Online Assessment and Evaluation Plan for System-Wide Policy on Accessibility

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Executive Summary

The design plan for the Information, Materials, and Technology (IMT) Accessibility Program Training is organized into two components. During the first component, participants will listen to a lecture, complete a quiz, and discuss case scenarios using a video conferencing tool, an online quiz tool, and a collaborative, electronic documentation tool. During the second component, participants will participate in an asynchronous discussion using an online threaded forum.

Design Plan

Instructional Problem

UT has a system-wide policy called IT0126 - Accessibility. This policy states:

> The University of Tennessee is committed to supporting a teaching and learning environment that is accessible to all, including individuals with disabilities. To this end, the University seeks to deploy information, materials, and technology (IMT) that have been designed, developed, or procured to be accessible to individuals with disabilities, including those who use assistive technologies. An accessible IMT environment generally enhances usability for everyone. By supporting IMT accessibility, the University helps ensure that a broad population is able to access, benefit from, and contribute to its programs and services. (University of Tennessee, 2015, p. 2).

Addressing the entire policy was beyond the scope of this project, however we decided to focus on a very legitimate need related to the Addendum of this policy which lays out the requirements of the IMT Accessibility Program. The policy explains every UT location must have an IMT Accessibility Program to be comprised of members appointed by higher administration, such as Chancellors. Therefore, any individuals assigned to the IMT Accessibility Programs need training on the IT0126 - Accessibility Policy and program requirements in order to establish a stable foundation of knowledge from which to work. The IMT Accessibility Program Training addresses this instructional need.

Learner Characteristics

The intended audience for the IMT Accessibility Program Training includes any UT employee assigned to the Information, Materials, and Technology (IMT) Accessibility Program (at any UT location). Learner characteristics must include the following: ability to read at fifth-grade level, ability to operate a computer, access to a computer with internet capabilities, access to reliable internet, and designation as a UT faculty or staff member involved with the IMT Accessibility Program.

Learning Environment

The learning environment for the IMT Accessibility Program Training will include two components. The first is a synchronous online workshop. This will encompass many tools, such as video conferencing; an online tool with immediate feedback; and a collaborative, electronic documentation tool. The second is a follow-up activity required for training completion. This will use an asynchronous online discussion forum. The overall training program aligns with policy competencies, workshop outcomes, and learner objectives.

Table 1: Policy Competencies, Workshop Outcomes, and Learner Objectives

Policy Competencies	"UT strives to deploy information, materials, and technology that have been designed, developed, or procured to be accessible to individuals with disabilities, including those who use assistive technologies" (University of Tennessee, 2015).
Workshop Outcomes	Workshop participants will be able to successfully implement the IT0126 Accessibility Policy throughout their IMT Accessibility Program. Participants will also have the opportunity to develop a system-wide network of IMT Accessibility Program peers and will be awarded a certificate when they successfully conclude the activities.
Learner Objectives	1) Participants will demonstrate their knowledge of the system-wide policy and IMT Accessibility Program requirements by completing a quiz and participating in follow-up review addressing any incorrect answers. 2) Participants will work collaboratively to apply knowledge in real-life case scenarios focused on authentic applications of IMT Accessibility Program requirements. 3) Participants will demonstrate their understanding and application of the IMT Program Policy requirements by beginning to implement the requirements, then relating their implementation efforts back to the requirements through a discussion post. They will also re-connect with peers from the workshop in order to identify and overcome barriers to program implementation.

Learning and Assessment Activities

The learning activity for this training will be a lecture delivered by the facilitator through a video conferencing interface. The assessment activities for the training will include an online quiz on the content of the accessibility policy, small-group discussions of case scenarios using video conferencing breakout rooms combined with a collaborative, electronic documentation tool, and an asynchronous discussion facilitated through an online threaded forum.

Lecture and quiz. The IMT Accessibility Policy Workshop begins with an online lecture in the form of a power point presentation focusing on discrete knowledge from the policy. This lecture is followed by individual quizzes to ensure that participants understand the policy and are on common ground. The first quiz is a formative assessment to measure participants' understanding of the information covered. "Formative assessment is a process that uses informal assessment strategies to gather information on student learning. Teachers determine what students are understanding and what they still need to learn to master a goal or outcome" (Regier, 2012, p. 5). The list of multiple-choice questions are listed in the figure below:

1. With Policy IT0126, The University of Tennessee aims to:
   A. Design materials that look ADA compliant.
   B. Spread information, materials, and technology that are accessible to as large a group as possible.
   C. Make information, materials, and technology accessible only to those with disabilities.
   D. Only use accessible materials designed by the University of Tennessee, Knoxville.

2. At a minimum, the Program must include these 10 items. Which of the below is not one of the 10 items?
   A. Audience
   B. Authority
   C. Assessment
   D. Training

3. The purpose of the IMT Accessibility Program is to address Accessibility in a _____ fashion.
   A. Dynamic
   B. Interesting
   C. Expedient
   D. Systematic

Figure 1. Sample questions on multiple-choice quiz after lecture.

However, the quiz will be administered as an online quiz with immediate feedback (below):

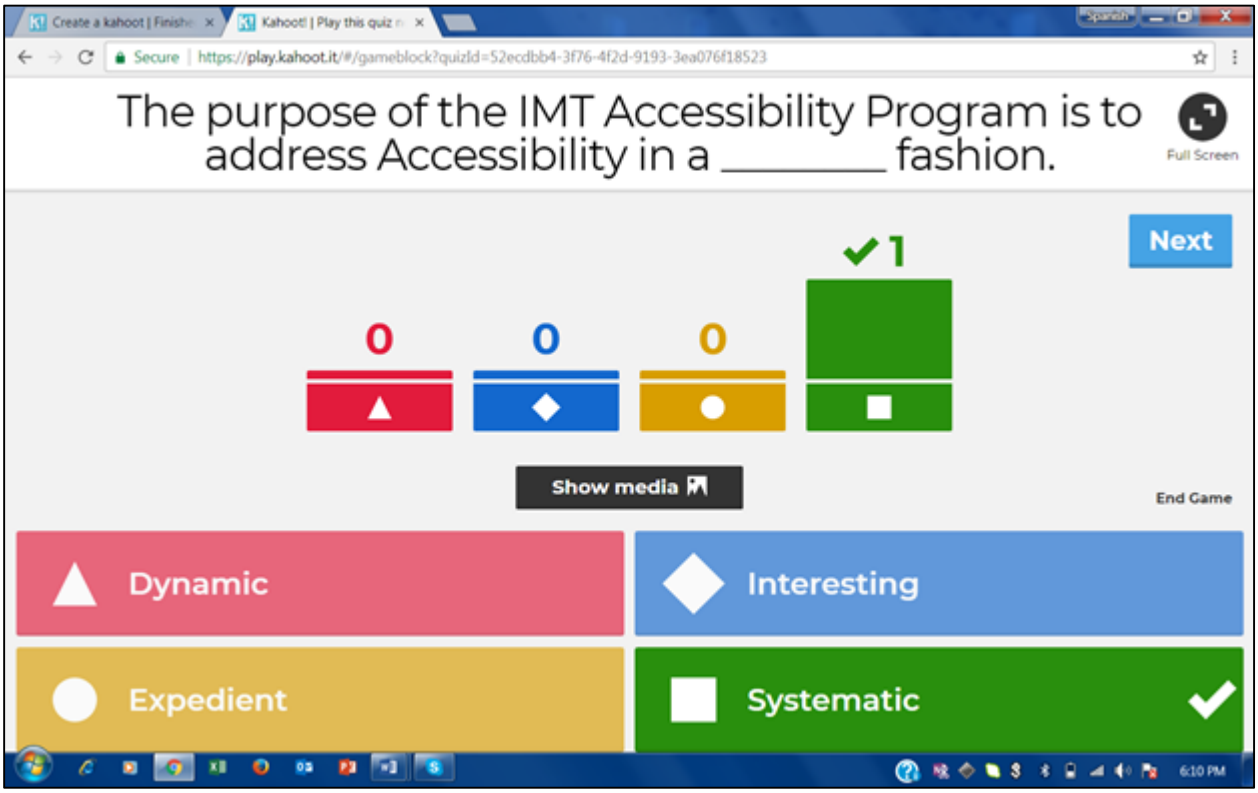

Figure 2. Multiple-choice online quiz with immediate feedback.

Participants must answer all questions correctly before moving on. There is a live facilitator who will address questions that were not answered correctly by the participants. The correct answer will be given again and that part of the policy will be repeated. The facilitator will ask for questions by the learners to ensure that they now understand the parts of the policy that they had missed.

We correctly employ our formative assessment since "the whole nature of formative assessment is small measurements—a pinpoint evaluation of a specific skill or process you are teaching right now, where you need feedback rather immediately so you can make the next decision" (Ratzel, 2001, para. 16).

We use best practices by including multiple-choice questions. According to Brown and Green (2016), "multiple-choice items are considered to be the most useful items in objective tests. Unlike true/false items, multiple-choice items can be used to judge higher-level thinking, such as application and analysis." (p. 145). We followed Brown and Green's (2016) guidelines when writing multiple-choice quiz questions and answers, including:

- Stick to four alternatives.
- Each alternative should be distinct; avoid overlapping alternatives.
- The correct answer should clearly be the best possible response.
- The correct answer should not include irrelevant clues, such as having it include more words or being more precise than the distractors.
- Randomly select the position of the correct answer.

(p. 145)

By discussing the missed questions, participants will all be on common ground and ready for the case scenarios and the second assessment in our IMT Accessibility Policy Workshop.

Case scenarios. After completing the quiz and reviewing any incorrect answers, all participants should have the same base level of discrete knowledge regarding the policy. When considering Bloom's taxonomy of the cognitive domain (as cited in Brown & Green, 2016), the next workshop activity will incorporate comprehension of this new material through application. This will be accomplished by breaking participants up into small, randomized groups and assigning them separate case scenarios. Case studies are authentic learning tools because they simulate real-world situations (Palloff & Pratt, 2009). Case-based learning is linked to constructivism – an approach in which a learner constructs knowledge in the process of meaning-making (Driscoll, 2018; Wilson, 2018). This activity will afford participants the ability to construct their knowledge by engaging in a sociocultural process of learning, which is an example of social constructivism (Hoadley & Van Haneghan, 2018).

The case scenarios in this activity will be structured around IMT Accessibility Program requirements. Participants will be broken up into randomized groups of 3-5. However, the facilitator will check to make sure that none of the groups are entirely comprised of members from a single university location. For instance, there should not be one group whose members are all from the University of Tennessee at Chattanooga. Each group will be sent to an online breakout space and provided a link to an electronic, collaborative documenting tool. As seen in Figure 3, when members go to this link they will be provided with instructions, a unique situation, and questions about their situation. After 25 minutes in their breakout groups, participants will return back to the main classroom space and take turns debriefing.

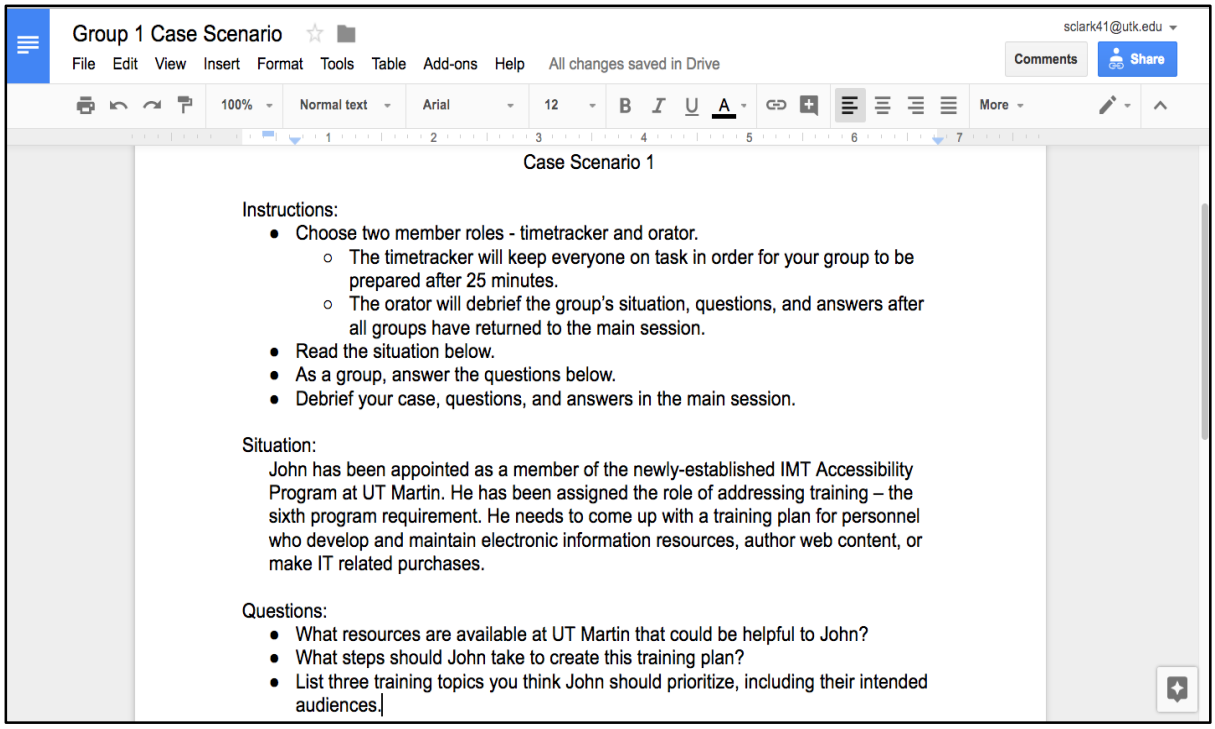

Figure 3. Example of the collaborative work space breakout groups will be sent to.

As seen in Figure 3, each case scenario will include the same instructions. The groups will first be tasked to choose two specific member roles - one timetracker and one orator. The timetracker will keep everyone on task in order for their group to be prepared by the 25 minute time limit. The orator will debrief the group's situation, questions, and answers after all groups have returned to the main session. Each group member will need to read their unique situation. Then, as a group, they will need to answer 3-5 questions about their situation. After 25 minutes, everyone will return to the main class section and the groups will take turns debriefing their case, questions, and answers. Below are two sample case scenario situations and questions.

Case scenario 1. The first breakout group will address the following situation: John has been appointed as a member of the newly-established IMT Accessibility Program at UT Martin. He has been assigned the role of addressing training – the sixth program requirement. He needs to come up with a training plan for personnel who develop and maintain electronic information resources, author web content, or make IT related purchases.

After reading this situation, the group will be tasked to address the following three questions/prompts: 1) What resources are available at UT Martin that could be helpful to John? 2) What steps should John take to create this training plan? 3) List three training topics you think John should prioritize, including their intended audiences.

Case scenario 2. The second breakout group will address the following situation: Jasmine is a member of the IMT Accessibility Program at the UT Knoxville. She has been assigned the role of addressing procurement – the fifth program requirement. She needs to come up with a procedure to incorporate IT accessibility into the procurement process, including establishment of a formal means for evaluating the accessibility of products or systems under consideration for procurement.

After reading this situation, the group will be tasked to address the following three questions/prompts: 1) What resources are available at UT Knoxville that could be helpful to

Jasmine? 2) What departments might Jasmine need to work with in regards to incorporating IT accessibility into the procurement process? 3) What steps should Jasmine take in establishing an evaluation plan for the accessibility of products or systems under procurement consideration? List three areas you think Jasmine should prioritize in her evaluation plan.

Assessment of case scenarios. These case scenarios comprise the workshop's second activity, which is also an authentic, formative assessment. It is an authentic assessment because it allows participants to collaboratively address real-world situations with materials and under conditions that are genuinely possible (Palloff & Pratt, 2009). It is formative because information is being obtained during the course (Brown & Green, 2016; Palloff & Pratt 2009) regarding the collaborative ability of participants to consider authentic situations they may experience and apply the discrete knowledge they have learned about the IMT Accessibility Program requirements. This assessment is an informal task completed by the facilitator during the debrief in the main session, and also during the breakout group work time. The online collaborative tool being used by groups not only affords the ability of all group members to contribute simultaneously, but also affords the ability of the facilitator to unobtrusively monitor the progress and direction of each group.

Asynchronous discussion. Three weeks after completing the workshop, learners will receive invitations to an online discussion forum by email. (This final activity will be announced and described during the online workshop so learners will know to expect it.) The three week time span has been selected to give the participants enough time to begin implementation while still retaining relatively strong recall of the materials and social connection to their workshop peers.

In the discussion forum, learners will be prompted to demonstrate understanding of the IMT Accessibility Program requirements by sharing two actions they have taken to begin implementation of the requirements. They will also be prompted to reply to peer discussion posts. They will have one week to respond to the discussion prompt, and an additional week to post two or more replies to peers.

When employing a discussion forum as part of an activity, it is important to address the known limitations of threaded forums. Gao, Zhang, and Franklin (2012) report that threaded forums can easily lead to unfocused discussions, shallow conversations, and lack of interaction with others' ideas. Hrastinski (2008) writes that, while instructors may be drawn to simple counts of post quantity as a measure of learning, effective online learning takes place across "more complex dimensions of participation, such as whether participants feel they are taking part and are engaged in dialogues, reflected by using a combination of perceived and actual measures of participation" (p. 1761).

To overcome these limitations, multiple design strategies will be applied. The discussion will be assessed using a rubric to provide focus, encourage depth of discussion, and promote interaction (see Table 2). Arter and McTighe (2001) note that rubrics can provide "guidelines, rules, or principles by which student responses, products, or performances are judged" (p. 180). The prompts will also be written to encourage critical thinking and planning for the future rather than shallow or simplistic responses (see Figure 4 and Figure 5). The achievement of critical thinking in a learning activity can be highly beneficial, as its outcomes may include "the acquisition of deep and meaningful understanding as well as content-specific critical inquiry abilities, skills, and dispositions" (Garrison, Anderson & Archer, 2001, p. 8). Additionally, the prompts will emphasize peer relationships as a critical source of ongoing assistance, both as a tie-in to the planned outcomes for the workshop, and as a strategy to increase the social presence

of the activity. Garrison, Anderson, and Archer (2000) note that "where it is important that participants find the interaction in the group enjoyable...social presence is a direct contributor to the success of the educational experience" (p. 89).

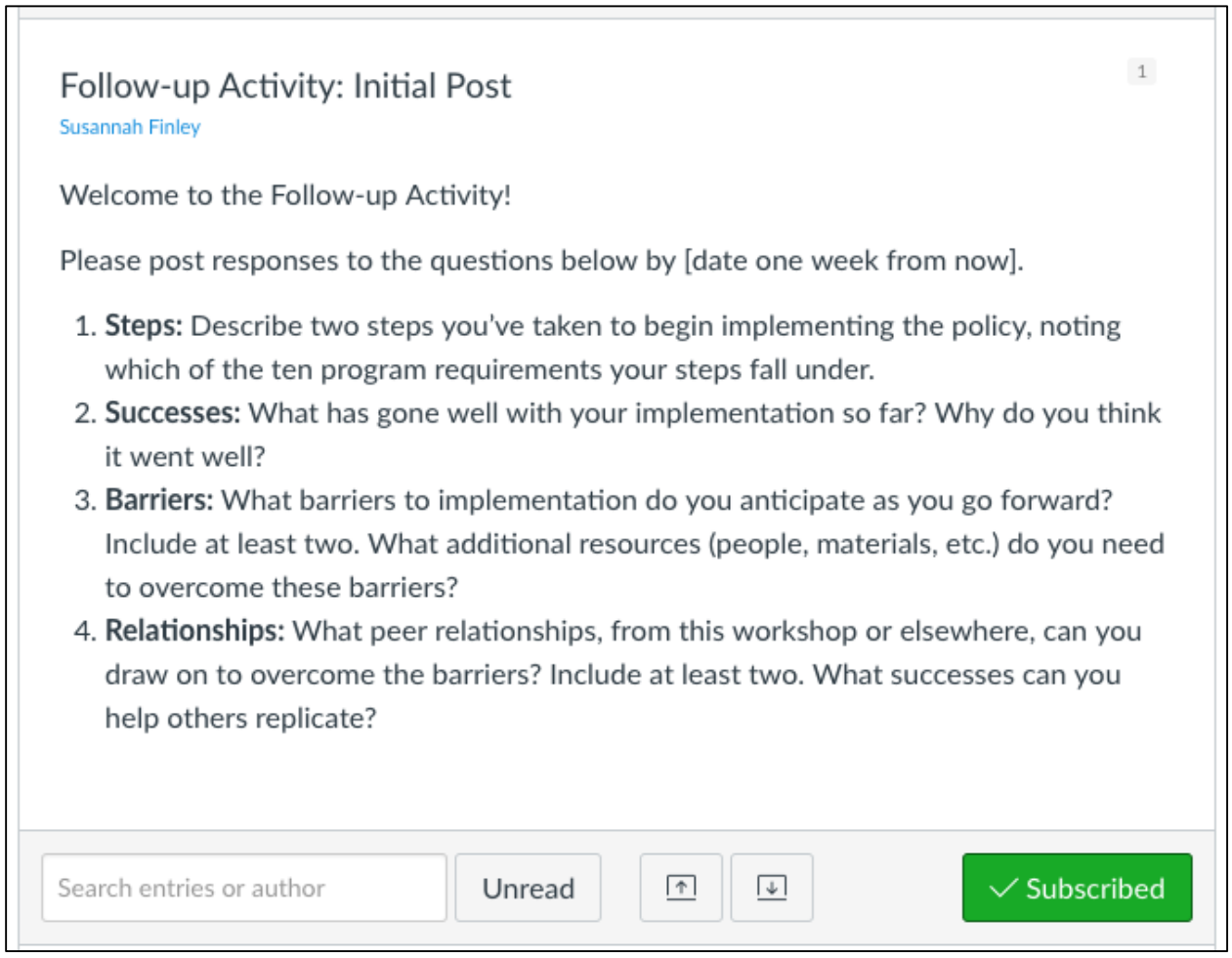

Figure 4. Follow-up Activity, Initial Post Prompt. Included to show the prompt for the initial discussion post, which encourages critical thinking and the reinforcement of mutually beneficial peer relationships as a means of achieving the planned workshop outcomes.

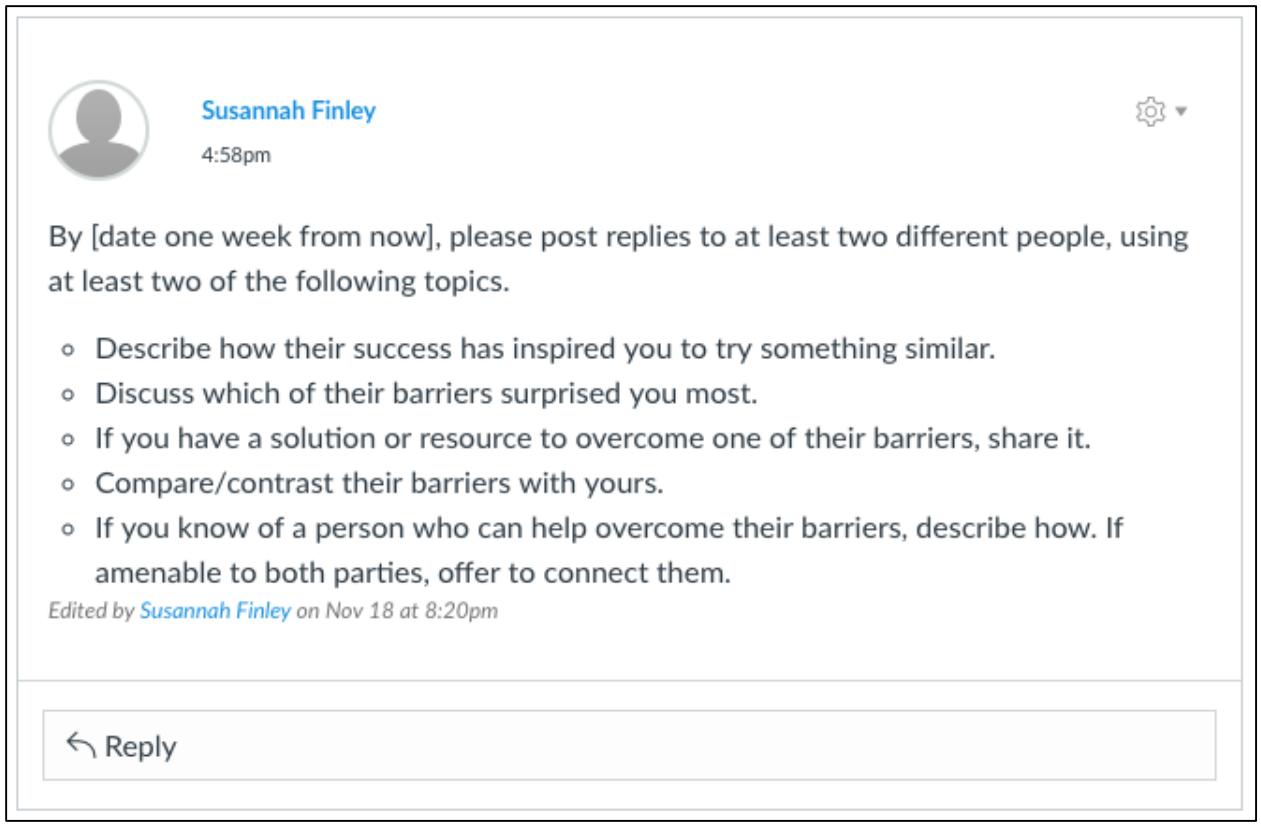

Figure 5. Follow-Up Activity, Reply Prompt. Included to show the prompt for the participants' asynchronous discussion replies, which encourage critical thinking and the reinforcement of mutually beneficial peer relationships as a means of achieving the planned workshop outcomes.

Assessment of asynchronous discussion. The asynchronous discussion that takes place in the online discussion forum comprises the third activity. It acts as a summative assessment of the learners' policy understanding, as it takes place after the training has completed. The objective for the asynchronous discussion states that "participants will demonstrate their understanding and application of the IMT Program Policy requirements by beginning to implement the requirements, then relating their implementation efforts back to the requirements through a discussion post. They will also re-connect with peers from the workshop in order to identify and overcome barriers to program implementation." In other words, it is critical for participants to be able to articulate their understanding of the policy, and also be willing to help each other. The asynchronous discussion assesses participants' understanding of policy requirements by prompting participants to express their policy knowledge as it relates to recent, policy-related steps they have taken. The asynchronous discussion also serves to bolster the learners' peer network by renewing relationships formed during the training, empowering peers to build on each other's ideas, and encouraging peer feedback. As Ertmer et al. state, "students noted that peer feedback can be valuable and, more importantly, described how *giving* peer feedback not only reinforced their learning but enabled them to achieve higher understanding." (2007, p. 412). Because the objective is concerned with both demonstration of understanding and the reinforcement of social connections between peers, the point values delineated in the rubric are structured to reward participants for connecting their writing to policy requirements (Task A) and detailed sharing of resources that will benefit other participants (Task B). Participants can receive up to 3 points per column and up to 6 points total. Participants must achieve 5 points on

this activity to be considered successful. The role of the instructor will be to monitor the discussion for participants who need assistance, reply to participants to assist in drawing out ideas, remind participants of upcoming post deadlines, and assess posts using the rubric (see Table 2). Participants who do not meet the point total will be asked to provide further information through additional posts.

Table 2: Discussion Board Rubric.

Points	Task A: Connect Discussion to Policy Requirements in Initial Post	Task B: Generate Resources for Peers
3	Participant describes his or her implementation efforts as they relate to the policy requirements, noting which requirement the efforts fall under.	In initial post, participant describes steps, successes, and barriers/resources according to prompt, and notes meaningful relationships and successes. In replies, participant remains on topic and focuses on problem-solving in collaboration with peers.
2	Participant describes implementation efforts, but does not relate them to policy requirements.	In initial post, participant briefly describes some combination of steps, successes, and barriers/resources, and may note shallow relationships or successes. In replies, participant is sometimes on topic, but does not focus on problem-solving in collaboration with peers.
1	Participant posts, but does not relate any implementation efforts or policy requirements.	Participant posts, but does not follow the prompt.
0	Participant does not post.	Participant does not post.

Conclusion

This design plan for the Information, Materials, and Technology (IMT) Accessibility Program Training caters to any UT employee appointed to the IMT Accessibility Program. It was comprised of two major components. During the first component, participants listened to a lecture, completed a quiz, and discussed case scenarios using a video conferencing tool, an online quiz tool with immediate feedback, and a collaborative, electronic documentation tool. During the second component, participants participated in an asynchronous discussion using an online threaded forum. After completing all components, participants received a certificate of completion.

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