AN ASSURE DESIGN FRAMEWORK FOR MICROSOFT TEAMS INTEGRATION IN REMOTE INSTRUCTION: A CASE OF THE UNIVERSITY OF BOTSWANA

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Abstract

The pandemic-driven virtual education had impelled the University of Botswana (UB) towards virtual learning tools, including Microsoft Teams (Teams). While UB teaching instructors are experienced with virtual platforms like Moodle, their experience with Teams is limited. Besides, existing literature in Botswana explores user experience with Teams, but often neglects the fundamental role of instructional design models for addressing these challenges. Nonetheless, with the pandemic shifting education online, instructional designers are urged to prioritize strategic media use, and content tailored to specific learning goals. This study proposes an innovative ASSURE-based Teams training program to be adopted by UB academic staff in distance education. Findings suggest the ASSURE model's efficacy as a valuable tool for designing effective remote learning instruction. This will empower decision-makers in Botswana's higher education sector to rigorously evaluate Teams' effectiveness in remote learning, driving its continuous improvement for students.

Keywords: *COVID-19, ASSURE model, Microsoft teams, Teams, Remote instruction*

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Introduction

The COVID-19 pandemic has triggered a global shift in education, pushing institutions towards innovative technologies to maintain uninterrupted learning (Artal-Sevil & lero-Gracia, 2021). Consequently, students' prospects for technology-facilitated learning also increased, making traditional instructional models less significant (Wea & Kuki, 2021). However, with the pandemic shifting education online, this necessitates the adoption of effective instructional models and improved pedagogical approaches (Ntereke, Conteh, Ramoroka, & Tlhobogang, 2021). This emphasis also highlights the need for the seamless integration of digital technologies into remote instruction (Beirnes & Randles, 2022). In response, Microsoft Teams (Teams) has surfaced as invaluable tool, utilized by academic institutions worldwide to deliver educational services (Wijayanto, Andayani, & Sumarwati, 2021). With its seamless integration, robust collaboration features, and user-friendly interface, Teams resonated with both instructors and students, making it a valuable asset for learning (Artal-Sevil & lero-Gracia, 2021). Notably, higher education institutions have successfully leveraged Teams to create interactive virtual classrooms that closely resemble traditional learning environments (Tan, Casanova, Huet, & Alhammad, 2022). This innovative approach ensured both continued access to quality education and student safety amidst the pandemic's uncertainties (Wijayanto, Andayani, & Sumarwati, 2021). In recognizing the potential of Teams, the University of Botswana (UB) implemented it for virtual instruction in its various departments (Mutanga, 2023), including the Centre for Continuing Education (CCE). While UB instructors are familiar with virtual platforms like Moodle (Motshegwe & Thomas, 2012), their limited experience with Teams confines their ability to take full advantage of its various features and functionalities (Ntereke, Conteh, Ramoroka, & Tlhobogang, 2021). This presents a significant challenge, as effective online learning hinges on instructors leveraging different platforms to create engaging learning experiences and students' satisfaction (Sato, et al., 2023).

Wea and Kuki (2021) posit that the surge in technology-based learning offers an exciting opportunity to mold student learning preferences and potentially define their educational experiences in the years to come. However, the pandemic has revealed several challenges that remote instruction must address to fully capitalise on this potential. For instance, some students, unfamiliar with mobile and computer-based learning, struggle to focus and stay engaged in online lessons (Magogwe, Mokibelo, & Karabo, 2022). These difficulties are further compounded by factors like limited internet access, inadequate home workspace, family distractions, outdated teaching methods, and unclear homework guidance (Bahian et al., 2020; Baticulon, et al., 2021). These challenges highlight the need for instructors to redesign engaging and active learning experiences that effectively utilise technology in remote settings (Bates, 2015). While research indicates instructors often lack the time or resources to implement innovative technology practices (Laurillard, 2013), selecting appropriate instructional methods can bridge the gaps in remote learning (Yu et al., 2022). As noted by Basham et al. (2017), effective instructional models ensure successful curriculum implementation and foster student-centered learning that adapt to

individual needs.(El-shazly, 2020) reinforces this notion by arguing that instructors without a structured and appropriate teaching and evaluation plan tend to prioritize content delivery over fostering student skill development.

Instructional design, denotes a multifaceted discipline that merges elements of art and science. It involves the careful planning and development of educational experiences, drawing upon established principles of educational theory (Davidson-Shivers, Rasmussen, & Lowenthal, 2018; Bernacki, Greene, & Lobczowski, 2021). Its core principle is to facilitate effective learning by creating efficient, engaging, and interactive environments (Czerkawski & Lyman, 2016). Extensive research within this field have yielded a rich tapestry of theoretical approaches, each offering unique strategies for crafting successful learning experiences. Among these, the ASSURE model, developed by Heinich et al. (1999), outshines for its focus on seamlessly integrating technology into the planning and delivery of lessons (Shelly, Gunter, & Gunter, 2012). Based on the ADDIE model, this approach offers a systematic instructional system design consisting of six essential stages (Smaldino, Lowther, Russell, & Mims, 2015): (a) Analysing learners, (b) Identifying standards and objectives, (c) Choosing appropriate strategies, technology, media, and materials, (d) Incorporating technology, media, and materials, (e) Encouraging learner participation, and (f) Evaluating and revising (Smaldino, Lowther, Russell, & Mims, 2015). Recognized by Baran (2010), the ASSURE model permits educators to create impactful learning experiences that utilize technology to enhance engagement and effectiveness.

Notwithstanding the ASSURE model's efficacy in designing interactive lessons (Russell & Butcher, 1999; Kristianti, Prabawanto, & Suhendra, 2017; AlNajdi, 2018) its exploration within higher education context during the pandemic remains scant (Vieyra & González, 2022). Moreover, while Teams shows promising results for virtual instruction within digital classrooms, there is a lack of research specifically on how instructional design models can be adapted for this context in Botswana. However, with the pandemic shifting education online, instructional designers are urged to prioritize strategic media use, and content tailored to specific learning goals (Vieyra & González, 2022). This study proposes an innovative ASSURE-based Teams training project to be adopted by UB academic staff in distance education. The framework aims to facilitate the seamless integration of the Teams platform into virtual instruction, focusing on fundamental tasks like basic course administration and online lessons delivery. Findings of the study will provide policymakers and decision-makers in Botswana higher education stream with valuable insights on effectively integrating Teams into remote instruction. This, in turn, will provide a structure for rigorously evaluating Teams' effectiveness, paving the way for ongoing improvement and optimization.

The entire paper is structured as follows: Section 2 discusses the study's main research question and objectives. Section 3 provides a theoretical background and existing literature regarding scholars' perspectives on the implementation of the ASSURE model in learning. Section 4 discusses the research theoretical framework, providing a comprehensive explanation of the ASSURE model. Section 5 presents the study results

along with an insightful discussion of the findings. Lastly, conclusions and potential opportunities for future research are discussed in section 6.

The main research question

This study aims to develop a training program based on the ASSURE model, to be adopted by teaching instructors at UB in distance learning. The proposed training program aims to offer strategic guidelines on effectively applying the ASSURE framework within Teams context to improve course management and instruction in a remote learning. Hence, the primary research question is:

"How can the ASSURE model be effectively applied to design a training program that can be adopted by University of Botswana teaching instructors, to enhance their ability to deliver effective remote instruction using Microsoft Teams?"

Research objectives

1. To identify the essential competencies required for effective remote instruction using Microsoft Teams by University of Botswana teaching instructors.
2. To analyse the ASSURE model and its constituent components, to determine their applicability in designing a training program for remote instruction.
3. To develop a comprehensive training program based on the ASSURE model, incorporating strategies such as lesson plans, lecture notes, practical exercises, and assessment methodologies that can be adopted by University of Botswana teaching instructors in remote instruction.

Literature review

Recently, the ASSURE model has garnered considerable interest within technology education research, with scholars actively exploring its efficacy in a range of educational settings. For instance, Çetinkaya (2017), observed that middle school students who were studying the "matter and heat" unit demonstrated higher levels of comprehension when their lessons incorporated a blended learning approach. This approach involved integrating components of the ASSURE instructional design model, web-assisted instructional tools, and personalized learning strategies. The results indicate that the combination of these elements can effectively enhance student achievement in the field of science education.

Lee and Lee (2014) explored the ASSURE model's impact on teacher confidence with technology, while another two-year study by Kim and Downey (2016) investigated its influence on student learning through 39 instances of curriculum development. In analysing student assessments, teacher perceptions, and instructional strategies, the study concluded that the ASSURE model demonstrates a clear positive effect on student learning outcomes when applied to curriculum development. İrmiş and Uludağ (2023) assessed music lessons designed with blended learning and the ASSURE model. Their

findings revealed significant improvements in student learning, including increased independent learning, motivation, collaboration, engagement, communication, and productivity. In a study by Kristianti et al. (2017), the ASSURE model was used with Autograph software to improve students' critical thinking skills in mathematics. The effectiveness of this approach was demonstrated through a pre-test or post-test control group experiment.

Soltani and Shamsi (2022) conducted a descriptive study with undergraduate public health students at Arak University of Medical Sciences. Using a census method, they enrolled all continuous and non-continuous students (male and female) from 2021. The findings of their study showed that an empowering program designed based on the ASSURE model significantly increased student participation and interest in teaching and classroom activities. In a distinct study Lei (2023) applied the ASSURE model with high school students aged 15-19 years. These students were from the literature, mathematics, and science departments. These students were selected to attend online classes for improving mathematics and reading skills designed using the ASSURE model. The results of the study were positive, indicating that educational technology based on the ASSURE model effectively enhanced both mathematical and reading skills.

Adi, Haryono and Sulistyorini (2021) utilised the ASSURE paradigm to create an instructional design for fostering financial literacy in elementary school mathematics. Employing a research and development approach, their study revealed that the ASSURE-based design effectively improved students' financial literacy. In another study, Efgivia et al. (2023) conducted a study comparing daily test scores in classes applying the ASSURE method and conventional methods. The results showed a statistically significant difference in favour of the ASSURE model, with higher mean scores for students in ASSURE classes. Sundayana et al. (2017) conducted an experiment to compare the ASSURE learning design with a conventional design for improving mathematical communication skills in school students. The ASSURE design group showed significantly better communication skills than the conventional group. Similarly, AlNajdi (2018) developed a blended lesson for young children using the ASSURE paradigm and Google Apps. This lesson included app-based activities, handwriting practice in face-to-face sessions, and smartphone or tablet support. Students in this study demonstrated improved writing, pronunciation, and reading skills.

Literature review summary and research gaps

An analysis of the existing literature reveals that the ASSURE model has enjoyed sustained interest and application by scholars for several years. This facilitated the design of effective technology-integrated lessons across diverse contexts. While the benefits of the ASSURE model are well-documented in the literature, research exploring its application in higher education during the pandemic remains limited (Vieyra & González, 2022). In Botswana, studies have examined teaching instructors' experiences with Teams during the pandemic (Ntereke, Conteh, Ramoroka, & Tlhobogang, 2021), however no

studies have focused on the potential application of the ASSURE design model to promote Teams wider acceptance in remote learning. This study aims to fill this gap by proposing a novel Teams training project based on the ASSURE model, that could be adopted by academic instructors in Botswana's higher education sector. The objective is to offer practical guidance on using ASSURE with Teams to improve learning outcomes in remote instruction.

Theoretical framework

The ASSURE model, developed by Heinich et al. (1999), provides a structured framework for instructional design in online settings. Based on the ADDIE model, ASSURE guides teachers through analysing learner needs, setting learning goals, choosing appropriate methods and materials, evaluating student performance, and revising the process as needed. Its focus on media integration and learner engagement, along with its user-friendly structure, makes it a valuable tool for online educators (Heinich, Molenda, Russell, & Smaldino, 1999). The ASSURE model is a six-stage framework for designing effective instruction: in which A - denotes Analyse learners, S - represents State standard and Objectives, the second S - is for Select strategy, technology, media, and materials, U - denotes Utilize technology, media, and materials, R - is for Require learner participation and E - denotes Evaluate and revise. The ASSURE model simplifies instructional design by offering a clear, step-by-step framework that is accessible to educators of all levels (Heinich, Molenda, Russell, & Smaldino, 1999). Figure 1 illustrates stages in the ASSURE model.

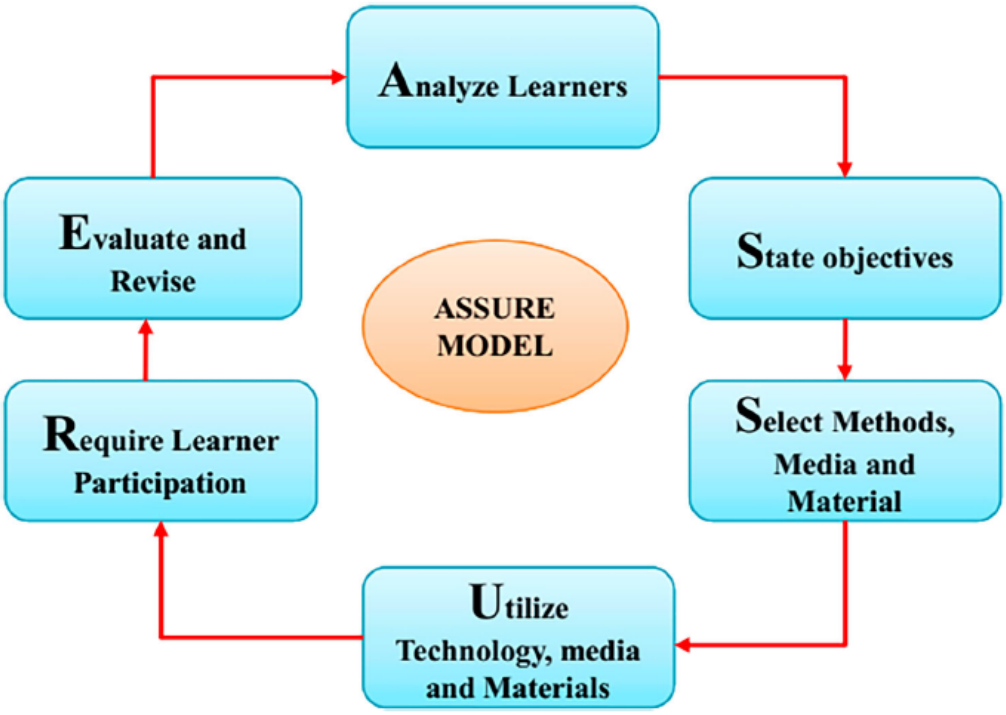

Figure 1: The ASSURE model (Lei, 2023)

Table 1 elaborates upon the initial overview of the ASSURE framework in Figure 1. This further provides a comprehensive breakdown of each step with insightful details.

Table 1: ASSURE model stages

Stage	**Description**
A (Analyse the characteristics of the students)	It is the identification of the characteristics of the students to guide the development of the instructional material according to those characteristics.
S (Establish Standards and Goals)	It is the specification of what students should be able to do as a result of instruction.
S (Select strategies, technology, media and materials)	It is about the ideal selection of these elements to achieve the learning objectives.
U (Use technology, media and materials)	It is the planning and use of resources to hook the student with the material that is being delivered.
R (Require the student's response)	It consists of planning how to achieve the participation of the student and the group in the learning process, given all the previous stages.
E (Evaluation and Review)	The impact of teaching on students is evaluated, determining if the learning objectives were achieved. The results are used to make a review of all the elements put into play, strategies, technology, means and materials.

Source: (Vieyra & González, 2022)

Results and discussions

This instructional design aims to utilize the ASSURE model to equip CCE academic staff in distance education, with the essential knowledge and skills to utilize the Teams platform for basic tasks like course administration and online lessons delivery. The subsections below explain the course outline, providing a synopsis of the modules and lessons.

Course outline containing modules and lessons
Course title: Introduction to Microsoft Teams
Lecture name and Surname: _____
Contact details: _____
Faculty/Department: _____
Office: _____
Mode of delivery: Blended learning
Location: Online/University of Botswana, Block 247 room 24

Introduction

Introduction to Microsoft Teams: This is 26 hours (1,560 minutes) long training course. The course is for academic administrators and faculty members in Centre for Continuing Education – distance education, who plan on using Microsoft Teams to manage and administer their courses in remote instructions. The course is delivered over 5 day's duration time period. The first seven (7) sessions are to provide the course overview, lectures, and hands on practical laboratory lessons. The remaining sessions (eight to ten) are for the course summary, learner assessment and training evaluation. The learners feedback will be noted, which will be used to improve the future training.

Course description

This course will provide an overview of how to use features within Teams such as chat, online meetings, calls and more. Learners will explore and learn the core features of Teams and be able to utilise it for various course administration, and collaboration to enhance their productivity in the workplace. An overview of Teams platform and its modules will be provided. Also a comparison of Teams platform and other learning management systems will be highlighted. Learners will gain hands-on computer experience with working with Teams platform modules to perform various tasks like the chat feature, share screen feature, uploading online content to Teams, editing Teams and more.

Pre-requisite

- No prior knowledge of Teams is necessary.

Specific course requirement

- An account for Office 365 is required.
- Basic computing and Keyboarding skills are essential to the successful completion of this course.
- Learners should possess excellent communication skills in English language.
- Learners should be familiar with working with Windows platform and Microsoft Suite applications.

Course competencies

At the end of this training, learners will have the competency to:

- Understand, use and work with Microsoft Teams platforms to deliver virtual lessons and perform various course administration tasks.

Course objectives

Expected learning outcomes

At the end of the training session the learners should be able to:

- Define Microsoft Teams
- State the pedagogical features of Microsoft teams
- Outline the differences between Microsoft Teams against other related learning management systems such as Moodle and Zoom.
- Describe the steps in installing Microsoft Teams both in personal computers and smart phones
- Create Teams.
- Use Microsoft Teams to create a lesson meeting.
- Use Microsoft teams to add or remove students from class.
- Record class sessions using Microsoft Teams video module.
- Upload/ remove class materials in Microsoft Teams
- Use chat module in Teams.
- Share screen in Teams.
- Delete Teams.

The course mode of delivery

This subject will be delivered in blended learning modality, which will provide a series of lecturers and practical hands-on tutorials. The lecture will explain the concepts; and the tutorial is the time to master the concepts. The lectures will be delivered both physically and remotely through MS Teams platform. During the tutorial the instructor will bring a set of questions and the learners should attempt to answer the questions individually or in group work. The instructor will try to help the learners individually or in a group.

Curricular content

Summary of the lectures and tutorials

The following Table 2 shows the lectures that will be delivered. There will be a tutorial attached to each lecture. The duration of each lecture is 60 minutes (1 hour). The second 120 minutes (2 hours) is devoted for a practical tutorial. There will be a 1 hour break between a lecture and a practical laboratory session. It is better to have the lecture and the tutorial at two different times, to enable learners to rigorously grasp the important training concepts. The following table summarizes the modules and the lessons. It also outlines the time it will take to complete each topic.

Table 2: Summary of the lectures and tutorials

Day	Topic	Lecture Summary	Lecture duration (minutes)	Tutorial Summary	Tutorial duration (minutes)
Day 1: Session 1	Overview of course		60		
Session 2	Microsoft Teams Explained	What is Microsoft Teams, Differences between Teams and other virtual learning platforms (Zoom, Moodle), Accessing Teams (Online Web, desktop), Different Components of Teams, Best practices of the use of Teams platform, Roles in Teams	60	Installing Teams in desktop, Create Teams account, Sign in to Teams (Online Web, Desktop), Navigate Teams platform, Sign out of Teams	120
Day 2: Session 3	Working with Teams	Accessing your profile setting, Accessing your profile picture, Changing your status, Changing your notification settings	60	Update profile settings, Update Teams password, Update Teams status, Update Teams notification status , Update teams profile picture	120
	Managing Teams	Managing a Team, Managing Users	60	Edit a Team, Delete a Team, Add members to a Team, remove member in Teams, Search for members in a Team	120
Session 4	Working with Channels	What are Channels in Teams, Creating Channels, Manipulating Channels, Channel notification, Restore Channels,	60	Create a Channel, Edit a channel, delete a channel, and restore a channel.	120
Day 3: Session 5	File and Folders in Teams	Differentiate between a File and Folder. Download a, Create New Folder, Upload Files, Moving a File, Copying a File, Renaming a File, Deleting Files and Folders	60	Create a File and Upload to Teams, Create a Folder in Teams, Downloading a File from Teams, Open a File in	120

				Teams, Deleting Files and Folders in Teams.	
Session 6	Collaboration in Teams (part 1)	Posts, Mentions, Chats	60	Creating a Post, Replying to Post, Share File in a post, Reacting to a Post, View Saved Posts, Create a Mentions, Create a chat, file sharing in a chat, Message Search.	120
D ay 4: Session 7	Collaboration in Teams (part 2)	Meetings, Screen Sharing, Video recording.	60	Schedule a meeting, Inviting outside Guests, Joining as a guest, View upcoming meeting, Inviting someone to a meeting, Record meetings, share screens	120
D ay 5: Session 8	Course Summary	Overview of the course important concepts and topics	60		
Session 9	Learner Assessment	Oral Quiz and discussions	30	Practical laboratory assessment	120
Session 10	Training Evaluation and Feed back		30		
		Total duration	600		960
		Grand total duration (m)	1560		
		Grand total duration (hours)	26		

Required textbooks:

- Mastering Microsoft Teams by Gregory M B.
- Getting Started with Microsoft Teams by Microsoft training Manual
- Any relevant internet sources on Microsoft Team Guide

Table 3: Training assessment distribution

Assessment	**Important judgement points**
Oral Quiz	When all answers are correct
Practical performance	When all answers are correct

Applying the ASSURE design Framework

Analysing the learners

In the beginning of the instruction, it is pivotal to learn about the learners attributes because the instruction is designed according to their characteristics (Bavli & Erişen, 2015). Therefore during this stage instructional designers analyse learner demographics, their professional goals and preferences, current training needs and skill gaps (Heinich, Molenda, Russell, & Smaldino, 1999).

General learners' attributes

In this training program the learners are; tutors, learner support coordinators, program coordinators and Head of department. These participants are employed in Faculty of Distance education, in CCE in University of Botswana, Gaborone Campus. Information about learner characteristics was gathered during the Tutor orientation program at the beginning of the academic year 2023. A survey questionnaire was distributed to participants, proposing Teams training workshop. To ensure data accuracy, the information was further verified through faculty department supervisory management. Table 4 gives a summary of the overall learner attributes.

Table 4: General learners' attributes

Learner	**Number**	**Academic Title**	**Gender**	**Age**	**Department**
Tutors	5	Doctorate	Male: 9 Female: 16	27 -55	Distance Education
	18	Masters			
	2	Professor			
Program coordinators	2	Doctorate	Male: 1	55 - 65	
	1	Masters	Female: 2		
Learner support coordinators	1	Doctorate	Female: 1	27-55	
Head of Department	1	Doctorate	Male: 1	55-65	

Table 4 shows that there are 25 tutors, 3 program coordinators, 1 learner support coordinator, 1 head of department who are from both genders (female and male) and in different age ranges. The ages of learners ranges from 27 to 65. In addition, the learners work in the same department in Distance education, in CCE at the University of Botswana.

Learner training needs

The learner training needs and competences with respect to Microsoft teams training program are presented as follows:

- No prior knowledge of Teams is necessary.
- Learners should behave excellent communication skills in English language.
- Learners should possess basic computer skills (e.g. working with Windows platform and Microsoft Suite applications)
- Learners should possess basic knowledge on Internet use (online data search, online data storing, file sharing and downloading files from online sources)
- Should be familiar in working with other virtual platforms to deliver lessons (e.g. Moodle, Zoom, or Google meet)
- Learners should be familiar with online collaboration and discussion virtual tools (such as WhatsApp groups, Facebook, Zoom, Google meet etc.)
- Learner should possess office 365 account issued by the university.

Learning styles

The learners were observed to have analysis, synthesis, collaboration and discussion skills according to their level of education, age and cognitive developments. Therefore the training will use methods that appeal to verbal, individual work, peer-to-peer and group discussions. In addition, audio visual aids will be used to facilitate long-term learning and to accommodate individuals with diverse learning styles. Various teaching methods, audio visual materials will be used throughout the teaching process by considering the feature of the teaching subject and learning styles of the students.

State objectives

By the end of Teams training programme, it is expected from CCE academic staff to reach following objectives;

- Define Microsoft Teams
- State the pedagogical features of Microsoft teams
- Outline the differences between Microsoft Teams against other related learning management systems such as Moodle and Zoom.
- Describe the steps in installing Microsoft Teams both in personal computers and smart phones
- Create Teams
- Use Microsoft Teams to create, update and cancel a lesson meeting.
- Use Microsoft teams to add or remove students from class.
- Control the rights the students have during class as well as on the team (whether they can mute or unmute themselves, record or take control of the screen sharing activity)

- Record class sessions using Microsoft Teams video module.
- Upload or remove class materials in Teams
- Separate students into groups during a Teams meeting
- Use chat module in Teams
- Share screen in Teams
- Delete Teams

Selecting methods, media and materials

The characteristics of the learning group are equally important as the teaching context in determining the most effective methods, media, and materials (Bavli & Erişen, 2015). Recognizing this, the selection of teaching methods, techniques, materials, and instruments for the Teams training was specifically tailored to the characteristics of the participants, ensuring the training would achieve its targeted goals and desired behaviours.

Methods

Fundamentally, before the Teams training workshop begins, the instructor utilizes a brainstorming technique to gather diverse opinions and insights from learners relating to the topic. Brain storming is a powerful approach that encourages individuals to freely share their thoughts without limitations or immediate judgment (Bavli & Erişen, 2015). This ensures a safe and inclusive space for learners to contribute their unique perspectives and fosters a collaborative learning environment (Al-Samarraie & Hurmuzan, 2018). Following the brainstorming session and an icebreaker, the lesson can begin with a brief, engaging overview of the topic presented through a PowerPoint presentation. This presentation should serve to highlight key concepts and provide a visual framework for understanding. To ensure the workshop caters to diverse learning styles and needs, a multimodal approach will be used. The PowerPoint presentation will be enriched with audio-visual elements like engaging YouTube videos, informative images, and dynamic animations. This technologically rich approach caters to visual, auditory, and kinaesthetic learners, maximizing engagement and comprehension. Additionally, printed handouts will be provided, offering a tangible reference for taking notes and reinforcing key points. At the end of the lecture, a brief question and answer session will foster an interactive learning environment. Learners will be encouraged to actively participate by answering questions, providing valuable feedback, and raising inquiries about any unclear concepts. Their feedback will be visually recorded on a clip chart to acknowledge individual contributions. This open dialogue ensures clarification, deepens understanding, and allows the instructor to address common concerns before proceeding. Only after gathering learner feedback will the instructor synthesize their thoughts and provide expert insights. This approach ensures that their explanation builds upon the established understanding of the class, further solidifying knowledge and addressing any remaining questions.

The second session of the training program focuses on a hands-on experience. The instructor will start by demonstrating key features and navigation within the Teams platform, showcasing how to complete various learning tasks. Learners will then actively participate by replicating the steps on their own computers. To ensure everyone succeeds, the instructor and IT technicians will be available to provide individual assistance as learners tackle practical exercises. This session is designed to equip participants with tangible, hands-on skills in using Teams. The lecture sessions, on the other hand, aim to provide participants with in-depth understanding (domain knowledge) of how Teams can be leveraged for various course administration tasks in virtual classrooms. By combining the practical session with the lectures, participants gain both the theoretical knowledge and practical skills needed to master Teams for efficient and effective course management.

This training workshop adopts a blended instruction approach, offering both in-person and online participation through Microsoft Teams. This flexibility allows academic staff to choose their preferred learning environment, whether joining in person or attending remotely from the comfort of their home or office. To enhance accessibility and facilitate reflection, the online sessions will be recorded using Teams' video recording module. Learners can access these recordings afterwards to revisit key concepts at their own pace. Additionally, online lecture notes will be uploaded for download, providing a valuable reference for reinforcing virtual training content. As further support, relevant YouTube video links will be shared with learners. These additional resources offer alternative perspectives and allow for deeper exploration of practical skills discussed during the workshop.

Media and materials

The following media and materials will be used for administering training programme:

- PowerPoint presentation slides
- PDF extra reading resources
- Projector
- Printed Handouts
- Computers connected to internet
- Flip charts and markers
- Computers installed with Microsoft Teams platform
- Laboratory audio speakers
- Microsoft Teams manual/ practitioner guide.

Utilize technology, media and materials

Preview the materials

The instructor ensures a smooth learning experience by thoroughly checking all equipment before each lesson. This includes verifying the functionality of the projector,

computers, and laboratory speakers. Additionally, they confirm that all computers have a stable internet connection and are running Microsoft Teams software. Furthermore, the instructor prepares the necessary digital and physical materials in advance. This includes ensuring the PowerPoint presentation slides are readily available, along with accessible PDF learning resources and printed handouts for the specific topic. Before the instructor introduces the topic to the learners, it is essential that they conduct thorough research and acquire a comprehensive understanding of the topic using reliable sources. Additionally, the instructor should possess practical knowledge of navigating the Teams platform and configuring its settings. They should be capable of guiding the learners in navigating and utilizing the various features of Teams effectively. Lastly, the instructor should ensure that the flip chart and markers are readily available for use and be prepared to address any questions the students may have regarding the topic at hand.

Prepare the materials

To ensure a smooth start to each lesson, the instructor should create PowerPoint slides in advance for their presentation. Additionally, they should verify that all necessary equipment, such as a computer connected to the internet, a projector, and computers, are prepared and available before the lesson begins, thus avoiding any unnecessary time delays. Furthermore, it is crucial to have an ample supply of printed handouts for distribution to the learners, allowing them to read and follow along with the presentation of the topic.

Prepare the environment

The instructor should inspect the computer laboratory room to ensure that it is comfortable and suitable for the teaching and learning process. These involves verifying for adequate lighting, adequate electricity, proper ventilation, good seating arrangements, and the classroom should be swept and clean before lesson commences.

Prepare the learner

Understanding the strong link between learner motivation and successful learning, the instructor will implement several strategies to engage and prepare students before each lesson (Bavli & Erişen, 2015). Thus, the instructor will clearly explain the lesson's objectives and how these skills will benefit the learners in their basic course administration activities. Moreover, the instructor will use clear, understandable language and provide learners with opportunities to explore the rules and sources, making the learning process inclusive and accessible. To create a positive and engaging atmosphere, the lesson will begin with brainstorming and an icebreaker activity. This can be followed by distributing printed hand outs of the PowerPoint slides to facilitate note-taking and active listening.

Require learner participation

Recognizing the vital role of learner participation in fostering lasting behaviour change, the instructor actively engages participants during the practical session. Each learner sits at their computer, following along with hands-on exercises focused on the topic. To probe

deeper and encourage independent thinking, the final 30 minutes involve an individual task that learners complete within the lab. As learners work, the instructor circulates, prompting them to explain the rationale behind their decisions. This personalized approach strengthens understanding before the instructor clarifies any common misconceptions or challenges using expert knowledge. To conclude the practical session, the instructor demonstrates the correct steps using an expert guide, allowing learners to observe and take notes. The session then opens for questions and class-level discussions about key practical concepts. This emphasis on individual work fosters both cognitive and psychomotor skills, while the collaborative discussions deepen understanding and encourage peer learning.

Evaluate and revise

After the lectures and practical sessions, the instructor will assess and refine learner understanding through a combination of summative and formative assessments. This includes both an interactive oral quiz and a take-home assignment. The oral quiz serves as a formative assessment, allowing for real-time evaluation of individual grasp of the lesson objectives. This engaging session encourages participation and provides immediate feedback, enabling the instructor to identify any areas requiring further clarification. Research suggests that oral quizzes can also help gauge the effectiveness of the teaching methods used (Gultom, 2016). The practical session culminates with a summative take-home assignment due within one week. This assessment mode provides a more comprehensive picture of learners' overall proficiency in applying the learned concepts. Insights gained from this assignment can potentially guide revisions to the curriculum or teaching strategies (Glaser, Chudowsky, & Pellegrino, 2001). Both formative and summative assessments are crucial tools for refining teaching approaches and ensuring learners achieve the desired learning outcomes (Mogboh & Okoye, 2019).

Conclusion and future research

During the COVID-19 pandemic period, Teams became a vital tool used by many universities for delivering remote education. This study explored the potential of the ASSURE model in developing a training program to integrate Teams into distance learning, specifically for CCE academic staff at the University of Botswana. The findings indicate that the ASSURE framework can be a valuable resource for instructional designers. By tailoring it to the university's context, the study provided a roadmap for instructors to effectively use Teams in their remote teaching practices. This equips instructors with the skills to manage and administer their courses, enhancing the learning experience for students. However, future research should empirically validate the proposed ASSURE framework's effectiveness. This could involve gathering both quantitative and qualitative data to measure its impact on factors like instructor engagement, students' productivity, and satisfaction. Such analysis would highlight the model's strengths, weaknesses, and ultimately lead to its further refinement, ensuring its optimal application in similar contexts.

References

Adi, H. S., Haryono, H., & Sulistyorini, S. (2021). The development of instructional design using ASSURE model in mathematics for elementary school to improve financial literacy. *Journal of Curriculum Indonesia, 4*(1), 30–42. doi:http://hipkinjateng.org/jurnal/index.php/jci/article/view/40

AlNajdi, S. M. (2018). Design a blended learning environment to teach Arabic alphabet for non-Arabic speaker children based on ASSURE model. *International Journal of Information and Education Technology, 8*(2), 128–132. doi:doi:10.18178/ijiet.2018.8.2.1021

Al-Samarraie, H., & Hurmuzan, S. (2018). A review of brainstorming techniques in higher education. *Thinking Skills and creativity*, *27*, 78-91.

Artal-Sevil, J. S., & lero-Gracia, M. S. (2021). Teaching in Covid times: Microsoft Teams and GSuite, two basic tools to support Learning. *In INTED2021 Proceedings* (pp. 10620-10631). IATED.

Bahian, M. E., Agapito, J. J., Arradaza, J. T., & Pita, C. C. (2020). Barriers to online learning amidst COVID-19 pandemic. *Psychology and Education Journal, 57*(9), 2252-2259.

Baran, B. (2010). Experiences from the process of designing lessons with interactive whiteboard: ASSURE as a road map. *Contemporary Educational Technology, 1*(4), 367-380.

Basham, J. D., Stahl, S., Hall, T., & Carter Jr, R. A. (2017). Establishing a student-centered environment to support all learners. In *In Handbook of research on classroom diversity and inclusive education practice* (pp. 155-182). IGI Global.

Bates, A. W. (2015). *Teaching in a digital age: Guidelines for designing teaching and learning.* BCcampus.

Baticulon, R. E., Sy, J. J., Alberto, N. R., Baron, M. B., Mabulay, R. E., Rizada, L. G., & Reyes, J. C. (2021). Barriers to online learning in the time of COVID-19: A national survey of medical students in the Philippines. *Medical science educator, 31* , 615-626.

Bavli, B., & Erişen, Y. (2015). Designing PCM instruction by using ASSURE instructional design model. *International Journal on New Trends in Education and Their Implications, 6*(3), 27-40.

Beirnes, S., & Randles, C. (2022). A music teacher's blended teaching and learning experience during COVID-19: Autoethnography of resilience. *International Journal of Music Education*. doi: https://doi.org/10.1177/02557614221091829

Bernacki, M. L., Greene, M. J., & Lobczowski, N. G. (2021). A systematic review of research on personalized learning: Personalized by whom, to what, how, and for what purpose. *Educational Psychology Review*, *33*(4), 1675-1715.

Çetinkaya, M. (2017). Fen eğitiminde modelleme temelinde düzenlenen kişiselleştirilmiş harmanlanmış öğrenme ortamlarının başarıya etkisi [Effect of Personalized Blended Learning Environments Arranged on the Basis of Modeling to Achievement in Science EducEducation]. *Ordu Üniversitesi Sosyal Bilimler Enstitüsü Sosyal Bilimler Araştırmaları Dergisi, 7*(2), 287-296.

Czerkawski, B. C., & Lyman, E. W. (2016). An instructional design framework for fostering student engagement in online learning environments. *TechTrends, 60*, 532-539.

Davidson-Shivers, G. V., Rasmussen, K. L., & Lowenthal, P. R. (2018). Foundations of online learning and instructional design. *Web-based learning: Design, implementation and evaluation*, 43-79.

Efgivia, M. G., Widiyanti, M., Iskandar, E., Ulfah, M., & Fitriah, M. (2023). ASSURE Learning Model to Increase Student Independence Junior High School Public 1 Bojonggede in the Pandemic Era. *1st UMSurabaya Multidisciplinary International Conference 2021 (MICon 2021)* (pp. 792-798). Atlantis Press.

El-shazly, M. (2020). The Impact of a WebQuest-Based Training Program on Developing the Teaching Skills of In-service Preparatory EFL Teachers. *M.A Thesis*. Faculty of Education. Mansoura University.

Glaser, R., Chudowsky, N., & Pellegrino, J. W. (2001). *Knowing what students know: The science and design of educational assessment.* National Academies Press.

Gultom, E. (2016). Assessment and evaluation in EFL teaching and learning. *Proceedings of ISELT FBS Universitas Negeri Padang*, *4*, pp. 190-198.

Heinich, R., Molenda, M., Russell, J. D., & Smaldino, S. (1999). *Instructional media and technologies for learning* (6th ed.). Englewood Cliffs, NJ: Merrill/Prentice Hall.

İrmiş, S., & Uludağ, A. K. (2023). The effects of blended learning activities based on the ASSURE model in teaching on students and teachers in music lessons. *International Journal of Assessment Tools in Education, 10*(2), 303-330.

Kim, D., & Downey, S. (2016). Examining the Use of the ASSURE Model by K–12 Teachers. *Computers in the Schools, 3*, 153-168.

Kristianti, Y., Prabawanto, S., & Suhendra, S. (2017). Critical thinking skills of students through mathematics learning with ASSURE model assisted by software autograph. *Journal of Physics: Conference Series, 895*, p. 012063.

Laurillard, D. C. (2013). A constructionist learning environment for teachers to model learning designs. *Journal of computer assisted learning*, *29*(1), 15-30.

Lee, Y., & Lee, J. (2014). Enhancing pre-service teachers' self-efficacy beliefs for technology integration through lesson planning practice. *Computers & Education, 73*, 121–128.

Lei, G. (2023). Influence of ASSURE model in enhancing educational technology. *Interactive Learning Environments*, 1-17.

Magogwe, J. M., Mokibelo, E. B., & Karabo, L. (2022). Online Learning during COVID-19: Readiness of Communication and Academic Literacy Skills Students at the University of Botswana. *Turkish Online Journal of Educational Technology-TOJET, 21*(1), 97-105.

Mogboh, V. E., & Okoye, A. C. (2019). Formative and summative assessment: Trends and practices in basic education. *Journal of Education and Practice, 10*(27), 39-45.

Motshegwe, M. M., & Thomas, P. Y. (2012). A feasibility study of Moodle: The case of University of Botswana. *Lonaka Journal of Learning and Teaching*.

Mutanga, A. P. (2023). Perspective Chapter: Addressing the Learning Management System Challenges during the COVID-19 Pandemic In Higher Education-Reflections From the Field. *IntechOpen, 1*.

Ntereke, B. B., Conteh, B. G., Ramoroka, B. T., & Tlhobogang, K. B. (2021). Teaching and learning online during the pandemic: lecturers' perceptions and experiences. *MOSENODI: International Journal of the Educational Studies, 24*(2), 22-47.

Russell, J. D., & Butcher, C. (1999). Using portfolios in educational technology courses. *Journal of Technology and Teacher Education, 7*(4), 279–289.

Sato, S. N., Condes Moreno, E., Rubio-Zarapuz, A., Dalamitros, A. A., Yañez-Sepulveda, R., Tornero-Aguilera, J. F., & Clemente-Suárez, V. J. (2023). Navigating the New Normal: Adapting Online and Distance Learning in the Post-Pandemic Era. *Education Sciences, 14*(1), 19.

Shelly, G. B., Gunter, G. A., & Gunter, R. E. (2012). *Teachers discovering computers: Integrating technology in a connected world* (7 th ed.). Boston, MA: Cengage Learning.

Smaldino, S. E., Lowther, D. L., Russell, J. D., & Mims, C. (2015). *Instructional technology and media for learning.* Upper Saddle River, NJ: Prentice Hall.

Soltani, R., & Shamsi, M. (2022). Designing, Implementing, and Evaluating the Effect of an Empowering Program Based on the ASSURE Model on Medical Students' Participation in Teaching and Classroom Activities. *Development Strategies in Medical Education, 9*(4), 22-33.

Sundayana, R., Herman, T., Dahlan, J. A., & Prahmana, R. C. (2017). Using ASSURE learning design to develop students' mathematical communication ability. *World Transactions on Engineering and Technology Education, 15*(3), 245–249.

Tan, C., Casanova, D., Huet, I., & Alhammad, M. (2022). Online collaborative learning using microsoft teams in higher education amid COVID-19. *International Journal of Mobile and Blended Learning (IJMBL), 14*(1), 1-18.

Vieyra, G. Q., & González, L. F. (2022). Instructional Design in the Face of COVID-19: Learned Lessons and Pending Tasks. *European Journal of Interdisciplinary Studies, 8*(1), 1-13.

Wea, K. N., & Kuki, A. D. (2021). Students' perceptions of using Microsoft Teams application in online learning during the Covid-19 pandemic. *In Journal of Physics: Conference Series. 1,* p. 012016. IOP Publishing.

Wijayanto, Y. R., Andayani, A., & Sumarwati, S. (2021). Utilization of microsoft teams 365 as an alternative for distance learning media amid the Covid-19 pandemic. *International Journal of Multicultural and Multireligious Understanding, 8*(2), 87-93.

Yu, Z., Xu, W., & Yu, L. (2022). Constructing an online sustainable educational model in COVID-19 pandemic environments. *Sustainability, 14*(6), 3598.