# 7. Learning from the Learners: Incorporating User Experience into the Development of an Oral Communication Lab

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Abstract: Much current research has shown that oral communication skills are crucial to success in the workplace, regardless of the field or discipline (e.g., Archer & Davison, 2008; Kesner, 2008; Reinsch & Gardner, 2014). Unfortunately, employers have expressed frustration with what they see as a lack of proficiency with oral communication in employees (Bauer-Wolf, 2018). To address this issue, many professional communication programs around the country have created communication labs or centers. This chapter presents a case study of an oral communication lab created in a college of business which, due to limited resources, lacked the sophisticated technologies found in similar facilities at other universities. Rather than focusing on technology, we focused on providing feedback, including individualized grader input and user experience (UX) and usability metrics. In this article, we share details from the development of this lab, particularly the challenges and affordances of researching our users and the impact of successive intervention on their abilities as presenters. In the process, we learned that even a low-tech lab can be successful if we include users as co-creators in the process of designing, implementing, and assessing the lab and its services.

Keywords: oral communication, communication lab, user experience, UX

## Key Takeaways:

- Our assumptions about the needs, goals, skills, and motivations of users can limit the kinds of questions we ask and the information we seek from and about those users.
- As faculty and administrators, we must recognize the value of seeing our student users as co-creators of resources intended to serve them.
- Engaging student users as co-creators requires thoughtful, formal, and iterative mechanisms for including their feedback and experiences.
- Acting on student-user feedback and experiences may upend assumptions and initial planning but, consequently, improve design and effectiveness.
- Even best practices may need to be adjusted to the unique experiences, expectations, skills, and ideas of a particular group of student users.

Much current research has shown that oral communication skills are crucial to success in the workplace, regardless of the field or discipline (e.g., Archer & Davison, 2008; Kesner, 2008; Reinsch & Gardner, 2014). In fact, in a 2018 survey by the Association of American Colleges and Universities, oral communication skills ranked highest in a list of job skills that employers want (Gewertz, 2018). Oral communication includes a number of distinct yet interrelated skills, such as listening, conversing, and presenting (e.g., Brink & Costigan, 2015). As professionals advance in an organization, however, presentation skills become much more important and can become one of the features that separates successful employees from less successful ones (Gray & Murray, 2011; Lin et al., 2010). Unfortunately, many employers have expressed frustration with what they see as a lack of proficiency with oral communication in employees, especially those who are recent graduates (Bauer-Wolf, 2018).

To address this issue, many universities support students' oral communication skill development through coursework that includes different types of professional speaking assignments. In addition, some universities also offer resources such as communication centers and labs. Similar to writing centers, communication labs give students space and resources to develop their speaking and presentation skills outside of the classroom. While our college of business had a long history of integrating oral communication across the curriculum, it had no communication lab or similar resource available to students outside their coursework.

#### ■ The Genesis of the Lab

In Fall 2018, the college administration expressed support for the business communication faculty to develop new initiatives that foster students' *soft skills* (teamwork, leadership, ethics, and communication) and, in particular, oral communication. Because of budget and space constraints, we were also challenged to use existing technological and logistical resources. With these parameters in mind, we proposed the creation of a pilot oral communication lab that would be operated in conjunction with one author's course, a second-year business presentations course. This face-to-face course was held two days a week and had 28 students, mostly sophomores, all of whom were of traditional college age.

One of our first tasks was to find a place for the lab and to acquire the equipment and resources necessary. As mentioned above, our lab was comparatively "low tech." The college leadership allocated a large, unused office located in the faculty suite for the lab. The room was large enough to accommodate the main activities: particularly, students presenting formally in front of visual aids. We were given a projector and a desktop computer with a webcam attached to the monitor, all of which came from college surplus; students were to record their presentations using the webcam and would project any visual aids onto a blank white wall behind them. We acquired a table and chairs as a workspace for indi-

vidual students and (later) student teams, a portable whiteboard, and pens and notepads for brainstorming.

In order for the lab to run smoothly, it was crucial that students be able to use the technology independently since the lab was not staffed and the instructor or the other faculty were not always present to show students how to use or troubleshoot the technology. It was also important to choose technology that was free to students and offered the privacy, confidentiality, and options for technical support expected in a university environment. We chose Blackboard, our university's learning management system (LMS), to house the activities in the lab. Next, we chose Kaltura, our LMS-integrated video management platform, for students to create, edit, and share their presentation videos. The plan was for students to submit their videos through an assignment portal in Blackboard, receive feedback on their videos from the external reviewer through an integrated rubric, and apply this feedback to prepare for their graded, face-to-face presentations in class.

In designing the lab's activities, we drew upon Susan Miller-Cochran and Rochelle Rodrigo's (2009) definition of usability: a process of "anticipating users' needs and expectations, as well as designing texts, documents, systems, platforms, spaces, software—and many other things—with a purpose in mind that is appropriate to and tailored for that audience of users" (as cited in Shivers-McNair et al., 2018, p. 3). We also considered how we might incentivize our students to use the lab to practice their presentations. According to Keshab Acharya (2016), understanding the idea of value from a user perspective includes considering what motivates users to use a product and how or why that product is deemed important to the user. For our pilot project, we made scheduling and access to the lab easy, and offered course credit for students' use of the lab for half of their required presentations. Additionally, in order to secure continued support of the lab, we needed to measure and demonstrate this intervention's impact on students' oral communication skills. We identified three primary research-informed areas of intervention to incorporate into the lab: practicing/overlearning, expert feedback, and video recording.

# Benefits of Practicing and Overlearning

The students came to the course with a variety of oral presentation skills and experiences. Some had experience with public speaking before taking the class, but many did not; some were fluent speakers, while others faced challenges in this arena. While the majority of students in the course had room for improvement when it came to their oral communication skills, some felt themselves to be—and perhaps truly were—effective and confident presenters. The question arose early on about exempting these students from having to practice in the lab. However, continuing to practice a skill or task even after improvement has plateaued can make that skill easier to perform in terms of the energy and cognitive effort expended (Huang et al., 2012). In other words, even though already effective

speakers' raw skills may not improve, the amount of effort and thought required to maintain their level of performance will decrease. Therefore, we decided that students would be asked to practice multiple times in the lab, regardless of their initial or ultimate skill level.

Repeated practice would, we believed, benefit students in other ways as well. Research has shown that practicing a speech can reduce the apprehension students feel when delivering their presentations to in-class audiences (e.g., Ayres et al., 1998). In informal discussions during the first week of class, a few students expressed comfort with presenting in front of an audience, and most acknowledged some degree of anxiety; with some students, this anxiety was overwhelming. Most were aware that, as business majors, they would be required to create and deliver substantial presentations in their upper-level courses. This awareness contributed to the students' sense of the importance of the second-year class (and, to a degree, to the amount of anxiety they reported).

It has long been recognized that anxiety or worry can make the performance of complex tasks worse (e.g., Derakshan & Eysenck, 2009; Eysenck, 1992; Humphreys & Revelle, 1984); however, today's traditional-age college students face some additional challenges. This generation—alternatively called Generation Z or the iGeneration—is more assertive than previous ones and more likely to believe that they can "be anything [they] want to be" (Twenge, 2014). However, they also show higher levels of stress and anxiety, and they are less likely to be self-reliant. Thus, when faced with a situation for which they have little practice and experience, such as public speaking, members of the iGeneration can experience crippling levels of anxiety. One function of the lab would be to provide a space where students could privately practice without fear of grades or evaluation; this would, we hoped, positively impact both their actual performance and their attitudes toward public speaking in general.

# Expert Feedback

The idea of a communication lab is perhaps not unique; however, ours had marked differences from the beginning. Many oral communication labs at other universities feature sophisticated technology and facilities that allow students to create, edit, and record a variety of speaking-related events, like the One Button Studio (Lone Star College, n.d.; University of Minnesota Libraries, n.d.). Others incorporate artificial intelligence platforms that can offer some analysis of delivery features, such as eye contact and tone of voice (e.g., PitchVantage, n.d.). While some communication labs offer students the opportunity for feedback from human experts, many do not, reflecting the long-standing approach that individual practice is among the more important elements in improving oral presentation skills. However, when we surveyed students in our courses to help us determine the kinds of activities and resources they would like to see in a college-based oral communication center, 98 percent (n = 101) indicated they would like a space to

get comprehensive feedback on their speaking-related assignments and out-ofclass activities.

Oral communication pedagogy often incorporates feedback from teachers, peers, and the students themselves. Research has shown, however, that feedback from teachers is of higher quality in terms of its impact on student improvement. In addition, students believe that feedback from teachers is "better" than the feedback they receive from peer- or self-review (van Glinkel et al., 2019). If the review of student practice presentations in the lab was to be conducted by their course instructors, we felt it might limit the number of faculty who would encourage their students to use the lab; those instructors who did not want to address oral communication skills in their classes or review the practice videos of their students might simply opt to not participate.

Fortunately, the college was able to draw upon the success of another communication endeavor to address this issue. In 2015, the college established a Writing Initiative, in which expert graders were provided to faculty who wanted to incorporate extensive written assignments in their courses but did not want to take on the additional grading burden. While the instructors graded content and organization, the outside reviewers evaluated language, grammar, and mechanical issues. To implement this model in the lab, the Writing Initiative grader was assigned to review student presentations as well, using a rubric developed by the business communication faculty and commonly used in sections of the presentations course (see Appendix A).

## Video Recording

The external reviewer would serve as the audience for the practice presentations, and, early on, the decision was made to have her review videos rather than live presentations. This decision had practical aspects in that it eliminated the need to schedule the reviewer and the students in the lab at the same time. More importantly, research shows that recording presentations offers students a number of benefits that ultimately improve their performance, including the ability to review their videos, more opportunity to practice, and reduced communication apprehension (Leeds & Maurer, 2009). Additionally, with an asynchronous, recorded presentation, we intuitively felt students would be in complete control of the presentation process and could start, stop, and re-start their presentations at their own pace and according to their own comfort level. A live audience, either present in the room or on a live video feed, would not allow students this degree of control and comfort.

Although we felt that our proposed pilot was grounded in current pedagogical research, established best practices, and UX and usability principles, the college administration—and we ourselves—wanted to have evidence of its effectiveness in helping students develop their oral communication skills before allocating substantial physical and personnel resources to the venture. At the outset, our original research questions focused on measuring and reporting back to the administration data on the impact of the lab experience on students' oral presentation skills and confidence, as well as the usability of our instructional materials, to have a clear understanding of our logistical needs. In the process of developing, managing, and evaluating the pilot project, however, our research question evolved into one more focused on user feedback: What impact did incorporating user experience throughout the development process have on the overall success of our Oral Communication Lab?

Early on, we observed how our assumptions of our users' wants and needs and, therefore, the ultimate impact of the lab—were challenged by our users' feedback, prompting us to adjust materials, texts, and processes. As we engaged in a cycle of implementation, reflection, adjustment, and re-implementation, we realized the importance of including students in the development process. As such, our new approach echoed the approach to usability testing modeled by Shivers-McNair et al. (2018), which they define as "an empathetic, flexible, ongoing engagement with our audiences and users" (p. 39). Our original plans and processes were modeled on established communication-lab best practices; however, by listening to and learning from our students through formal and informal feedback mechanisms, we learned that even best practices need to be adjusted to the unique experiences, expectations, skills, and ideas of our particular group of users. This chapter presents a case study of how this realization changed the course of the pilot study, revealed the challenges and affordances that exist when integrating user experience, and, ultimately, led to a more successful and impactful experience for our students.

## Methods

After receiving Institutional Review Board approval to research the lab (REF# IRB-2019-113), our next step was to develop or identify tools to assess the impact of the lab as we defined it above. Also, the assessment instruments were intended to help us as instructors refine the experience in the lab to better meet students' needs and expectations as well as create a body of data which could be reported to the college administration with the goal of continuing or even expanding the lab's services.

At the outset of the semester, we planned to use the following assessment instruments: an observations/electronic journal, the Personal Report of Communication Apprehension (PRCA-24) as a pre-test and post-test, the Shannon Cooper Technology Profile, the Instructional Video Usability Survey, Speech Anxiety Thoughts Inventory (SATI), Lab Technology Usability Survey, and the final Logistics Survey. As will be shown in the Findings section, the information gathered from these instruments prompted the creation and/or implementation of additional interventions and assessments based on feedback from our users.

#### Observations/Electronic Journal

Observation is recognized as one of the most powerful tools for understanding how users see, hear, and interpret the environment they are working in and how they act and react to the reality of that environment (Still & Crane, 2016). To better understand the users' experience in the lab, we conducted a *cognitive* walkthrough by "defining the task or tasks that [our] user would be expected to carry out" and then using the space and technology to practice and record our own conference presentation (Interactive Design Foundation, 2018, para. 3). In an electronic journal, we noted our experience and any logistical problems we could address before making the space available to the students. We also recorded our observations of student interactions with the space and technology when we met them in the lab for their first (and subsequent) visits. Our goal was to try to anticipate what information and tools the students would need to use the lab successfully; however, as will be seen below, further interactions with students would make it clear that our interpretations of those needs were not always on the mark.

# Personal Report of Communication Apprehension (PRCA-24): Pre/Post-test

In the presentations course, we discuss *communicator anxiety* with our students, which their textbook defines as the "feeling of butterflies or sick feeling in stomach" (Hamilton & Kroll, 2018, p. 160). As mentioned earlier, many students stated reticence to public speaking; therefore, we anticipated that this nervousness might create a barrier to students using the lab. To help us as instructors and the students themselves recognize and address the nature and extent of their communication apprehension, we created a packet of self-assessments and peer activities to raise students' awareness of how their individual anxiety manifests itself.

The first assessment instrument administered to the students was the Personal Report of Communication Apprehension (PRCA-24) developed by James McCroskey (Hamilton & Kroll, 2018). This survey helps students identify their own brand of anxiety and its manifestations during specific oral communication situations, such as group settings, meetings, dyadic interactions, and public speaking (e.g., "I feel relaxed while giving a speech," with 1 = Strongly Agree and 5 = Strongly Disagree). The survey also included Likert-scale questions and open-ended reflection questions that encouraged students to think about how and why they feel anxious when speaking to others and to reflect on ways that they might manage or reduce that anxiety. To measure any changes in communication apprehension levels among students, we re-administered the PRCA-24 survey at the end of the semester.

# ■ Shannon-Cooper Technology Profile

Based on the 2006 National Education Technology Standards for Students, Li-Jen Shannon et al. (2006) condensed the findings of several studies to create a model that asks learners to assess their skill and comfort level in a number of technological areas on a scale of o to 10, with o being the lowest and 10 being the highest. The Shannon-Cooper Technology Profile (SCTP) covers technological areas such as communication tools, video/audio/graphics software, social media, and learning management systems (see Appendix B). We adapted the SCTP to include the categories of technology that we planned for the students to use, both in the pilot program and in potential expansions of the lab's services. These categories include virtual conference tools, social media, presentation software, screen capture/video creation, web creation software, and video and audio editing software. We asked students to rate their skills and comfort with specific platforms in these categories (e.g., the category of presentation software included PowerPoint, Prezi, and an Other category). Our intention was to confirm that the students were proficient in the technology we would be using in the lab; however, the results of these initial surveys informed the development of additional support materials and assessment instruments.

## ■ Instructional Video Usability Survey

Based on the results of the cognitive walkthrough and the Shannon-Cooper Technology Profile, we created an instructional video that explained the location of the lab space and presented step-by-step visual instructions for recording and uploading videos. Before students used the lab for the first time, the instructor asked them to informally evaluate the video after watching it twice during class. Based on that feedback, we revised the video prior to students actually using it in the lab and designed a more complete post-semester usability survey, which we discuss in the Lab Technology Usability section.

## Speech Anxiety Thoughts Inventory (SATI)

Due to the results of the PRCA-24, which indicated high levels of communication apprehension in the class, we hoped to better understand the nature of these feelings and to respond, if possible, in the lab. Therefore, we sought out an additional instrument, the Speech Anxiety Thoughts Inventory (SATI) tool, adapted from Cho et al. (2018; Appendix C). The tool asks students to indicate their level of agreement (1-5) with different statements related to oral communication concerns, such as "If I make a mistake, the audience will think I'm stupid," and "I'll get tongue-tied." Based on their responses, students were asked to reflect on the types of worries they have with regard to public speaking and brainstorm reasons why they may feel this way (past experiences, lack of preparation, etc.).

These results helped us identify the origin of the anxiety—e.g., general anxiety, technology, or confidence issues—and apply potential responses.

# Lab Technology Usability Survey

To assess the usability of the lab technology, including Blackboard, Kaltura, and the revised instructional video, we administered a survey at the end of the semester based on usability criteria from Jakob Nielsen (2012; Appendix D). According to Nielsen, usability refers to how easy it is for users to use a certain website, software, or other technology, and involves at least six criteria:

- Learnability: how easy it is for learners to use the software for the first time
- Efficiency: how quickly learners can actually use the software after learning
- Memorability: how easily learners can use the software after not using it for a while
- Errors: how often learners make mistakes and how easily they can troubleshoot or fix the errors
- Satisfaction: how attractive or pleasant the design and navigation of the software is
- Utility: to what degree the software does what the learners need or want

The survey included questions that correspond to the six elements from Nielsen's usability standards and are modeled on a survey used by Parmanto et al. (2016). Students were asked to indicate how much they agreed with a series of statements, and each section included a line for open-ended comments. We analyzed these usability findings alongside a post-semester logistics survey assessing students' perceptions of the availability of the lab as well as the impact of practicing on their oral presentation skills.

# **Logistics Survey**

Students also evaluated several logistical aspects of the lab to inform continued program development and sustainability, such as their perceptions of the procedures, lab access and support, physical lab space, and the likelihood of sustained engagement for future utilization of the lab. Analyzing these data points demonstrated the rich opportunities available when including user input in the developmental process. However, we also learned new challenges and affordances that come from intentionally engaging in iterative user-centered design.

# Findings

The assessments we implemented during and after the pilot study provided valuable insight that both informed the development of lab resources during the semester and also provided guidance for future iterations of this oral communication initiative. In this section, we describe how first understanding our students' (the users') attitudes toward presenting and technology helped us make intentional decisions about how we would prepare and support the lab initiatives. The findings also showed us the importance of incorporating usability and user experience feedback during the development of initiatives like the lab. As a result of the inclusion of user experience assessments, we were able to make adjustments during the development process that aligned more with the needs of our current users.

To better understand our students' experience, we first used the lab ourselves to practice a conference presentation. During our cognitive walkthrough, our first goal was to see the lab from a user's point of view and to gather information and data from that perspective, specifically any challenges our users may encounter in the space. Conducting a cognitive walkthrough of the lab processes taught us a great deal. For example, the projector light was nearly blinding, and, given the narrowness of the room, there was no real way to avoid having it shine in our eyes. Also, the microphone was across the room from us as speakers, and, because of this, the audio was not as clear as we would have liked. Background noises also interfered; the air conditioner was loud when running, which caused us to have to speak more loudly to overcome it. Also, the lab shares a ventilation system with the faculty lounge, so the noise of the lounge's television (and the occasional college birthday celebration) bled through. All of these proved distracting to us, and, though few students communicated with us about these issues, we recognized that they may potentially impact students' experience in the lab. We requested additional insulation for the space and alerted the grader to these potential challenges.

In the observation journal are several instances in which the students clearly made the space their own. While we intended the whiteboard in the lab as a place to write our instructions or announcements, students used it to write each other encouraging messages. They left each other inspirational or instructional notes on paper on the table. They rearranged the furniture to best suit their preferences. We also recorded the observation that the students overwhelmingly dressed casually, in spite of the practice rubric including a section on professional dress and the expectation that they were to dress professionally for the graded class presentation. We even observed one student, who had worn shorts and a T-shirt to practice in the lab, walking around campus a short time later the same day dressed in a jacket and tie for another event. Clearly, students were envisioning the lab and its services in a unique and different way than we had originally expected.

Other day-to-day observations led us to rethink how students viewed and used the lab. For example, we assumed that students would start the recording when they came to the lab and just let it run as they practiced their presentation over and over. However, students wanted to submit a more polished final product

rather than a video of their entire process, so they ended up recording, deleting, and re-starting their Kaltura videos several times over until they had a single shorter video they considered the "best." Some even wanted to upload more than one video, because each had "different good points" that they wanted feedback on. We also overheard students practicing their presentations when we knew the camera wasn't running, and even heard a few instances of motivational self-talk from students before they began "formally" practicing.

The users of the lab, mostly sophomores, brought a range of speaking and presentation skills to the course. Considering the composite results of the PRCA-24, students' anxiety scores ranged from low to high; however, a shared perception among the students was lower situational anxiety towards dyadic communication situations and higher anxiety towards group communication situations (meetings, presentations, networking). The composite scores from the pretest PRCA-24 indicated an overall class average of 59.6 (n = 27, range 24-120), and the posttest overall average was 52.3, representing a 12 percent reduction of communication anxiety. Moreover, by examining specifically the public speaking subtotal scores, we found that the pretest average was 18.3 and the posttest average was 14.3 (n =27, range 6-30), indicating a 22 percent decrease in communication anxiety.

Not only did we assume student attitudes toward dress, but we also assumed they would be proficient in the technologies we planned to use in the lab. The results from the Shannon-Cooper Technology Profile (Appendix B) indicated that students self-reported high proficiency in social media, basic computing programs, and the Blackboard LMS platform. For example, Facebook scored an average of 7.4/10, Twitter scored 7.3/10, and Instagram scored 8.8/10. In contrast, Kaltura, our integrated video recording platform, scored an average of .59/10, with 22 of the 28 students giving it a score of zero. Because the Shannon-Cooper Technology Profile showed that students were not familiar with Kaltura, we felt it was important to meet each student in the lab during that student's first visit in order to lead them through, click by click, the process of recording and uploading their videos. Additionally, we created an instructional video to assist students with the process of recording and submitting their videos in the lab. Using Kaltura, a cell phone, and VideoPad video editing software, we created a five-minute instructional video that guided students through locating the lab space, using Kaltura to record their videos, and submitting those videos for feedback through Blackboard. To make sure that students had easy access to the video, we posted it on the course Blackboard site and published it on YouTube, where it could be easily viewed on mobile devices.

The students evaluated the instructional video for using the technology twice—once before using the lab and again at the end of the semester. Prior to using the lab, students evaluated the instructional video in class by completing the Instructional Video Usability Survey. The students wrote down their feedback in a two-column format (liked, disliked) after viewing the video twice. Our intention was to use the students' feedback to edit or adjust the video prior to

them using it to navigate the software and hardware in the lab. Many students responded positively to the detailed, step-by-step format of the video, commenting that it was clear, detailed, and helpful. However, when reporting their "dislikes," we received several comments about the background music being distracting and the process appearing complicated and overwhelming. One student even noted, "it seems like there are about 35 steps to just upload my video." The entire process, in fact, was relatively simple to us (approximately eight steps), but in our effort to be detailed, we created a perception of the process as overwhelming and adverse for our users. We considered this feedback and revised the video in several ways: lowered the volume of the music, numbered the steps on-screen, and added transitions that divided the video into three major tasks.

At the end of the semester, students completed the lab Technology Usability Survey, an anonymous Blackboard survey that used Nielsen's (2012) usability criteria of learnability, efficiency, memorability, errors, and satisfaction. The survey included questions related to the usability of the revised instructional video, as well as the Kaltura program used in the lab. The most notable insight from this second round of testing was informal feedback from the students that they did not actually use the video during their time in the lab. When commenting on learnability and memorability, several said they remembered the basic steps from their initial viewing and then "just figured it out." Interestingly, while the revised video was no shorter than the previous version, the feedback from the students indicated that it was clear and organized. In the final usability survey, 82 percent of students reported satisfaction with the instructional video. Although we gleaned that most did not use the video while in the lab, the survey results indicated a preference towards this instructional medium: 68 percent (n = 28) agreed that the video is a better way to get instructions than a written handout, and 68 percent agreed that the video is a better way to get instructions than written directions on a website. These findings also supported our perception that students were learning the technology quickly and intuitively. Our observations in the lab provided another example of this technological intuitiveness on the part of students. Once we showed the students where to open the My Media tab on Blackboard (where Kaltura is housed), many students actually started to lead us; they would find and click on the proper buttons before we pointed them out. While we know from the survey that students did not know the details of using Kaltura, we do not know if it was their intuitive ability to navigate unfamiliar software or their perceived value of the video that caused them not to use this resource.

At the end of the semester, we asked the students to complete the anonymous Logistics Survey evaluating several aspects of the lab to inform continued program development and sustainability, such as their perceptions of the procedures, lab access and support, physical lab space, usability of technology, and the likelihood of sustained engagement for future utilization of the lab. Not only did 93 percent of the users indicate that they would use the lab again for future presentations, but they also surprised us by suggesting extended operating

hours, extended appointment times, and additional uses for the space related to professional development. We had assumed a 9:00 a.m. to 5:00 p.m. schedule would work best for our student population, many of whom work after classes or commute to campus only two or three days a week. However, on the survey, 76 percent indicated they preferred weekday evening hours to practice in the lab, with 59 percent requesting weekend hours. While we recognized early on that our assumptions of our users' needs and wants were not always correct, we were so focused on scaffolding skills that we did not create an opportunity for gathering feedback on basic scheduling and process logistics.

#### Discussion

The experience of developing, implementing, and assessing our communication lab highlighted how much our assumptions informed the original conception of students' needs and experiences, prompting us to evaluate those assumptions through the lens of evidence-based inquiry to allow the voices of the users to take precedence in the development process. This iterative process included more opportunities for user feedback and more flexibility in our design, echoing Alexander Osterwalder et al.'s (2014) notion of a value proposition design that includes "designing, testing, building, and managing value" (p. 79) by "test[ing] ideas as quickly as possible in order to learn, create better design, and test again" (p. 50). While most of our user feedback concerned our support materials, we now recognize the potential for additional metrics that elicit feedback on students' preferences and experiences related to the lab space, logistics, and access.

Students had the opportunity to visit the lab at four points during the semester: optionally, for their first and fourth presentations, and required, for their second and third presentations. When the lab was initially advertised to the students, they were given the opportunity over the next two weeks to schedule sessions, but none chose to do so. This was not surprising to us given the students' self-reported anxiety levels and resistance to or lack of recognition of the value of practice. However, when students were incentivized to schedule a lab session through nominal participation points, 89 percent (n = 28) of the students successfully recorded and uploaded their videos for review by our external reviewer. By the third presentation, attendance in the lab dropped to 75 percent (-14%); however, we noted three specific incidents of sickness and family situations that could have prevented students from scheduling an appointment. Most notable of these usage statistics is the 75 percent usage for the fourth and final presentation, which was optional. However, what was still unknown to us is why students chose to practice (for no course points), and if their motivation was related to grades, increased confidence, decreased anxiety, or a combination of factors. These numbers suggest that most students came to realize the value of practicing their presentations prior to delivering them in class, and that perhaps incentivizing students to practice can move them past initial resistance and anxiety. Still, more

feedback opportunities related to students' motivations and preferences may have given us additional direction for adjustments that could enrich their use of the lab during the semester.

The results of the Speech Anxiety Thoughts Inventory (Cho et al., 2004) indicated that students predominantly express worry about negative judgment from others. Regardless of their initial or ultimate level of reported anxiety, 97 percent (n = 27) of the students "strongly agree" or "agree" with the seven statements that coalesce around the idea of an audience (e.g., "If I make a mistake, the audience will think I'm stupid"). This phenomenon addresses one issue that had been discussed among college administration, i.e., the benefits of having a "live" audience vs. recording presentations on video. Members of the college's advisory board, for example, volunteered to come to the lab to serve as audience members for the students' practice sessions. However, the responses on the PCRA suggested that students would see such live-audience situations not as practice, but as "final" presentations that undermine the lab's value as a neutral, low-risk practice space. The advisory board members' offer to serve as audiences was intended as a good-faith effort to increase the value of the lab for students; however, the reported value of the lab for the students themselves lies in the ability to practice privately and to remain in complete control of the experience. This insight has the potential to impact staffing decisions for the lab in the future. If asynchronous feedback from a human expert is truly preferable and more useful for students—as it appears to be—then the pressure to staff the communication lab with those experts at all times is reduced. Instead, the lab can be either unstaffed or staffed by non-specialist personnel, as long as it is accessible to students

After practicing and recording their presentations, the students were expected to review the feedback from the outside expert and apply it to the performance of their graded presentations in the course, which usually took place a few days after they completed their practice videos. Regardless of where the students began the semester in terms of proficiency or confidence, by the end of the semester, they demonstrated and reported gains in all areas. The most marked improvement came in delivery—voice fluency, pitch, and pacing, as well as eye contact and body language. Students also seemed more proficient when interacting with their visual aids, referring to them instead of reading from them and effortlessly positioning themselves so as not to block them. The lowest in-class presentation scores were associated with those who did not practice in the lab at all or those who only used it once. This finding reinforces the original concept that repeated practice, followed by feedback, and then followed in turn by reflective integration, is an effective approach for improving student oral communication skills.

Perhaps the most marked example of the lab's potential for success comes from the student with the highest anxiety score, "Henry." On his PCRA prior to using the lab, Henry reported high apprehension for nearly every kind of speaking situation: in groups, in meetings, dyadic (one-on-one), and public situations

(e.g., at networking events or parties). He also expressed low confidence in creating and delivering presentations for class. In his first presentation in class, given before students were allowed to practice in the lab, he showed severe anxiety in his voice, eye contact, and other nonverbal behaviors. Even when he came to his first appointment in the lab, he was reticent when interacting with the instructor and seemed anxious about using the lab's technologies, even though no one else was going to be present.

With each practice session, however, Henry's confidence and fluency grew. He used the lab at least twice for each presentation, at one point staying for more than two hours (when the appointments at that time were only half an hour long). With each in-class presentation, his delivery improved; his voice was louder, his eye contact was more direct, his interaction with visual aids more effective, and his demeanor more confident and relaxed. He received a perfect score on his last individual presentation and expressed the view that the lab truly helped him to grow as a speaker. His experience supports the idea of overlearning, in that he practiced again and again until he had mastered the basic mechanics of presenting. He then continued to practice until the act of presenting became less intimidating, and he was able to add nuances of tone and delivery on the top of his performance.

Educational theory and pedagogical best practices encourage us as teachers to use assessment instruments to gather information about the success (or lack thereof) of our teaching endeavors—formative assessments for when instruction is ongoing and *summative* assessment at the end (Harlen & James, 1997). Both allow us to make adjustments during and after our classes in preparation for future iterations. However, we also must recognize that our assumptions about the needs, goals, skills, and motivations of learners can limit the kinds of questions we ask and the information we seek from and about our student users when creating feedback and assessment interventions. Perhaps we should view our students as co-creators of knowledge when developing materials and resources, considering not only the usability of our tools but also the motivation and value that influence user experience.

#### Conclusion

Though this project had a relatively small sample size, i.e., 28 students who constitute one section of a multi-section course at our university, the research findings emphasize the importance of including our students in the developmental process of initiatives aimed at supporting their professional development. All of our students were traditional college age, and all had chosen to take a face-to-face class. Overall, though, the university has a growing number of non-traditional students and students who take all or nearly all of their classes online. If the lab is to be made available to all students, the needs and schedules of these students will have to be considered.

Because of the successful impact of the lab on students' presentation skills and confidence levels, and the enthusiasm the students expressed about the lab, the college's administration is open to extensions of lab services. In considering expansions, we will once again take guidance from the students. For example, in the Logistics Survey, students expressed interest in such activities as face-to-face interviewing practice (57%), networking practice (48%), and virtual interviewing practice (29%). With the expansion of the services comes the opportunity for further research into the communication-related needs, wants, skills, and motivations of our students. As we consider the next steps, we can see how the larger lab project will have a number of benefits; by creating a robust, pedagogically sound framework for the lab—by continuing to learn from the learners—the project will ensure that students have the most effective experience possible and will see significant improvements in their communication skills and communication-related confidence.

This experience has taught us that our assumptions about what our students (the users) need and want did not always align with what they indicated informally and formally during the semester. Had we not incorporated user feedback checkpoints or kept our eyes open during informal interactions with students, the lab and its activities would have had a much lower chance of success. First of all, we would have created more work for ourselves as teachers (and likely for the students as well) by using unsuccessful, ineffective instructional strategies. Secondly, we would have missed the innovative and insightful comments, ideas, and actions expressed by students as they navigated, learned from, and contributed to the lab. Though we hope the lab will always be a dynamic and evolving place, the contributions students have made through this pilot study will help to ensure that, as it opens to the rest of the college, the communication lab can have a true and real impact on students as speakers and presenters.

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# ■ Appendix A: Presentation Evaluation Rubric

Performance Element			
Opening	Below Expectations	Meets Expectations	Exceeds Expectations
Attention	☐ No attempt to gain audience's attention	Gains audience's attention with a startling statement, anecdote, question, humor, or quotation	Gains audience's attention with a startling statement, anecdote, question, humor, or quotation and establishes common ground
Purpose	☐ No clear purpose statement	☐ Provides a general purpose statement	☐ Provides a statement of purpose – describing the problem and question to be answered
Motivation to Listen	☐ No indication of benefits for the audience	☐ Identifies at least one benefit for the audience	☐ Identifies benefit to audience and the rhetorical purpose of the presentation
Preview	☐ No preview of main points	☐ Provides a general preview of topics	☐ Provides preview of topics, notes the expected length of the presentation, suggests a plan for handling questions
Body	Below Expectations	Meets Expectations	Exceeds Expectations
Organization	☐ Haphazard or inappropriate pattern of organization; no use of transitions; requires effort to follow	☐ Pattern is generally clear and organized; uses transitions to connect most major points; a few minor points may be confusing	☐ Uses a clear, appropriate pattern of organization; uses transitions to make the presentation easy to follow
Audience-Centered Content	☐ Too many points unrelated to audience's interest, or needs	☐ Makes 3 or 4 major points relevant to the audience	☐ Makes 3 or 4 major points; tailors the message to audience's interests and needs; uses appropriate language and examples
Credibility	☐ Does not establish credibility	☐ Establishes trustworthiness and expertise	☐ Provides 3+ reasons for credibility by contextualizing sources and evidence sources
Support	☐ Provides only limited or weak facts or data to support thesis	Uses appropriate facts, evidence, data, or financial analysis to support thesis	☐ Uses appropriate facts, evidence, data, or financial analysis to support thesis; interprets meaning and draws conclusions

Closing	Below Expectations	Meets Expectations	Exceeds Expectations
Summary	☐ No summary of main points	☐ Summarizes main points	☐ Summarizes main points and reinforces the central idea of the presentation
Call to Action	☐ No call or weak call to action	☐ Asks for a specific, realistic action in a direct manner (e.g., "I recommend")	□ Asks for specific realistic action in a direct manner, suggests timeline, restates benefits
Memorable Ending	☐ Stops abruptly or uses trite closing	☐ Ends on a strong memorable note	☐ Ends on a strong, memorable note and links back to opening
Visual	Below Expectations	Meets Expectations	Exceeds Expectations
Content	☐ Multiple points per slide (text-heavy); irrelevant or hard to see images; difficult to quickly understand slide	Several major points per slide; relevant, quality visuals included to explain points; fairly easy to quickly understand slide	☐ Few major point per slides/speaking points; thoughtful, quality visuals included to explain points; easy to quickly understand slide
Clarity	☐ Difficult to read; full sentences; charts/ graphs too complex	☐ Easy to read; simple charts/ graphs	☐ Easy to read; simple charts/ graphs; appropriate use of "white space"
Consistency	☐ Mix of type fonts, colors, clip art or photo styles on one or more slides	☐ Consistent font type, colors, and clip art/ photo styles	☐ Consistent font type, colors, clip art and photo style, and use of upper/ lower case
Correctness	☐ More than two mechanical errors — spelling, typos, formatting, etc.	☐ One or two mechanical errors	☐ Free of mechanical errors
Delivery	Below Expectations	Meets Expectations	Exceeds Expectations
Appearance	☐ Inappropriate grooming or dress for business presentation	☐ Business/professional appearance	☐ Men: dress shirt/tie, slacks, sport coat Women: tailored jacket, skirt or slacks
Eye Contact	☐ Limited eye contact; uses note cards; stares at ceiling or focuses on screen	☐ Tries to maintain eye contact but frequently looks at screen or notes	☐ Maintains eye contact, seldom refers to slides or notes
Poise and Confidence	☐ Distracting sways, paces or fidgets; poor use of hands (e.g., clicking pen, clapping)	<ul> <li>Neutral; uses hand and body movements but appears stiff, uneasy</li> </ul>	☐ Engaging. Uses gestures and expressions; looks comfortable, confident, and natural
Voice	☐ Difficult to understand; mumbles; too loud or soft; too fast or slow, lots of "umms" and verbal distraction	☐ Easy to understand. Appropriate pace and volume; few verbal distractions	☐ Engaging. Uses conversational tone, modulates voice
Enthusiasm	☐ Delivery lacks enthusiasm/ energy	☐ Projects a feeling of enthusiasm about the topic	☐ Projects a feeling of enthusiasm about the topic combined with high energy delivery

TIMING: COMMENTS:

# Appendix B: Shannon-Cooper Technology Profile

#### Part I:

On a scale of o to 10 (o is lowest, 10 is highest), please rate your skill and comfort level with the following:

Application and Software Usage:

1. Virtual conference tools:
Skype for Business
Zoom
Other (please specify):
2. Social Media:
Facebook
Twitter
Instagram
Other (please specify):
3. Presentation Software:
Microsoft PowerPoint
Prezi
Other (please specify):
4. Screen Capture/Video Creation
Kaltura

On a scale of o to 10 (o is lowest, 10 is highest), please rate your comfort level

- \_\_\_\_\_ I. Are you willing to learn new technologies to update with the most recent development?
- \_\_\_\_\_ 2. Are you willing to attend face-to-face training sessions on the Huntsville campus, outside of your class time, to learn new technology applications?
- \_\_\_\_\_ 3. Do you believe that learning new technologies could enhance your skills?
- \_\_\_\_\_ 4. Are you willing to complete virtual, no-credit tutorials to learn new technologies?

5. Are you willing to complete virtual tutorials for class credit to learn new technologies?
Multimedia Interest:
I. Do you enjoy creating new ideas or materials either on computers or mobile devices?
<ul> <li>2. Do you enjoy creating multimedia projects (audio, video, or graphics)?</li> <li>3. Are you willing to try new software or tools for creating multimedia?</li> <li>4. Are you familiar with the ethics and privacy issues around technology usage?</li> </ul>
Part I average score: Part II average score:
■ Appendix C: Speech Anxiety Thoughts Inventory (SATI)1
Thinking about your previous responses and specific experiences you have had giving presentations in professional situations, complete the questionnaire below about the different worries that often contribute to communicator anxiety.
(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree
When you are anxious about giving a presentation, what do you worry about?
I. I'll get tongue-tied.
2. My speech won't impress the audience.
3. My speech will be incoherent.
4. I won't be able to speak as well as others.
5. When others are not paying attention to my speech, I worry that the audience is thinking poorly of me.
6. If I perform poorly, then the audience will remember me negatively 7. It would be terrible if my voice will tremble.
8. If I make a mistake, the audience will think I'm stupid.
9. If I am anxious in this situation, the audience will not like me.
10. I won't know what to say when I'm called on to make a speech.
11. If I don't speak well, the audience will reject me.
12. What I say will sound stupid.
13. It would be terrible if others think I'm not intelligent.
14. It would be terrible if I make a mistake during my speech.
15. I will not be able to control my anxiety.
16. It would be terrible if people notice that I'm anxious.
17. My behavior will appear awkward to the audience.
18. I will be unable to give a good speech.
19. I won't be able to complete my speech.
20.My mind will go blank.
21. I must deliver a good speech in order to gain approval from the audi-

<sup>1.</sup> Adapted from Cho et al. (2004)

ence.
22. I worry that I will be asked to give a speech.
23. I won't be able to answer questions from the audience.

# ■ Appendix D: Lab Technology Usability Survey

## Formative Assessment of Kaltura Usability

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

		I	2	3	4	5
Utility	Kaltura is a great tool for recording video assignments to class.					
	Kaltura is a better way to record videos for class than other methods.					
	I can imagine uses for Kaltura beyond making videos for class assignments.					
	Comments:					
Learn- ability/	It was easy to use Kaltura.					
Memo- rability	It was easy to learn how to use Kaltura.					
, ,	I believe I could become proficient in using Kaltura in a short time.					
	I believe that I will be able to use Kaltura again without additional help or instructions.					
	When I didn't know how to do something in Kaltura, I could figure out how to do it on my own (i.e., without asking the teacher for help).					
	Comments:					
Errors/ Reliabil-	Whenever I made a mistake using Kaltura, I could fix the problem easily and quickly without help.					
ity	Whenever I made a mistake using Kaltura, I could fix the problem easily and quickly with help from an instructor or fellow student.					
	When something didn't work as I expected, the system gave me a clear error message to let me know how to fix the problem.					
	Comments:					
Efficiency	Once I learned how to use Kaltura, I could complete tasks quickly.					
	Using Kaltura to record and upload my video took less time than I expected.					
	Comments:					

Satis- faction/ Media Quality	I could see myself clearly in the video when I played it back.  I could hear myself clearly in the video when I played it back.			
	I could see my visual aids clearly in the video when I played it back.			
	The video has a professional appearance.			
	I can envision using Kaltura to create a video for use in the job-search process or other professional context.			
	Comments:			
Satis-	I like using Kaltura.			
faction/	Kaltura is simple to understand.			
Interface	Kaltura can do everything I want it to do.			
	Overall, I am satisfied with Kaltura.			
	Comments:			

# Usability of Instructional Video

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

		I	2	3	4	5
Utility	The video was a great tool for learning how to find and use the COBA Communication Lab.					
	The video is a better way to get instructions than a written handout.					
	The video is a better way to get instructions than written directions on a website.					
	Comments					
Learn- ability/	It was easy to find the video.					
Memo- rability	It was easy to access and play the video.					
	I replayed the entire video more than once to help me learn how to use Kaltura.					
	I will be able to use Kaltura again after viewing the video only once.					
	I replayed parts of the video to help me learn how to use the lab.					
	Comments:					

Errors/	The video provided accurate instructions for			
Reliabil- ity	finding and using the lab.			
	The screencast section of the video matched what I saw on my screen when I was using Kaltura and/or Blackboard.			
	When the video gave inaccurate or confusing instructions, I was able to figure out the right way on my own.			
	Comments:			
Satis- faction/	The video quality was good.			
Media	The video's audio quality was good.			
Quality	The video was the right length.			
	The video was too long.			
	The video was too short.			
	Comments:			
Efficiency	Having access to the video helped me complete tasks (i.e., recording and uploading the video) quickly.			
	Comments:			
Satis-	I liked the video.			
faction/ Overall	The video is simple to understand.			
	The video helped me do everything I wanted to do.			
	Overall, I am satisfied with Kaltura.			
	Comments:			