional development, promote digital literacy, e-learning innovation, and lifelong learning (Tapio, 2007). Similarly, Afghan universities must prepare learners for 21st century and the future. As Afghanistan is rebuilding its education system, teachers must be equipped with modern methods and skills (Azam, Omar Fauzee, & Daud, 2014).

Recently officials, policymakers, educationists, curriculum designers, teacher trainers, and certain foundations

have been discussing the reform of education at the school and tertiary levels. Particularly, the Ministry of Higher Education (MoHE) established a committee for the development and reformation of the curriculum of the universities in 2009 and successfully reviewed 71 programs and related curricula until 2020 (MoHE, 2020, p. 9). However, it is unclear to what extent the skills obligatory for 21st century workplaces are considered and whether universities prepare graduates to enter the complex work steads existing today. Silva (2008) states that students, workers, and citizens must have the ability to overcome multifaceted problems using their creativity to extract ideas from various sources. Likewise, EFL learners need to have the skills to be part of this technologically and culturally globalized market. Improving educational attainment and investing in education with the expectation to contribute to long-term economic sustainability and well-being is the priority for every nation (Chalkiadaki, 2018), but it is not simply transmitting skills and information (Cummins, 2009) Afghanistan like other countries is required to provide and implement not only a curriculum that is pertinent, coherent, and updated but also the skills to prepare students for the current competitive world.

To date, 21st century skills have been the focus of numerous studies around the world (Astuti, Aziz, Sumarti, & Bharati, 2019; Azeez & Barany, 2022; Bedir, 2019; Boholano, 2017; Chehimi & Alameddine, 2022; Kareem & Hussein, 2023; Kim, Raza, & Seidman, 2019) In Afghanistan, there are studies on textbooks and curriculum evaluation at school level (Katawazai, Haidari, & Sandaran, 2019; Monib, Karimi, Nijat, Rahmani, & Sandaran, 2020). However, to the knowledge of the researcher, no studies have been carried out in investigating 21st century skills in EFL classrooms at Afghanistan universities. Hence, this study aims to investigate how Afghan EFL lecturers and students perceive the implementation of 21st century skills in the classroom at three different public universities. The study attempts to answer the following research questions.

-How do Afghan EFL tertiary-level lecturers perceive the implementation of 21st century skills in the classroom?

-How do Afghan EFL tertiary-level students perceive the implementation of 21st century skills in the classroom?

Background of the Study

The concept of "21st-century skills" has become prominent in many educational studies as a way to adapt the educational system to the rapid and complex changes happening around the world (Paulsen, 2017). To guide 21st century educational policy and practices, the skills and competencies have been developed into different frameworks being discussed by educational stakeholders (Chalkiadaki, 2018; Menggo, 2022) For instance, according to Erstad (2010), the Assessment and Teaching of 21st Skills (ATC21S) – a project, sponsored by Cisco Systems, Intel Corporation, and Microsoft Corporation in cooperation with educational researchers, was designed to define 21st century skills and to develop ways of assessing them – ATC21S framed the skills into four broad categories. The first category is ways of thinking which include creativity and innovation, critical thinking, problem-solving, and metacognition. The second is ways of working which cover communication and collaboration. The third is tools for working which include information literacy and Information Communication Technology (ICT) literacy. Finally, the category of skills for living in the world includes citizenship, life and career, cultural awareness, and competence. Some other instances of 21st century skills that Chalkiadaki (2018)

has provided through a systematic literature review from 2000-2018 are EnGauge 21st Century Skills (Burkhardt et al., 2003), Definition and Selection of Competencies (DeSeCo) by The Organization for Economic Co-operation and Development (OECD, 2005), Recommendation of European Parliament and Council (European Parliament & Council of the European Union, 2006), The P21 Framework for 21st Century Learning (2006), Assessment and Teaching of 21st Century Skills Project (ATC21S) cited in (Erstad, 2010), and Learning Metrics Task Force (LMTF) (UNESCO Institute for Statistics; Brookings Institution & Center for Universal Education, 2013). Nonetheless, the definitions of 21st century skills differ. Researchers mostly have come up with their terms, explanations, and interpretations because of the usage level required at that specific time (Heckman & Kautz, 2012; Soulé & Warrick, 2015). In order for Afghanistan to compete in regional and international markets, 21st century skills must be incorporated into university curricula including English as a foreign language (EFL). The country has experienced major challenges due to decades of war, and its education system needs special attention. The failure to equip students with the necessary skills for success in today's world is a concern for the education system. For instance, Romanowski, McCarthy, and Mitchell (2007) identified some challenges as a lack of autonomy of the students, qualified faculties, and inaccessibility of students to quality learning material in Afghanistan. It is important to recognize that the world is rapidly changing and it is difficult to keep education updated. As Bandelli (2017) states that the world is moving fast and education cannot keep up with it. Similarly, Afghanistan must examine the education system to maintain it updated. Therefore, EFL students need to be well-educated and equipped with 21st century skills to meet the requirements of this era. It is important to note that English language is not only taught as a foreign language but is also used a medium of instruction in some schools (e.g., private schools). Generally speaking, English is taught as a compulsory subject at the tertiary level education from 2nd to 4th semester. In the past, the skills and materials provided were appropriate for EFL classrooms, but now we are living in a digitized world that requires us to adjust accordingly.

According to Fandiño Parra (2013), current EFL classes must be different from those of the mid-to-late 20th (p.193). That's because of the drastic change in English Language Teaching (ELT) over the years and societal need for more creative and capable workers who can collaborate, manage, lead, and network with productive people around the world (Giri, 2016). As stated earlier, the MoHE established a committee for the development and reformation of the curriculum of the universities in 2009 and successfully reviewed 71 programs and related curricula until 2020 (MoHE, 2020), but 21st century skills have not been investigated to see whether they are applied at the universities or not.

Statement of the Problem

Based on statistics and workforce readiness, the unemployment rate for university graduates in 2014 was around 18.68% (Dasgupta, Anhal, & Bhatnagar, 2019) due to the lack of applied skills required to enter the workforce and limited employment opportunities. To address this issue, stakeholders urging higher education administrations to equip graduates with important skills needed in the current era to meet the demands of society. Graduates are often found to lack essential skills upon entering the workforce. This makes MoHE including higher education intuitions to take responsibility in preparing students for workforce and future life.

One of the most significant challenges faced by higher education institutions is the lack of well-qualified lecturers. According to The World Bank (2017), approximately 60% of all lecturers in public universities hold only a bachelor's degree which is a cause of concern. Some lecturers have been held responsible for using teacher-centered learning approaches such as the frontal method, using constant study notes (traditionally known as chapters) and slides throughout their careers. In addition to this, Behbud (2018) argues that low-quality education services; outdated curricula, and insufficient schooling infrastructures are other crippling challenges faced by the universities. It seems that the public, administrators, and stakeholders often imagine that what is being in use is noncurrent or unsatisfactory.

To ensure successful graduates, it is imperative to consider 21st century skills and update the curriculum, use effective teaching, and assessment methods in education to meet the current and future demands both nationally and internationally (Menggo, 2022). The new generation must acquire applicable skills before embarking on their job search (Robbins, 2017) to be successful in their careers because the education skills, as well as the career exploration skills, are different from those of the past (Hodge & Lear, 2011; Soulé & Warrick, 2015). In this technologically developed era, it is unnecessary to utilize outdated educational methods (Wagner, 2010). Therefore, up-to-date skills, curricula, and methods along with the ones still beneficial have to be applied, while retaining the ones that are still relevant such as Communicative Language Teaching (CLT). To ensure success and competitiveness of graduates in Afghanistan, the educational system in general, and EFL classrooms, in particular, need changes to align with 21st century skills and meet the demands of the current and future eras. Currently, the government, particularly MoHE, is collaborating with universities, organizations, and foundations to review and reform curricula, teaching and learning methods, and to develop professional teaching skills and capacity building. For instance, MoHE has reviewed 71 programs and related curricula until 2020 and established Professional Development Centers (PDCs) at 14 different universities (MoHE, 2020); and introduced Outcome-Based Education and Student-centred Learning (OBE/SCL), which aligns with current international trends in higher education (Katawazai, 2021). Furthermore, MoHE is implementing a strategic plan for educational development to achieve long-term goals in education. Despite these efforts, the use of 21st century skills in tertiary education has never been seen in Afghanistan. Therefore, it is of utmost importance to investigate whether 21st century skills are being taught in EFL tertiary-level classes at public universities in Afghanistan.

Literature Review

Twenty First Century Skills in Education

This study investigates 21st century skills from EFL lecturers' and students' perspectives. The implementation of 21st century skills, a blend of specific skills, literacies, expertise, and content knowledge, is essential for success in the workplace and in daily life (Ledward & Hirata, 2011). In response to a rapidly changing world, the priority of 21st-century education is to prepare students with the knowledge, skills, and attitudes necessary for success in workforce and daily life. This entails focusing on development of (1) learning skills such as critical thinking, creativity, collaboration, communication, and problem-solving; (2) literacy skills such as information, media, and technology literacy; and (3) life skills such as adaptability, initiative, social and cross-cultural competence, productivity and accountability, leadership and responsibility skill (Partnership for 21st Century Learning, 2015).

Generally, the frameworks provided for 21st century skills seem to be largely consistent with each other as they all accept that the skills and abilities which individuals need in the 21st century must vary from those required for life, job, citizenship, and self-actualization in the 20th century (Fandiño Parra, 2013). Moyer (2016) illustrates that 21st century skills are also referred to as cross-curricular skills, transferable skills, transversal skills, among others. Although some of these names may be fairly synonymous, they have other specialized meanings. However, the traditional teacher-centered method is commonly used in Afghanistan (Hikmat, 2009), which fosters passivity and memorization rather than active engagement and deep learning. Students passively listen, take notes, read the specific given notes – traditionally called chapters – and finally take exams. This is what enforces passivity in class and paves the way to rote learning rather than deeply understanding and actively participating in the class. This approach can undermine the full potential of learning, exclude and discourage students who possess different forms of intelligence (Ball, 2016). In Afghanistan, tertiary-level education has not been investigated regarding the implementation of 21st century skills. Thus, this study investigates the implementation of 21st century skills in EFL tertiary-level classrooms from teachers' and students' perspectives. This study focused specifically on critical thinking, collaboration, communication, creativity and innovation, self-direction skills, global connections, and local connections adopted from (Menggo, Suastra, Budiarsa, & Padmadewi, 2019; Ravitz, Hixson, English, & Mergendoller, 2012).

Critical Thinking Skills

These skills refer to analyzing arguments, making inferences, using inductive or deductive reasoning to judge, evaluating decisions, or problem-solving (Ravitz et al., 2012). For Qing (2013), critical thinking involves various components, including (1) analyzing information within its proper context, (2) assessing the meaning and validity of the argument, (3) recognizing assumptions that are not directly stated in the text, (4) effectively and accurately using language. Additionally, Feng (2013) notes that developing critical thinking skills in college students is a primary goal and learning outcome in higher education.

Collaboration Skills

Collaboration skills mean accomplishing a goal as a team and helping others achieve their goals (Kereluik, Mishra, Fahnoe, & Terry, 2013). Asri (2019) emphasized the importance of cooperation in groups and teams, learning from others, and utilizing social networking skills to promote collaboration. Collaborative learning, which involves teaching and learning techniques that make learners work in pairs, groups, or teams to accomplish a goal is another way to improve collaboration skills. Effective collaboration involves setting goals, sharing ideas and workload, serving as facilitators and contributors, sharing power and decision-making, and engaging in productive conflict (Johnson & Johnson, 2013). Thus, learners should actively engage in content, improve skills to work in teams, and learn how to solve conflicts.

Communication Skills

According to Partnership for 21st Century Learning (2009), communication is the ability to effectively express

thoughts and ideas using oral, written, and nonverbal communication skills in various ways and contexts; listening effectively to meanings including knowledge, values, attitudes, and intentions; using communication for a variety of purposes (e.g. for informing, instructing, inspiring and persuading); employing multiple media and technologies; knowing how to assess their effectiveness and how to communicate effectively in a variety of environments.

Creativity and Innovation Skills

Creativity and innovation skills refer to the ability to generate, expand, refine, analyze, evaluate, and improve ideas using various techniques (Partnership for 21st Century Learning, 2009). In Afghanistan, learners are mostly restricted to basic skills and exams, which limits their development of necessary innovation and creativity skills. Encouraging divergent thinking, rather than convergent thinking, is essential to foster creativity in students. Therefore, rethinking teaching methods, curricula, programs, assessments, and the overall education system is crucial for the development of innovation and creativity skills.

Self-direction Skills

These refer to skills that students can use to explore and process their identified topics, take responsibility for their learning, can answer feedback, and review their produced work (Ravitz et al., 2012). In addition, self-direction skills include (1) time and goal management: setting goals with clear criteria, balancing both short-term and long-term goals, and managing workload efficiently; (2) independent work: defining, monitoring, prioritizing, and completing tasks without direct oversight; and (3) self-direct learning: exploring students' own learning for gaining expertise and going beyond mastery of curriculum or basic skills, initiating to improve professional skills, showing commitment for lifelong learning and reflecting critically on past experiences to inform coming or future progress (P21 Skills Coding Scheme) as cited by (Moyer, 2016).

Global Connections

Global connection skills refer to skills that enable students to understand global and geopolitical issues, including language, culture, history, geography, and literature of other countries (Ravitz et al., 2012). Moreover, global awareness includes recognizing interrelationships between nation-states, international organizations, private and public entities, cultural groups, and individuals worldwide (North Central Regional Educational Laboratory–NCREL, 2003). Thus, Afghan students should be equipped linguistically and culturally with a broader multi-perspective mind.

Local Connections

Students should be locally grounded to succeed in today's world (Rabacal, Geroso, & Oliveros, 2018). ATC21S (cited in Paulsen, 2017) described living in the world—citizenship, local and global connection, here, only the skills are presented: participating both in community activities and decision-making, voting in elections,

exhibiting interest in and assisting with solving local problems, interfacing effectively with public institutions and taking benefits of opportunities provided by the home country and international are all essential components of local connection skills (Paulsen, 2017).

Using Technology as a Tool for Learning

Technological literacy is knowledge about technology, including how it works, what purposes it can serve, and how it can be used effectively and efficiently to achieve specific goals (North Central Regional Educational Laboratory–NCREL, 2003). Through the use of technology, students can demonstrate, develop and analyze different concepts taught in the classroom. In the successful implementation or usage of technology, a teacher has an important role (Mandell, Sorge, & Russell, 2002) in determining when, to what extent, and how software is used inside the classroom (Bebell & Kay, 2010).

Lecturers' and Students' Perceptions of the 21st Century Skills

Past studies have highlighted positive perceptions of teachers and students towards the incorporation of 21st century skills in English as a Foreign Language/English as a Second Language (EFL/ESL) classrooms by using a variety of teaching and learning methods and strategies (e.g., Lampropoulos, Siakas, Makkonen, & Siakas, 2021; Susanti, Rachmajanti, Suryati, & Astuti, 2023; Yong & Saad, 2023). Luo (2022) investigating correlation between 21st skills and reading strategies found that English majors' 21st century skills were rated high level, particularly learning and innovation skills. Furthermore, the majority of ESL/EFL teachers prioritize the incorporation of 21st century skills in their classes, recognizing that these skills prepare students to become adaptable 21st century citizens (Chehimi & Alameddine, 2022).

Similarly, Kareem and Hussein (2023) investigation on the actual use of 21st century skills in EFL university classes revealed the equal implementation of communication, collaboration, critical thinking, and creativity skills. Teachers perceive 21st century skills, for instance, critical thinking skills important in EFL classrooms (Tuzlukova, Al-Busaidi, Burns, & Bugon, 2018). Azeez and Barany (2022) studied EFL teachers' awareness and opinions on 21st century skills. The results showed that teachers have positive attitudes and are aware of the value and application of creativity and innovation skills.

Student teachers' perspectives on the development of 21st century skills have also been examined, with collaboration identified as the best-achieved competency and global connections as the least well-achieved competency (Bani Amer, 2022). In the study of Woods, Wendt, Barrios, and Lunde (2021), the importance of 21st century learning, particularly digital literacy and technology skills was emphasized. Using technology, an important 21st century skill, increased student engagement, curriculum relevance, and information retention. Ali (2022) demonstrated in his study that students employ L2 strategies with digital technologies using multi-digital platforms to complete writing. Project-based learning (PBL) was one of the methods that maximized the use of language, enhanced higher-order thinking, creativity, and ICT skills (Yong & Saad, 2023).

Method

Research Design

This study utilizes a quantitative approach employing a survey design to investigate the perceptions of EFL lecturers and students regarding 21st century skills. Survey research designs are techniques used to collect data on “behaviors, opinions, attitudes, beliefs, characteristics, perceptions, and their experiences” related to a particular phenomenon from a sample of participants (Creswell, 2012; Leavy, 2022). The use of a survey design has several advantages, including its feasibility, strength and ability to answer the proposed research questions. It is particularly useful for evaluating and determining changes needed in curriculum and student services, as universities and colleges require graduates’ data (Cozby, Bates, Krageloh, Lacherez, & Van Rooy, 2012).

Many researchers have utilized survey designs to measure 21st century skills (e.g., Albahlal, 2019; Astuti et al., 2019; Bedir, 2019; Giri, 2016). The use of survey research is not new in the field of education. In fact, surveys back to 1817 when Marc Antoine Jullien de Paris designed a 34-page international survey of national educational systems De Landsheere (1988) as cited by (Creswell, 2012, p. 376). Surveys are useful for gathering factual information and are relatively easy to access for students and teachers (Cohen, Manion, & Morrison, 2013, p. 336). Therefore, the present study will utilize a survey design to collect data on the perceptions of EFL lecturers and students on 21st century skills.

Participants and their Background

The study focuses on English department lecturers and students from three public universities. The respondents were selected based on stratified sampling. According to Neuman (2014), stratified sampling is a random sampling in which a researcher selects a set of categories, which are mutually exclusive and exhaustive and divides the sampling frame by the categories, then randomly chooses cases from each category. Firstly, the population was into strata based on supplementary information. Secondly, the sampling frame was divided by the strata and then the respondents were drawn through random sampling from each stratum.

Information required for Section I is the gender and academic qualifications of the respondents including (academics–teacher/student, experience, students–freshman, sophomore, junior or senior; degree holding or pursuing. Table 1 shows that the respondents involved 148 students and 49 lecturers. Among the lecturers, 32 (65.3%) were bachelor’s, 14 (28.6%) master’s and 3 (6.1%) Ph.D. degrees. Both permanent and temporary or contract teachers participated in the study. It is worth noting that the three public universities where the survey was conducted do not offer master's or Ph.D. programs in the related field, and therefore only bachelor students were involved. Of the lecturers, 47 (95.9%) were male, while only 2 (4.1%) were female. The age of the lecturers who responded varied: 55.1% were aged 31-35, 22.45% were aged 25-30, 16.33% were aged 36-40, and 6.12% were more than 40 years. Furthermore, 44.9% had 6-10 years of experience, 30.63% had 1-5 years, 22.45% had 11-15 years, and 2.02% had more than 15-year experience. As per the students, 47 (31.8%) were freshmen, 41 (27.7%) were sophomores, 35 (23.6%) were juniors, and 25 (16.9%) were seniors. Among them, 128 (86.5%) were male, and 20 (13.5%) were female. The majority of the student 120 (81.08%) were aged 25-30, 25 (16.89%)

were 31-35 years, and 3 (2.03%) were more than 35 years old.

Table 1. Demography of the Respondents

Demographic Variables			Frequency	Percentage %
Teacher	Gender	Male	47	95.9%
		Female	2	4.1%
	Age	25-30	11	22.45%
		31-35	27	55.1%
		36-40	8	16.33%
		More than 40	3	6.12%
		Education	B.A.	32
		M.A.	14	28.6%
		Ph.D.	3	6.1%
	Experience	1-5	15	30.63%
		6-10	22	44.9%
		11-15	11	22.45%
		More than 15	1	2.02%
Total		49	100 %	
Student	Gender	Male	128	86.5%
		Female	20	13.5%
	Age	25-30	120	81.08%
		31-35	25	16.89%
		More than 35	3	2.03%
	Year	Senior	25	16.9%
		Junior	35	23.6%
		Sophomore	41	27.7%
		Freshman	47	31.8%
	Total		148	100 %

Research Instrument

One survey instrument is adopted on the implementation of 21st century skills from Ravitz et al. (2012) to investigate the extent to which 21st century skills are being taught in EFL classrooms at three public universities in Afghanistan. The instrument, which has been widely used in diverse contexts, focuses on the perceptions of lecturers and students regarding the implementation of 21st century skills in instructional settings. The instrument measured on a five-point Likert scale (5=almost daily, 4= 1-3 times per week, 3= 1-3 times per month, 2= a few times per semester, and 1= almost never) is already validated and reliability has been done in the previous study on problem-based learning and 21st century skills (Ravitz et al., 2012). The questionnaire comprises forty-eight (48) items regarding 21st century skills incorporation into EFL classrooms categorized into 8 separate sections: The sections include critical thinking skills (6 items), communication skills (5 items), collaboration skills (6

items), self-direction skills (7 items), creativity and innovation skills (5 items), global connection skills (6 items), local connection skills (5 items) and technology as a tool of learning skills (8 items) where each item indicates a contribution to students' learning in the related skills.

Reliability which refers to the dependability or consistency of answers from one set of items to another occurring under very similar conditions (e.g., Cohen et al., 2013; Neuman, 2014) was done as part of another study. The questionnaire was validated and its reliability was established in a previous study on problem-based learning and 21st century skills (Ravitz et al., 2012). However, the internal consistency of the questionnaire was re-checked in the current study for the new sample of participants using Cronbach's alpha coefficient, which is one of the three best-known ways (test-retest, equivalent-form, and internal-consistency methods) for testing the reliability scales or indices that consist of multiple items (Fraenkel, Wallen, & Hyun, 1993).

Table 2. Reliability Test of the Instrument

Cronbach's Alpha	Cronbach's Alpha based on standardized items	Number of items
0.748	0.805	48

As can be seen in Table 2, a reliability analysis done based on Cronbach's alpha coefficient yielded acceptable results across all 48 items of the questionnaire (standardized alpha 0.8 or greater, with inter-item correlations above 0.748). The index for all items combined had alpha= 0.748. This indicates that all the items have relatively internally consistent and the selected instrument for the current study is acceptable.

Data Collection and Procedures

The questionnaire was distributed electronically to the respondents, which is a common and cost-effective strategy in research studies (Dörnyei, 2009). Prior to data collection, informed consent was obtained from all participants. The survey was administered over the course of one month, during which no adverse events or complaints were reported. Upon completion of data collection, descriptive analysis was performed using SPSS version 25, and inferential statistics, such as independent samples t-tests, were conducted to compare the responses of the two groups.

Data Analysis

When the data was collected, it was uploaded into SPSS version 25 for analysis. Descriptive statistics, such as frequency, percentage, and mean were applied to describe the data, and independent samples t-test was used to compare the mean of the teachers' and students' responses. The findings pertaining to the eight components of 21st century skills, as established in RQ1 and RQ2, are presented in the Results section.

Findings

A total of 197 valid responses were collected through an online survey administered to lecturers and students in

EFL classrooms at three public universities in Afghanistan. In the second part of the survey, participants were asked to rate the frequency of 21st century skills implementation. The frequency rating is interpreted in accordance with the criteria proposed by (Santos, 2017), which outlines the different levels of implementation for each skill component.

Mean	Interpretation
4.5-5.0	almost daily
3.5-4.4	1-3 times per week
2.5-3.4	1-3 times per month
1.5-2.4	a few times per semester
1.0-1.4	almost never

Teachers' and Students' Perceptions of the Implementation of 21st Century Skills in the Classroom

The findings of the study (see appendix) indicate that collaboration, communication, and technology as a tool for learning skills were incorporated in EFL classes “1-3 times per month,” while critical thinking, self-direction, global connection, and local connection skills were implemented “a few times per semester.” Creativity and innovation skills were perceived to be implemented “1-3 times per month” by teachers and “a few times per semester” by students. The finding also shows that collaboration skills were implemented at an average frequency of “1-3 times per month” with a mean score range of 2.68-2.86. The practices that the majority of participants perceived as being “1-3 times per month” were “using contribution from each student to create joint products,” “presenting group work to the class, teacher, or others,” “working as a team to incorporate feedback on group products or tasks,” and “assessing other students’ work or giving feedback to peers” with mean scores ranging from 2.5 to 3.4.

The practice with the highest frequency occurrence was “working in pairs or small groups to complete a task together” with a mean score of 3.63 and 3.31, occurring “1-3 times per week.” The least frequent practice was “working with other students to set goals and create a plan for their teams” with a mean score of 2.44 and 2.21, resulting in the occurrence of practices a few times per semester. Although teacher and student responses on the incorporation of collaboration skills were similar, a significant difference was found in two practices. Teachers reported a significantly higher level of implementation of “work in pairs or small groups to complete a task together” ($M=3.63$) compared to the students ($M=3.21$), ($t(195)=-2.20$, $p=.030$). Similarly, teachers perceived the incorporation of “create joint products using contributions from each student” significantly higher ($M=3.02$) as compared to the students ($M=2.54$), ($t(195)=-2.69$, $p=.009$).

In addition to collaboration skills, the incorporation of technology as a tool for learning skills was perceived by both groups as occurring “1-3 times per month” with a mean range of 2.54-2.64. Both groups of participants perceived that three practices which include using technology for self-instruction; selecting proper resources or technology tools for completing tasks; and using technology for information sharing were incorporated “1-3 times per month” at a mean range of 2.5-3.4. The practices “using technology to analyze information (e.g., databases, spreadsheets, graphic programs, etc.); using technology to interact directly with experts or members of

local/global communities; using technology to keep track of their work on extended tasks or assignments; and using technology to evaluate the relevance and credibility of online resources” were rated as being implemented “a few times per semester.” The most commonly used practice reported by both teachers and students was “using technology for self-instruction” with a mean of 3.24 and 3.23, respectively. Conversely, the least commonly used practice, with means of 2.28-2.32, was “using technology for information analysis.” There was only one practice in which a significant difference was found between teachers and students. Teachers reported a significantly higher level of implementation for the practice “using technology such as multimedia, blogs, presentation software to help them share information” ($M=3.16$) compared to the students ($M=2.58$), ($t(195)=2.84$, $p=.006$).

Similarly, communication skills were perceived by teachers and students to be occurred “1-3 times per month.” However, the practice of “structuring data in written and oral presentations such as creating charts, tables, and graphs” occurred “a few times per semester” with a mean of 2.38 and 2.31 reported by teachers and students respectively. Among these practices, the highly occurred practice teacher respondents believed is “answering questions in front of an audience” with a mean of 2.97 while student respondents perceived that the practice with the highest frequency was “preparing and delivering an oral presentation to the teacher” with a mean of 2.91. However, when the mean was compared for each item, a significant difference was found in only one practice, which is “deciding how they will present their work or demonstrate their learning.” Teachers' response rate was significantly higher ($M=2.61$) compared to that of students ($M=2.24$), ($t(195)=2.14$, $p=.036$).

The implementation of creativity and innovation skills was perceived distinctly by the participants. Specifically, teachers reported that these skills were taught at a mean of 2.6 with an average frequency of “1-3 times per month,” whereas students considered the same skills to be less frequently taught at a mean of 2.38 with an average frequency of “a few times per semester.” Notably, the practice of “using idea creation techniques such as brainstorming or concept mapping” was reported by both teacher and student respondents to be applied “1-3 times per month” with a mean of 2.93 and 2.94, respectively. In contrast, the practice of “creating an original product or performance to express their ideas” was perceived to be undertaken “a few times per semester” at a mean of 2.26 and 2.28 by the respondents. When comparing the responses of teachers and students regarding creativity and innovation skills, a significant difference was found in two of the practices. The practice of “testing out different ideas and work to improve them” was reported to be incorporated significantly more often by teachers ($M=2.77$) compared to students ($M=2.28$), ($t(195)=2.42$, $p=.018$). Similarly, teachers reported significantly higher implementation of the practice of “inventing a solution to a complex, open-ended question or problem” ($M=2.61$) compared to students ($M=1.97$), ($t(195)=3.14$, $p=.003$).

On average, practices related to self-direction skills were implemented “a few times per semester” with mean ratings of 2.39 and 2.43 by students and teachers respectively. However, two practices, namely “choosing their own topics for learning,” and “choosing their own resources for studying,” were rated as occurring “1-3 times per month” with mean ranging from 2.5-2.57. In contrast, the practice of “using teacher, peer or expert feedback to revise their work” was reported as occurring “1-3 times per month” by teachers, while students reported it occurring “a few times per semester.” The remaining items in this category were rated as being implemented “a few times per semester” by both groups. In this category, the highest occurred practice is “choose their own topics

of learning or questions to pursue” at a mean range of 2.57. The remaining items in this category were rated as being implemented "a few times per semester" by both groups. Notably, the practice that occurred most frequently was "choosing their own topics of learning or questions to pursue," with a mean rating of 2.57.

The least commonly used self-direction skill, according to both teachers and students, was “use specific criteria to assess the quality of their work before it is completed” with mean scores of 2.30 and 2.29, respectively. Significant difference was found in only one practice related to self-direction skills reported by the participant groups, $p > .05$. Teachers reported significantly higher implementation of “Use teacher, peer or expert feedback to revise their work” ($M = 2.55$) as compared to students ($M = 2.18$), ($t(195) = 2.06$, $p = .043$).

The practices related to global connection skills were found to be incorporated at a mean range of 2.45-2.28 with an average frequency of “a few times per semester” as reported by teacher and student respondents. The practice of “using ideas or information that come from people from other cultures or countries” had the mean score of 2.69 and 2.68 with a frequency of “1-3 times per month” closely followed by the practice of “studying information about other cultures” at a mean of 2.67 and 2.5 “1-3 times per month” responded by teachers and students. In contrast, the practice of “reflecting on own experiences in connection to global experiences” had the lowest mean score in this category, with a frequency of “a few times per semester” and a mean range of 2.06-2.12, as perceived by students and teachers. No significant differences were found between teacher and student responses in global connection skills.

The practices in the domain of local connection skills were found to be occurring infrequently, “a few times per semester,” with an average mean range of 2.27 reported by both groups of participants. Among them, the practice of “responding to a community member or group concerns” had the lowest mean of 2.0. No significant differences were found between the responses of teachers and students regarding local connection skills. Similarly, critical thinking skills were also perceived by teachers and students to occur “a few times per semester,” at a mean range between 2.06 and 2.42. However, when comparing the frequency of the skills between teachers and students, significant differences were found in all items except for the practice of “Draw their own conclusion based on the analysis of numbers, facts, or relevant information” with $p < .05$. Contrary to other categories, teachers reported significantly lower implementation of “Draw their own conclusion based on the analysis of numbers, facts, or relevant information” ($M = 2.22$) as compared to students ($M = 2.48$), ($t(195) = -1.72$, $p = .08$).

Discussion

The findings of the current study indicated that 21st century skills were implemented to some degree, ranging from infrequent occurrences "a few times per semester" to "1-3 times per month", with variations in mean frequency between skills and subcategories. This suggests that all skills were incorporated to a certain extent in EFL classrooms. Despite differences in teachers' and students' perceptions, no skills or practices were fully and frequently addressed, and both groups agreed on the infrequent implementation of the mentioned skills. To some extent, these findings are consistent with those of Ghamrawi, Ghamrawi, and Shal (2017) who used the same survey questionnaire and found that 21st century skills were not yet implemented in Lebanese public schools.

Similarly, Landon (2019) reported a significant gap in the teaching and practice of the 21st skills. One possible factor that led to the lower implementation of 21st century skills in EFL classrooms is the lack of knowledge about the theory and concept of these skills, which has been highlighted in previous studies. For instance, Orak (2019) found that Turkish EFL teachers lacked theoretical and conceptual knowledge regarding 21st century learning and innovation, despite being motivated to promote the skills in the class.

Among the categories, collaboration skills were used widely compared to other skills realized by both teachers and students although they failed to apply the mentioned skills daily. Technology was another domain implemented 1-3 times per month, which was rated equally by both groups of participants. Although there were nuances in practices within the category, both teachers and students were eager to implement technology as a tool for learning in EFL classrooms. This result is consistent with Silviyanti and Yusuf (2015) study, which indicated that EFL teachers had a high motivation to implement information communication technology in EFL classrooms as it makes learning more interesting and effective.

The next component is related to communication skills which teachers and students reported to be incorporated “1-3 times per month.” This finding suggests that teachers may need to develop proper communication strategies to successfully incorporate communication skills into their classes. A study conducted by Sukirlan (2014) found that teaching communication strategies in tertiary-level EFL classrooms improves communication skills. The strategies included approximation, circumlocution, exemplification, comparison, word coinage, code-switching, foreignizing, repetition, etc. However, students' willingness to communicate in the classroom may also affect the successful implementation of communication skills.

Furthermore, the study found that creativity and innovation skills were perceived differently by teachers and students. While teachers reported the applicability of these skills 1-3 times per month, students perceived them as occurring a few times per semester. This discrepancy may indicate a lack of clarity among teachers regarding the characteristics of creativity and innovation skills. To effectively promote these skills, teachers need to have a clear understanding of their characteristics and how to develop them in their students. A study conducted by Hana and Hacène (2017) found that teachers consider creativity quite confusing which indicates uncertain knowledge about its characteristics, even though they had positive perceptions toward promoting creative thinking. The remaining three categories, including self-direction, global connection local connection, and critical thinking skills were least incorporated in the EFL classes rated by teachers and students. These skills were practiced a few times per semester, indicating insufficient occurrences within a class. This lack of implementation might be linked to congested classrooms and teachers' focus on the lecture-based method in Afghanistan universities. This is a common issue obstructing the implementation of all eight skills and the practices in each domain. This is a common issue obstructing the implementation of all eight skills and the practices in each domain. In frontal teaching methods as well as congested classes, learners have almost no chance for autonomy, collaboration, creativity, critical thinking, research, and technical skills (Giri, 2016). The use of the lecture method is also a common issue reported in previous studies, including Govender (2015), which shows that students were not actively involved in class due to the frequent use of lecture methods. He further stated that although lectures are useful when teaching to a large group of students and enabling lecturers to present factual material logically,

students often feel passive due to one-way communication. Critical thinking skill was also proved to be incorporated infrequently in the EFL classrooms.

Conclusion

The study found that 21st century skills were implemented to some extent in EFL classrooms as perceived by both teachers and students in all of the eight main skills namely collaboration skills, communication skills, creativity and innovation skills, self-direction skills, local connection skills, global connection skills and technology as a tool for learning skills. Overall, the study revealed that, on average, all skills were implemented a few times per semester or 1-3 times per month. However, the level of implementation varied among the specific categories of frequency, including "almost never, a few times a semester, 1-3 times per month, 1-3 times per week, and almost daily," as well as within each main skill. Collaboration skills were the most implemented, followed by technology as a tool for learning and communication skills. However, critical thinking, global connection, local connection, and self-direction skills were the least implemented, according to both teachers and students. Creativity and innovation skills was the only domain rated differently by teachers and students, with teachers reporting the implementation of these skills "1-3 times per month" and students reporting their implementation "a few times per semester."

Implications and Recommendations

The findings of the current study provide valuable insights into the implementation of 21st century skills in the educational system, highlighting the need for action from the government, specifically the MoHE, and universities. Given the major problem of graduates lacking important skills in the workplace, it is imperative that governments and institutions work towards eliminating barriers to the implementation of these skills. This includes encouraging professional development, promoting digital literacy, and lifelong learning, all of which are essential in 21st century education. To optimize the implementation of 21st century skills in EFL and other classes, it is necessary to provide teachers with the required training and workshops, and administrations must provide necessary infrastructures such as updated technology, language labs, and high-speed internet connections. Modern technology as a tool for learning equips both teachers and students with a variety of educational resources that inspire critical thinking, creativity, communication, and collaboration.

Moreover, this study highlights the need for educationists, syllabus and material designers, and curriculum developers to focus more on 21st century skills in curriculum development. Materials should contribute to the development of 21st century skills, including collaboration, communication, creativity and critical thinking, self-directed learning, global and local awareness, and technology. The findings also indicate that both teachers and students agree that the implementation of 21st century skills in EFL classes is at a low level. Therefore, English teachers need to acknowledge the changing nature of literacy and encompass diverse areas such as technology, multimedia relations, and culture. Teachers should adopt a more facilitator role in learning and allow students to set their learning goals, plan their knowledge quest or problem-solving strategy, collaborate with classmates, learn to listen actively and engage in teamwork.

Limitations

This study is limited in scope to the English departments of three public universities in Afghanistan. Therefore, it is important to investigate the status of 21st century skills in other departments, as well as private universities, to gain a more comprehensive understanding of the skills. Additionally, this research is based on a selected set of 21st century skills, including collaboration, communication, creativity and innovation, critical thinking, self-directed learning, global and local awareness, and technology, as evaluated by the survey instrument. As 21st century frameworks include various other skills, future studies should aim to explore a broader range of skills with larger sample sizes and a wider study scope.

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Appendix. Perceptions of Afghan EFL Lecturers and Students on the Implementation of 21st Century Skills in the Classroom

	How often are students asked to do the following?	Respondents	almost never%	a few times a semester %	1-3 times per month%	1-3 times per week%	almost daily%	Mean
Critical Thinking Skills	1: Compare information from different sources before completing a task or assignment?	Lecturers	28.6	32.7	38.8	0.00	0.00	2.10
		Students	27.40	27.40	26.80	18.40	0.00	2.54
	2: Draw their own conclusions based on analysis of numbers, facts, or relevant information?	Lecturers	30.60	28.60	40.80	0.00	0.00	2.10
		Students	25.80	27.40	27.90	18.90	0.00	2.40
	3: Summarize or create their own interpretation of what they have read or been taught?	Lecturers	28.60	32.70	38.80	0.00	0.00	2.10
		Students	24.70	27.40	27.40	20.50	0.00	2.43
	4: Analyze competing arguments, perspectives, or solutions to a problem?	Lecturers	30.60	34.70	34.70	0.00	0.00	2.04
		Students	26.80	25.30	26.30	21.60	0.00	2.42
	5: Develop a persuasive argument based on supporting evidence or reasoning?	Lecturers	30.60	36.70	32.70	0.00	0.00	2.02
		Students	27.40	28.90	33.70	20.00	0.00	2.36
6: Try to solve complex problems or answer questions that have no single correct solution or answer?	Lecturers	30.60	34.70	34.70	0.00	0.00	2.04	
	Students	27.40	25.80	26.80	20.00	0.00	2.39	
Average	Lecturers	29.93	33.35	36.75	0.00	0.00	2.06	
	Students	26.58	27.03	28.15	19.90	0.00	2.42	
Collaboration Skills	1: Work in pairs or small groups to complete a task together?	Lecturers	0.00	22.40	22.40	24.50	30.60	3.63
		Students	0.00	34.20	21.10	24.20	20.50	3.31
	2: Work with other students to set goals and create a plan for their team?	Lecturers	28.60	26.50	30.60	0.00	14.30	2.44
		Students	25.30	34.70	36.80	0.00	3.20	2.21
	3: Create joint products using contributions from each student?	Lecturers	0.00	47.60	16.70	19.00	16.70	3.02
		Students	0.00	60.00	18.40	17.90	3.70	2.65
	4: Present their group work to the class, teacher, or others?	Lecturers	14.30	28.20	20.40	20.40	16.30	2.95
		Students	12.60	28.90	23.70	20.00	14.70	2.95
	5: Work as a team to incorporate feedback on group tasks or products?	Lecturers	12.20	40.80	22.40	22.40	2.00	2.61
		Students	5.30	44.70	36.80	13.20	0.00	2.57

	6: Give feedback to peers or assess other students' work?	Lecturers	22.40	28.60	26.50	20.40	2.00	2.51	
		Students	5.30	49.50	40.50	4.70	0.00	2.44	
	Average	Lecturers	12.91	32.35	23.16	17.78	13.65	2.86	
		Students	8.08	42.00	29.55	13.33	7.01	2.68	
Communication Skills	1: Structure data for use in written products or oral presentations (e.g., creating charts, tables or graphs)?	Lecturers	28.60	28.60	18.40	24.50	0.00	2.38	
		Students	30.00	25.80	27.40	16.80	0.00	2.31	
	2: Convey their ideas using media other than a written paper (e.g., posters, video, blogs, etc.)?	Lecturers	22.40	28.60	32.70	0.00	16.30	2.59	
		Students	15.80	37.90	42.60	0.00	3.70	2.37	
	3: Prepare and deliver an oral presentation to the teacher or others?	Lecturers	0.00	53.10	16.30	16.30	14.30	2.91	
		Students	4.70	35.80	28.40	27.90	3.20	2.88	
	4: Answer questions in front of an audience?	Lecturers	14.30	26.50	22.40	20.40	16.30	2.97	
		Students	18.90	26.80	26.80	23.70	3.70	2.66	
	5: Decide how they will present their work or demonstrate their learning?	Lecturers	14.30	38.80	20.40	24.50	2.00	2.61	
		Students	21.10	41.10	22.60	15.30	0.00	2.32	
	Average	Lecturers	15.92	35.12	22.04	17.14	9.78	2.69	
		Students	18.10	33.48	29.56	16.74	2.12	2.50	
	Creativity and Innovation Skills	1: Use idea creation techniques such as brainstorming or concept mapping?	Lecturers	14.30	26.50	26.50	16.30	16.30	2.93
			Students	8.40	30.00	30.50	21.10	10.00	2.94
2: Generate their own ideas about how to confront a problem or question?		Lecturers	16.30	40.80	24.50	18.40	0.00	2.44	
		Students	25.80	39.50	20.00	14.70	0.00	2.23	
3: Test out different ideas and work to improve them?		Lecturers	18.40	28.60	24.50	14.30	14.30	2.77	
		Students	17.90	46.80	16.80	15.30	0.00	2.38	
4: Invent a solution to a complex, open-ended question or problem?		Lecturers	24.50	32.70	12.20	18.40	12.20	2.61	
		Students	24.70	48.40	20.00	4.20	2.60	2.11	
5: Create an original product or performance to express their ideas?		Lecturers	28.60	32.70	22.40	16.30	0.00	2.26	
		Students	22.60	46.80	10.00	20.00	0.00	2.28	
Average		Lecturers	20.42	32.26	22.02	16.74	8.56	2.60	
		Students	19.88	42.3	19.46	15.06	2.52	2.38	
Self-direction Skills		1: Take initiative when confronted with a difficult problem or question?	Lecturers	26.50	34.70	20.40	18.40	0.00	2.30
			Students	20.50	37.90	30.00	11.60	0.00	2.32
	2: Choose their own topics of learning or questions to pursue?	Lecturers	24.30	36.70	26.50	22.40	0.00	2.57	
		Students	14.70	29.50	38.90	16.80	0.00	2.57	
	3: Plan the steps they will take to accomplish a complex task?	Lecturers	24.50	24.50	30.60	20.40	0.00	2.46	
		Students	20.00	28.90	34.20	16.80	0.00	2.47	

	4:Choose for themselves what examples to study or resources to use?	Lecturers	16.30	36.70	26.50	20.40	0.00	2.51	
		Students	16.80	31.60	36.30	15.30	0.00	2.50	
	5:Monitor their own progress towards completion of a complex task and modify their work accordingly?	Lecturers	26.50	32.70	22.40	18.40	0.00	2.32	
		Students	25.30	28.40	34.70	11.60	0.00	2.32	
	6:Use specific criteria to assess the quality of their work before it is completed?	Lecturers	30.60	24.50	28.60	16.30	0.00	2.30	
		Students	23.60	40.50	18.90	16.90	0.00	2.29	
	7:Use peer, teacher or expert feedback to revise their work?	Lecturers	18.40	36.70	16.30	28.60	0.00	2.55	
		Students	22.10	45.80	15.30	16.80	0.00	2.26	
	Average	Lecturers	23.87	32.35	24.47	20.70	0.00	2.43	
		Students	20.42	34.65	29.75	15.11	0.00	2.39	
	Global Connection Skills	1: Study information about other countries or cultures?	Lecturers	16.30	40.80	14.30	16.30	12.20	2.67
			Students	14.20	43.20	23.70	15.80	3.20	2.50
		2:Use information or ideas that come from people in other countries or cultures?	Lecturers	0.00	51.00	28.60	20.40	0.00	2.69
			Students	4.70	40.00	36.80	18.40	0.00	2.68
3:Discuss issues related to global interdependency (for example, global environment trends, global market economy)?		Lecturers	18.40	34.70	24.50	22.40	0.00	2.51	
		Students	23.70	31.60	27.40	17.40	0.00	2.38	
4:Understand the life experiences of people in cultures besides their own?		Lecturers	18.40	38.80	24.50	18.40	0.00	2.42	
		Students	17.40	43.20	20.50	18.90	0.00	2.41	
5:Study the geography of distant countries?		Lecturers	26.50	34.70	20.40	18.40	0.00	2.30	
		Students	23.70	35.80	29.50	11.10	0.00	2.27	
6:Reflect on how their own experiences and local issues are connected to global issues?		Lecturers	22.40	44.90	30.60	2.00	0.00	2.12	
		Students	33.20	35.30	23.20	8.40	0.00	2.06	
Average		Lecturers	17.00	40.81	23.81	16.31	2.03	2.45	
		Students	19.48	38.18	26.85	15.00	0.53	2.38	
Local Connection Skills	1:Investigate topics or issues that are relevant to their family or community?	Lecturers	22.40	32.70	28.60	16.30	0.00	2.38	
		Students	25.30	30.00	29.50	15.30	0.00	2.34	
	2:Apply what they are learning to local situations, issues or problems?	Lecturers	18.40	38.80	26.50	16.30	0.00	2.40	
		Students	22.60	33.70	25.80	17.90	0.00	2.38	
	3:Talk to one or more members of the community about a class project or	Lecturers	20.40	36.70	26.50	16.30	0.00	2.38	
		Students	20.50	37.40	25.80	16.30	0.00	2.37	

	activity?								
	4:Analyze how different stakeholder groups or community members view an issue?	Lecturers	34.70	24.50	24.50	16.30	0.00	2.22	
		Students	24.20	34.70	30.00	11.10	0.00	2.27	
	5:Respond to a question or task in a way that weighs the concerns of different community members or groups?	Lecturers	30.60	38.80	30.60	0.00	0.00	2.00	
		Students	24.20	51.60	24.20	0.00	0.00	2.00	
	Average	Lecturers	25.30	34.30	27.34	13.04	0.00	2.27	
		Students	23.36	37.48	27.06	12.12	0.00	2.27	
	Technology as a Tool for Learning skills	1:Use technology or the Internet for self-instruction (e.g., Kahn Academy or other videos, tutorials, self-instructional websites, etc.)?	Lecturers	14.30	14.30	28.60	18.40	24.50	3.24
			Students	14.70	27.40	27.40	27.40	3.20	3.23
		2:Select appropriate technology tools or resources for completing a task?	Lecturers	10.20	30.60	24.50	20.40	14.30	2.97
Students			15.50	27.00	28.40	29.10	0.00	2.76	
3:Evaluate the credibility and relevance of online resources?		Lecturers	34.70	20.40	24.50	14.30	6.10	2.36	
		Students	28.90	26.30	25.80	15.80	1.60	2.33	
4:Use technology to analyze information (e.g., databases, spreadsheets, graphic programs, etc.)?		Lecturers	32.70	26.50	20.40	20.40	0.00	2.28	
		Students	30.00	25.30	26.80	17.90	0.00	2.32	
5:Use technology to help them share information (e.g., multi-media presentations using sound or video, presentation software, blogs, podcasts, etc.)?		Lecturers	12.20	18.40	30.60	18.40	20.40	3.16	
		Students	17.40	26.30	28.40	23.20	4.70	2.71	
6:Use technology to support team work or collaboration (e.g., shared work spaces, email exchanges, giving and receiving feedback, etc.)?		Lecturers	20.40	30.60	28.60	20.40	0.00	2.48	
		Students	27.40	28.90	25.80	17.90	0.00	2.34	
7:Use technology to interact directly with experts or members of local/global communities?		Lecturers	24.50	34.70	24.50	16.30	0.00	2.32	
		Students	25.80	30.50	28.40	15.30	0.00	2.33	
8:Use technology to keep track of their work on extended tasks or assignments?		Lecturers	26.50	26.50	30.60	16.30	0.00	2.36	
		Students	25.30	33.20	27.90	13.70	0.00	2.30	
Average		Lecturers	21.93	25.25	26.53	18.11	8.16	2.64	
		Students	23.12	28.11	27.36	18.12	1.18	2.54	