UNIVERSITY LECTURERS' PERCEPTION OF THE ESSENTIAL SKILLS AND TASKS FOR SUCCESSFUL ONLINE TEACHING IN THE POST-COVID-19 ERA

[1]Joshua Sule Mamman PhD
joshua.mamman@kwasu.edu.ng
[1]Department of Business and Entrepreneurship Education, Kwara State University, Malete Ilorin, Kwara State, Nigeria

[2]Moses Tswanya Saba PhD
mosessaba@futminna.edu.ng
[2]Department of Industrial and Technology Education, Federal University of Technology Minna, Niger State, Nigeria

Abstract

The Covid-19 pandemic has altered the future of teaching and learning whether it is accepted or not. It has changed the nature of face-to-face teaching and enabled the rapid growth of blended and online teaching and learning. This study examined university lecturers' perception of the essential skills and tasks for successful online teaching in the post-covid-19 era. Two research questions were raised and one hypothesis was tested in the study. The study used a descriptive survey design. The population of the study comprised all the lecturers in universities in North-west, Nigeria. A sample of 214 lecturers was selected. A structured questionnaire tagged Skills and Tasks for Online Teaching Questionnaire (STOTQ) designed by the researcher and duly validated with a Cronbach reliability coefficient of 0.85 was used to gather data for the study. Two hundred and fourteen copies of the questionnaire were administered and were retrieved and used for the study. The data collected to answer the research question were analysed using mean and standard deviation. One-way Multivariate Analysis of Variance (MANOVA) was used to test the hypothesis at the 0.05 level of significance. The study found that interaction, management, technology content, organization/instruction design, and pedagogical skills are highly needed for successful online teaching in the post-covid-19 era, there was no significant difference between the responses of male and female lecturers on the essential skills and tasks needed for successful online teaching in the post-Covid-19 era $F(1, 212) = 1.53$, $P > 0.05$; *Wilk's* $\Lambda = 0.886$, $\eta^2 = 0.04$. *Based on the findings, it was concluded that interaction, management, technology, content, organisation/instructional design, and pedagogical skills and the tasks identified are essential for successful online teaching in the post-covid-19 era. Based on the findings of the study, the following is recommended; lecturers should use these identified skills to self-evaluate their ability to teach in an online environment and identify their training needs; as the work of academics moves from face-to-face mode to blended and online modes, especially because of covid-19, lecturers should critically question their practices and discuss with their peers for the adoption of new pedagogical practices for the new teaching spaces.*

Keywords: *Skill, tasks, online, teaching, post-covid-19, era*

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Introduction

Information Communication Technologies (ICTs) have indeed been infused in all areas of education especially teaching and learning. This infusion has provided a soft landing for education in the face of the Covid-19 pandemic. The ubiquitous nature of information communication technologies has helped and will continue to help higher education during this period of coronavirus. Classroom boundaries have exceeded the realms of location, physical presence and time (Barber, Donnelly, Rizvi, & Summers, 2013). The Covid-19 pandemic has altered the future of teaching and learning whether it is accepted or not. It has changed the nature of face-to-face teaching and enabled the rapid growth of blended and online teaching and learning. ICTs offer opportunities for education to continue even in the Covid-19 period, as a result, stakeholders' attention has been shifted to online courses. This comes with challenges for both teachers and students. With the growth of online teaching and learning, teachers must have an understanding of the roles and practices expected of them of an effective online teacher. According to Albrahim (2020)**,** the ICT era coupled with Covid-19 is the era of anytime and anywhere learning. New teaching pedagogies, learning skills, and assessment methods have emerged to adapt to these changes (Barber et al., 2013). In addition, new formats of learning are expected.

These changes represent challenges that may burden lecturers in higher education who have to keep pace with the innovative paradigms of higher education and new approaches to teaching and learning (Siemens & Matheos, 2010). This includes being aware of who the students are, what they need to learn, how to teach them, as well as the skills that they, as instructors, need to master to effectively execute their role (Palloff & Pratt, 2013). For lecturers to be able to cope with all these changes, there is a dire need to examine the skills of successful online teachers.

A skill is an ability learned to act with determined results with good performance often within a given timeframe, energy, or both. A skill generally requires certain environmental stimuli and situations to assess the level of proficiency demonstrated and used. Teachers require a broad range of skills to make a significant contribution to student learning in an online environment. These essential skills include:

Pedagogical Skills: Effective online instructors should understand the fundamentals of online teaching and pedagogy. They must demonstrate this understanding by applying a large number of principles and strategies. These principles and strategies include Learning theories, such as learning styles, the adult learning theory, the learner-centred approach, and collaborative learning; Designing and implementing appropriate instructional strategies, as well as classroom assessment and student engagement techniques; Organizing and facilitating students' participation and providing guidance and support as needed; Using criterion-based assessment to evaluate individual and group performance; Motivating students and showing enthusiasm and interest; Encouraging knowledge construction based upon learners' prior knowledge and life experience; Fostering learners' self-assessment and reflection; and Promoting group interaction, collaboration, and teamwork. (Abdous, 2011; Bailie, 2011; Craddock & Gunzelman, 2013; Munoz Carril et al., 2013). Pedagogical skills are about the teachers' competencies to determine what, where, when, how and the method that will best be adopted to enhance

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effective teaching that will result in better results. According to Jeral and Elizabeth (2015), online pedagogical skills include well developed and careful design of learning activities that promote interaction and prompt feedback in an online environment. This means the crafting of a meaningful learning experience in an online environment online. Successful online educators always establish and project their pedagogical presence into the online learning environment. Required roles of online educators include pedagogical knowledge, facilitating active learning, designing instruction, coordinating social interaction, managing the course, and troubleshooting technical issues. Jeral and Elizabeth (2015) noted that familiarity with instructional design is particularly important in online education, which encompasses the planning, organizing, and structuring of elements within the online learning environment.

The next skill is the content skill. Content skill generally refers to the facts, concepts, theories, and principles that are taught and learned in specific academic courses, rather than two related skills such as reading, writing, or researching that students also learn in school. Online instructors should be able to do the following to demonstrate their content skill: expressing and mastering extensive knowledge of the content; Stating learning goals and objectives that coincide with learners' levels and characteristics; drafting and developing learning and assessment activities that align with learning goals and objectives; developing a course outline that includes all course components and elements; designing a teaching proposal at the general level and identify each of its phases or elements; developing and selecting appropriate and varied learning resources that accommodate different learning styles and preferences; Linking the subject and content with scientific, social, cultural, and any other relevant phenomena; and Developing an inventory of existing content and resources and any additional content and resources that will be needed. (Abdous, 2011; Bailie, 2011; Munoz Carril et al., 2013)

Design Skill: Instructional design is the creation of learning experiences and materials in a manner that results in the acquisition and application of knowledge and skills. Designing and developing online courses is a demanding task. It requires having a design and production team, which consists of an instructional designer, instructional technologist, graphic and media designers and production team, and librarians (Abdous, 2011). These individuals work collaboratively to produce high-quality online courses (Haughton, Sandt, & Slantcheva-Durst, 2014). However, online instructors must be able to do the following: Understanding and applying instructional design principles, models, and theories; Organizing and presenting the learning materials in different formats; Cooperating with the production team to design learning activities and select appropriate tools and techniques to present these activities; and Using students' previous feedback to develop and design new courses and assess the course design quality by using quality assurance tools and instruments, such as the Quality Matters Rubric. (Abdous, 2011; Munoz Carril et al., 2013; Newby, Eagleson, & Pfander, 2014)

Technological Skill: Although online learning relies heavily on technology, there is no imperative need for online instructors being technologically advanced. Technological skills are the abilities and knowledge needed to perform specific tasks both by students and instructors in an online environment. They are practical ideas that relate to the use of

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different types of mechanical, electronic, information technology, communication devices, or other related ideas in a connected environment. Technology skill has to do with abilities, experiences and technical know-how to be able to operate many devices, perform and navigate through many information technology platforms in an online environment. Online instructors have to possess adequate technological literacy skills to be able to do the following: Accessing various technological resources and tools, such as email, Internet browsers, LMSs, text and video chat applications, and productivity software and applications; Understanding the learning and teaching capabilities and limitations of these tools; Being aware of the technical potential of, and procedures used to create, e-content, such as e-books and instructional videos; and Being alert to the latest updates and renovations of educational technology and software. (Abdous, 2011; Alman & Tomer, 2012; Bailie, 2011; Munoz-Carril et al., 2013)

Management Skill: As classroom management is an important aspect of face-to-face education, managing courses and learning is essential in online learning environments. An awareness of institutional policies and norms is also an important aspect of being a successful online instructor. Skills and tasks related to these two aspects include the following: Being able to clarify the roles and expectations of the instructor and the learners; Managing the course time and applying time-saving techniques; Demonstrating leadership, management, mentoring, and coaching skills, as well as knowledge of administrative qualities and procedures; Tracking course and students' progress regularly; Establishing and declaring rules and regulations for participation, submission of assignments, timeliness, sending and seeking feedback, and communication protocols; Conducting research on classroom teaching then interpreting and integrating research findings and results; Understanding and demonstrating a commitment to institutional policies; Maintaining contact and networking with online teaching and administrative teams; and Complying with legal, ethical, and copyright issues and standards. (Bailie, 2011; Craddock & Gunzelman, 2013; Munoz Carril et al., 2013).

Interaction Skill: Active communication and social presence are vital to engaging online learners. Using different communication tools (e.g., email, video chat, text messages, etc.), online instructors have to efficiently communicate and promote interactivity among the learners. Some activities to achieve this include the following: Facilitating and maintaining interactive discussion and information exchange; Using sufficient and commonly understandable language; Respecting and considering cultural differences; Clearly requesting information and asking questions; Clarifying the purpose and meaning of messages and feedback; Emphasizing the important points using font colours and effects; Ensuring the quality and accuracy of written messages and feedback and detecting typographical and grammatical errors; Personalizing messages and feedback and making them more lively by adding the appropriate sense of humour when possible; Using different communication methods to ensure accessibility among the instructor and learners, and the learners with their peers; Maintaining a warm, friendly, and inviting collegial atmosphere; Creating and developing respectful relationships and a sense of community among the learners; Showing sensitivity and empathy when communicating online; Resolving conflicts and misunderstandings amicably; and Offering advice and

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suggestions and clarifying doubts and suspicions. (Abdous, 2011; Bailie, 2011; Fuller & Yu, 2014; Munoz Carril et al., 2013). All these skills and tasks can help in designing and creating professional development opportunities for online lecturers. Online instructors can also use these to self-evaluate their competencies and then recognize their learning and training needs (Baran et al., 2013).

The necessity of the acquisition of these online skills is borne out of the fact that online teaching and learning is now the future of higher education. This has initiated a dramatic change in the educational paradigm. To a large extent now, this change is necessitated by covid-19. Covid-19 has made online education now become a dominant part of the landscape of higher education and has changed the way to educate post-secondary students now and in the future. The online instructor in higher education also requires changes in skills and focus, including adopting a learner-centred approach (Fish & Wickersham, 2009). The rapid growth of online programs raises many new pedagogical, psychological and social issues. Online learning creates a learning environment that compared to traditional classroom-based education, is less personal, more independent, often fragmented, rarely systemic, distributed in space and time, and dependent on the learner rather than on the teacher. To increase online educational effectiveness and to understand how students learn and how teachers teach best in an online environment necessitates a comprehensive theory based on sound, continuous pedagogic research. Classic pedagogy has served numerous generations of brick-and-mortar education teachers and students well, however, it cannot satisfy online teachers and learners, as rapid changes in knowledge and technology are driving the need for new approaches to dissemination and integration of new information into workplaces and work practices, and new learning paths for adults (Haythornthwate & Andrews, 2011). Teach online. CA (2012) explained that changes in society, student expectations, the population explosion and technology in an online environment are motivating educational institutions and instructors to rethink teaching skills and methods.

The present study is different from previous surveys in several aspects. First, unlike most of the previous surveys, it separates skills from the tasks to demonstrate each skill. Second, it ranked the skills based on the responses of the lecturers and third, this survey uses unique statistical tool to test the hypothesis. The big question now is that what are the essential skills needed for successful online teaching? The researcher's observation shows that the quality of skills lecturers possess for online teaching is questionable. Even though many educators see the importance of online education much more important because of Covid-19 many still lack the experience or knowledge to teach online effectively. Do educators need any special skills or knowledge to successfully teach online? If so, what are they and what are the tasks to demonstrate these skills? These are the questions which this study addressed.

Research Questions

1. What is the perception of lecturers of the essential skills needed for successful online teaching in the post-Covid-19 era?

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2. What is the perception of lecturers of the tasks needed to demonstrate the essential skills for successful online teaching in the post-Covid-19 era?

Hypothesis

Ho1: There is no significant difference between the mean rating of male and female respondents on the essential skills and tasks needed for successful online teaching in the post-Covid-19 era.

Methodology

The descriptive survey design was adopted for the study. The study was a survey of the perceptions of lecturers regarding the essential skills and tasks needed for successful online teaching in the post-Covid-19 era. **The population of the study comprised all the lecturers in universities in North-west, Nigeria.** A sample population of 214 lecturersfrom universities in North west, Nigeria was selected for the study. These lecturers were selected because of their experience in teaching online courses. This was determined from a preliminary study conducted. The researcher believed that these lecturers are in a better position to assess the essential skills and tasks for successful online teaching. A structured questionnaire tagged Skills and Tasks for Online Teaching Questionnaire (STOTQ) designed by the researcher and duly validated by three experts with a Cronbach reliability coefficient of 0.85 was used to gather data for the study. The PSOTQ consists of six skills and 30 tasks adapted from Lee and Hiruni (2005) and Albrahim (2020) after an extensive review of the literature. The items were placed on a four-point rating scale of Highly Needed (HN) = 4, Moderately Needed (MN) = 3, Fairly Needed (FN) = 2, and Not Needed
(NN) = 1. A total of 214 copies of PSOTQ was administered with the help of three research assistance and all were retrieved. The data collected to answer the research question were analysed using mean, standard deviation. The hypotheses were tested using independent one-way multivariate analysis (MANOVA) statistic at 0.05 level of significance. The following boundary limits were used for item options of research instruments. Highly Needed (3.50-4.00), Moderately Needed (2.50-3.49), Fairly Needed (1.50-2.49), and Not Needed (0.0-1.49). The hypothesis was rejected when the observed p-value was less than the fixed p-value of 0.05. The hypothesis was not rejected when the observed p-value is equal to or greater than the fixed p-value of 0.05.

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Results

Research Question One: What is the perception of lecturers of the essential skills needed for successful online teaching in the post-Covid-19 era?

Table 1: Mean and standard deviation of responses on online essential skills needed for successful online teaching in the post-Covid-19 era

S/N	Indicate the level to which the following skills are needed for successful online teaching	Mean	Std	Remark	Ranks
1	Interaction skill	3.77	0.59	Highly Needed	1st
2	Management skill	3.77	2.54	Highly Needed	1st
3	Organization/ instructional design	3.66	0.64	Highly Needed	5th
4	Technology skill	3.69	0.64	Highly Needed	3rd
5	Content knowledge	3.67	0.71	Highly Needed	4th
6	Pedagogical skill	3.42	0.76	Moderately Needed	6th
	Weighted Mean and Std	**3.66**	**0.98**	**Highly Needed**	

Table 1 reveals that the following five of the six listed skills are highly needed for online teaching in the post Covid-19 era, interaction (mean = 3.77), management skills (mean = 3.73), organization/instructional design skills (mean = 3.66), Technology skills (mean = 3.69), content knowledge (mean = 3.67). The respondents indicated that pedagogical skill is moderately needed (mean = 3.42). The skills are ranked thus: interaction skill 1st, management skill 1st, technology skill 3rd, content knowledge 4th, organization/instructional design 5th and pedagogical skill 6th. All the standard deviations are low which shows the responses of the respondents are clustered around the mean. The weighted mean and standard deviation are 3.66 and 0.98, respectively.

Research Question Two: What is the perception of lecturers of the tasks needed to demonstrate the essential skills for successful online teaching in the post-Covid-19 era?

Table 2: Mean and standard deviation of lecturers' perception of the tasks needed to demonstrate the essential skills for successful online teaching in the post-Covid-19 era

S/N	Items	Mean	Std	Remark
	Interaction skill			
1	Guide and maintain interactive discussion	3.61	0.75	Highly Needed
2	Provide timely feedback	3.78	0.75	Highly Needed
3	Encourage peer learning	3.89	0.89	Highly Needed
4	Advice and counsel students	3.63	2.52	Highly Needed

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5	Creating respectful relationships and a sense of community among the learners	3.49	0.74	Moderately Needed
Weighted Mean and Std				**Highly**
		3.68	**1.13**	**Needed**
	Management skill			
1	Monitor and evaluate student performance	3.63	0.64	Highly Needed
2	Manage time appropriately	3.51	2.52	Highly Needed
3	Introduce support services to students	3.60	0.68	Highly Needed
4	knowledge of administrative qualities and procedures	3.59	0.72	Highly Needed
5	Tracking course and students' progress regularly	3.51	0.73	Highly Needed
Weighted Mean and Std				**Highly**
		3.57	**1.06**	**Needed**
	Organization/ instructional design			
1	Provide clear learning outcomes, objectives, and expectation	3.63	0.64	Highly Needed
2	Organize materials and activities clearly and well	3.51	0.92	Highly Needed
3	Identify students' learning styles/needs	3.59	0.72	Highly Needed
4	Conduct instructional design effort	3.64	0.81	Highly Needed
5	Present materials and activities	3.58	0.73	Highly Needed
Weighted Mean and Std				**Highly**
		3.59	**0.76**	**Needed**
	Technology Skills			
1	Utilize technology in a competent manner	3.87	0.59	Highly Needed
2	Being aware of the technical potential of, and procedures used to create, e-content.	3.87	1.54	Highly Needed
3	Being alert to the latest updates and renovations of educational technology and software.	3.62	0.64	Highly Needed
4	Accessing various technological resources and tools, such as email, Internet browsers,	3.55	0.64	Highly Needed
5	Understanding the learning and teaching capabilities and limitations of these tools	3.71	0.59	Highly Needed
Weighted Mean and Std		**3.72**	**0.80**	**Highly Needed**
	Content Skill			
1	Master in content area	3.59	0.82	Highly Needed

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2	Stating learning goals and objectives that coincide with learners' levels and characteristics	3.51	0.91	Highly Needed
3	Drafting and developing learning and assessment activities that align with learning goals and objectives	3.58	0.68	Highly Needed
4	Expressing and mastering extensive knowledge of the content	3.59	0.70	Highly Needed
5	Stating learning goals and objectives that coincide with learners' levels and characteristics	3.41	0.75	Moderately Needed
Weighted Mean and Std		**3.54**	**0.77**	**Highly Needed**

Table 2 continued

S/N	**Items**	**Mean**	**Std**	**Remark**
	Pedagogical Skill			
1	Adopting the learner-centred approach, and collaborative learning.	3.63	0.52	Highly Needed
2	Designing and implementing appropriate instructional strategies.	3.49	0.74	Moderately Needed
3	Using classroom assessment and student engagement techniques.	3.48	0.76	Moderately Needed
4	Facilitating students' participation.	3.55	0.70	Highly Needed
5	Using criterion-based assessment to evaluate individual and group performance;	3.48	0.76	Moderately Needed
Weighted Mean and Std		**3.53**	**0.70**	**Highly Needed**
Overall Weighted Mean and Std		**3.605**	**0.87**	**Highly Needed**

Table 2 reveals the tasks needed to demonstrate each of the skills listed in Table 1. For interactive skill, Table 2 shows that the respondents indicated that all the tasks are highly needed except for item five which they indicated moderately needed. The respective means of the items are as follows: guide and maintain interactive discussion (mean= 3.61; Std = 0.75), Provide timely feedback (mean = 3.78; Std = 0.75), Encourage peer learning (mean = 3.89; Std = 0.89), advice and counsel students (mean = 3.63; Std = 2.52), and creating respectful relationships and a sense of community among the learners (mean = 3.49; Std = 0.74). Summarily, Table 2 reveals that the tasks listed are highly needed to demonstrate interaction skill (mean = 3.68; Std = 1.13). The low standard deviation shows that lecturers' perception of the tasks to demonstrate interaction skill in an online environment are clustered around the mean. The responses of lecturers indicated that all the tasks listed for management skill are highly needed with their respective mean and standard deviation scores of each item as follows: monitor and evaluate student

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performance (mean = 3.63; Std = 0.64), manage time appropriately (mean = 3.51; Std = 2.52), introduce support services to students (mean = 3.60; Std = 0.68), knowledge of administrative qualities and procedures (mean = 3.59; Std = 0.72), and tracking course and students' progress on a regular basis (mean = 3.51; Std = 0.73). The weighted mean and standard deviation scores of tasks for management skill (mean = 3.57; 1.06) shows that the tasks are highly needed.

Table 2 shows that organization/instructional design skill is highly needed (mean = 3.59; Std = 0.76). The breakdown of the tasks under organization skill is as follows: Provide clear learning outcomes, objectives, and expectation (mean = 3.63; Std = 0.64), organize materials and activities clearly and well (mean = 3.51; Std = 0.92), identify students' learning needs (mean = 3.59; Std = 0.72), conduct instructional design effort (mean = 3.64; Std = 0.81), and present materials and activities (mean = 3.58; Std = 0.73). The Table also reveals that the tasks under technology skill are highly needed (mean = 3.72; Std 0.80). Each task under the technology skill has high mean score. Utilize technology in a competent manner (mean = 3.87; Std = 0.59), being aware of the technical potential of, and procedures used to create, e-content (mean = 3.87; Std = 1.54), being alert to the latest updates and renovations of educational technology and software (mean = 3.62; Std = 0.64), accessing various technological resources and tools, such as email, Internet browsers (mean = 3.55; Std = 0.64), and understanding the learning and teaching capabilities and limitations of these tools (mean = 3.71; Std = 0.59). Table 2 reveals that the tasks to demonstrate content skill are highly needed except for one of the items that is moderately needed. Master in content area (mean = 3.59; Std = 0.82), stating learning goals and objectives that coincide with learners' levels and characteristics (mean = 3.51; Std = 0.91), drafting and developing learning and assessment activities that align with learning goals and objectives (mean = 3.58; Std = 0.68), expressing and mastering extensive knowledge of the content (mean = 3.59; Std = 0.70), stating learning goals and objectives that coincide with learners' levels and characteristics (mean = 3.41; Std = 0.75). The weighted mean and standard deviation (mean = 3.54; Std = 0.77) shows that the tasks are highly needed.

Lastly, the tasks under the pedagogical skills are highly needed with following mean score for each task. Adopting the learner-centred approach, and collaborative learning; (mean = 3.63; Std = 0.52), designing and implementing appropriate instructional strategies (mean = 3.49; Std = 0.74), using classroom assessment and student engagement techniques (mean = 3.48; Std = 0.76), facilitating students' participation (mean = 3.55; Std = 0.70), and using criterion-based assessment to evaluate individual and group performance (mean = 3.48; Std 0.76). The weighted mean score and standard deviation (mean = 3.53; Std = 0.70) show the tasks are highly needed.

Ho1: There is no significant difference between the mean rating of male and female respondents on the essential skills and tasks needed for successful online teaching in the post-Covid-19 era.

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Table 3: Summary One-way Multivariate Analysis of Variance (MANOVA) of the difference between the responses of male and female respondents of the essential skills and tasks needed for successful online teaching in the post-Covid-19 era

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.866	682.206[b]	2.000	211.000	.000	.866
	Wilks' Lambda	.134	682.206[b]	2.000	211.000	.000	.866
	Hotelling's Trace	6.466	682.206[b]	2.000	211.000	.000	.866
	Roy's Largest Root	6.466	682.206[b]	2.000	211.000	.000	.866
Gender	Pillai's Trace	.014	1.535[b]	2.000	211.000	.189	.004
	Wilks' Lambda	.886	1.535[b]	2.000	211.000	.189	.004
	Hotelling's Trace	.014	1.535[b]	2.000	211.000	.189	.004
	Roy's Largest Root	.014	1.535[b]	2.000	211.000	.189	.004

a. Design: Intercept + Gender
b. Exact statistic

Table 3 reveals that there was no significant difference between the responses of male and female on the essential skills and tasks needed for successful online teaching in the post-Covid-19 era F (1, 212) = 1.53, P> 0.05; Wilk's Λ = 0.886, partial η^2 = 0.04. This implied that male and female lecturers did not differ significantly in their responses regarding the two dependent variables (essential skills and tasks for successful online teaching in the post-Covid-19) tested in the study.

Table 4: Tests of Between-Subjects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Gender	Essential Skills	.553	1	.553	.506	.478	.002
	Tasks	1.901	1	1.901	1.682	.196	.008

a. R Squared = .002 (Adjusted R Squared = -.002)
b. R Squared = .008 (Adjusted R Squared = .003)

Table 4 reveals that the mean responses for essential skills were not significantly different between male and female lecturers (F (1,212) = 0.506 p= 0.478, η^2 = 0.002), and the mean score for tasks were also not statistically significantly different between male and female lecturers (F (1,212) = 1.682 p = 0.196, η^2 = 0.008)

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Table 5: Estimated Marginal means

Dependent Variable	Gender	Mean	Std. Error
Essential Skills	Male	2.49	.110
	Female	2.39	.094
Tasks	Male	2.44	.112
	Female	2.24	.095

Table 5 reveals the estimated marginal means of male and female responses on the essential skills and tasks needed for successful online teaching in the post-Covid-19 era. Though, there are mean differences between male and female lecturers' responses on the essential skills (0.10), and tasks (0.20). These mean differences were not statistically significant.

Discussion of findings

The study examined the perception of lecturers of the essential skills for online teaching in the post-covid-19 era. The study found that interaction, management, organisation/instructional design, technology, content and pedagogical skills are highly needed for successful online teaching in the post-covid-19 era. This means that for one to be a successful teacher in an online environment, these skills must be acquired. This finding supports the earlier finding of Hirunu (2005) who found that five of these skills (interaction, management, organisation/instructional design, technology, content skills) are ranked 1-5 as the essential skills for successful online teaching. These skills are very necessary for lecturers who want to be successful in an online environment. Not surprisingly, the ability to stimulate and facilitate interactions is a vital skill that online lecturers should possess. The skill of interaction is ranked first together with management skill in this study. Though some researchers believed that technology is the first skill in online teaching, this is not so in this study as technology skill occupies the third position in the ranking. This ranking also presents a trend that online education is driven by the concerns of students' learning instead of technological concerns. This finding is also in line with Lee and Tsai (2011) who found that content knowledge is very in teaching in an online environment. This implies that in an online environment, educators' mastery in the content area is important as well as their ability to organize and present content information to students, but content skill is more important according to the ranking in this study. This finding supports the earlier finding of Abdous (2011) who stated that effective online instructors should understand the fundamentals of online teaching and possess essential skills such as pedagogical skills, social interaction skills, design skills, content skills and technological skills. It is therefore clear that the six skills listed in this study are essential for successful online teaching.

The study also found that online educators must demonstrate these skills understanding through applying a large number of principles and strategies. This clearly shows that online educators must perform tasks that are relevant to the six skills listed in this study. This finding supports the earlier finding of Albrahim (2020) who listed a lot of

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tasks and strategies to demonstrate the essential skills. Such tasks include using different communication methods to ensure accessibility among the instructor and learners, and the learners with their peers; Maintaining a warm, friendly, and inviting collegial atmosphere. Also, Bailie, (2011); Craddock and Gunzelman, (2013) and Fuller and Yu, (2014) all stated that resolving conflicts and misunderstandings amicably; and Offering advice and suggestions and clarifying doubts and suspicions are necessary tasks to demonstrate interaction skill. It was revealed in the study that there are relevant tasks that online educators need to carry out to demonstrate management skill. These tasks include: Monitor and evaluate student performance, manage time appropriately, introduce support services to students, and knowledge of administrative qualities and procedures. This means that possessing management skill for online teaching entails the ability to be able to perform these skills. This finding is in line with Munoz Carril et al. (2013) who stated that by demonstrating management skill for online teaching, the online educator should be able to plan and control the online environment by way monitoring and evaluating the students' performance.

The study also reveals the tasks to demonstrate instructional design skill to include: Provide clear learning outcomes, objectives, and expected, organize materials and activities clearly and well, identify students' learning styles/needs, and conduct instructional design effort. This indicated that instructional design skill cannot be exhibited without these tasks. This finding corroborates the views of Eagleson, and Pfander (2014) who stated listed some of the principles to demonstrate design skill, their principles include: Cooperating with the production team to design learning activities and select appropriate tools and techniques to present these activities; and using students' previous feedback to develop and design new courses and assess the course design quality by using quality assurance tools and instruments, such as the Quality Matters Rubric. Also, Haughton, Sandt, and Slantcheva-Durst (2014) gave some strategies for design skill which an online educator should be conversant with, and that these individuals work collaboratively to produce high-quality online courses.

The study reveals that online educators should skilfully utilize technology, being aware of the technical potential of, and procedures used to create, e-content, being alert to the latest updates and renovations of educational technology and software, and accessing various technological resources and tools, such as email, Internet browsers to be able to demonstrate technical skill for successful online teaching. This finding is in line with the view of Abdous (2011) who stated that online instructors have to possess adequate technological literacy skills to be able to do the following: accessing various technological resources and tools, such as email, Internet browsers, LMSs, text and video chat applications, and productivity software and applications. The study found that relevant tasks must be carried out to show that online lecturer has acquired content skill, such tasks include: Stating learning goals and objectives that coincide with learners' levels and characteristics, drafting and developing learning and assessment activities that align with learning goals and objectives, expressing and mastering extensive knowledge of the content, and stating learning goals and objectives that coincide with learners' levels and characteristics. The finding is related to the list of Abdous (2011) which include: Designing

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a teaching proposal at the general level and identify each of its phases or elements; developing and selecting appropriate and varied learning resources that accommodate different learning styles and preferences; linking the subject and content with scientific, social, cultural, and any other relevant phenomena; and developing an inventory of existing content and resources and any additional content and resources that will be needed. Lastly, the study found that the following tasks are needed to demonstrate pedagogical skill: Adopting the learner-centred approach, and collaborative learning; designing and implementing appropriate instructional strategies; using classroom assessment and student engagement techniques; facilitating students' participation; and using criterion-based assessment to evaluate individual and group performance. This is in line with Craddock and Gunzelman, (2013) who stated that the following principles are relevant to demonstrate pedagogical skill: organizing and facilitating students' participation and providing guidance and support as needed; using criterion-based assessment to evaluate individual and group performance; Motivating students and showing enthusiasm and interest, and encouraging knowledge construction based upon learners' prior knowledge and life experience.

Conclusion

Online education is challenging. Lecturers may feel uncomfortable teaching online as a result of the many roles and responsibilities of e-teaching. The study found that interaction, management, technology, content, organisation/instructional design, and pedagogical skills are highly needed for successful online teaching. The study also found essential tasks to demonstrate the skills. Based on these findings, it is concluded that interaction, management, technology, content, organisation/instructional design, and pedagogical skills and the tasks identified are essential for successful online teaching in the post-covid-19 era. This implies that for lecturers to be successful in an online environment, they have to possess these skills by performing the identified tasks sufficiently. Anything short of this will mean that lecturers may find it difficult to teach online courses which have become necessary in the era of covid-19.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Lecturers should use these identified skills to self-evaluate their ability to teach in an online environment and identify their training needs.
2. As the work of academics moves from face-to-face mode to blended and online modes, especially because of covid-19, lecturers should critically question their practices and discuss with their peers the adoption of new pedagogical practices for the new teaching space.

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