

USABILITY STUDY DESIGN

According to the International Standards Organization (ISO 9241-11), usability is “the extent to which a system, product or service can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use” and is “a more comprehensive concept than is commonly understood by “ease-of-use” or “user friendliness.” This document outlines how usability will be measured and assured for this project.

STUDY OVERVIEW

PRODUCT

What’s being tested? What are the business and experience goals of the product?

The product being tested is a **self-paced, online learning experience to support the online capability and continuity of the Polly Cooper Chapter**. Through its six units, there are an equivalent number of goals (synonymous with a terminal objectives):

1. Board members and volunteer information specialists from the Polly Cooper Chapter (“learners”) will understand the course structure and be able to confidently navigate Google Classroom.
2. Learners will be able to successfully navigate the Google Admin Console for adding, deleting, and modifying chapter member accounts within the organization.
3. Learners will be able to extend the concept of email aliases within Google Admin Console to include email routing for cross-coverage of incoming messages.
4. Learners will be able to combine their knowledge of account management and application management to administrate Google Groups for Business.
5. Learners will be able to add, delete, and modify folders and files within Google Drive as well as build on their knowledge of account structures to manipulate their permissions.
6. Learners will be able to plan, compose, and publish a simple website in Google Sites using their own Google Drive assets and evaluate the overall course.

In order to meet those goals, learners must find the platform usable, which this study supports.

TEST OBJECTIVES

What are the goals of the usability test? What specific questions will be answered? What hypotheses will be tested?

This usability test **aims to confirm that the platform is usable** or, where there are difficulties, **identify where scaffolding is required**. Questions to be answered include the rough amount of time taken for learners to complete test tasks (efficiency) as well as a battery from the standard **System Usability Scale (SUS)**. A quantitative survey to measure effectiveness and satisfaction, the SUS asks participants to score the following 10 items with one of five responses that range from strongly agree to strongly disagree:

1. I think that I would like to use this system frequently.
2. I found the system unnecessarily complex.
3. I thought the system was easy to use.
4. I think that I would need the support of a technical person to be able to use this system.
5. I found the various functions in this system were well integrated.
6. I thought there was too much inconsistency in this system.
7. I would imagine that most people would learn to use this system very quickly.
8. I found the system very cumbersome to use.
9. I felt very confident using the system.
10. I needed to learn a lot of things before I could get going with this system.

Score calculation will be performed according to John Brooke's formula - adding the total score for all odd-numbered questions, then subtract 5 from the total to get (X), adding the total score for all even-numbered questions, then subtract that total from 25 to get (Y), then adding the total score of the new values (X+Y) and multiplying by 2.5. Given that the Google Classroom platform is offered by a large technology provider, **a hypothesis would be that the score meets or exceeds 68 - the breakpoint for a system of average usability.**

BUSINESS CASE

Why are we doing this test? What are the benefits? What are the risks of not testing?

This test is included in the learning design process in order to smooth the onboarding process. In order to absorb new knowledge in a self-paced, online experience, learners must not only learn the academic material - they must master the platform as well. Commercial learning management and course authoring systems may be perfectly usable for one group of learners and utterly frustrating for others. In order to give the learning experience its best chance of success, we need to measure where the audience could run into trouble and make the necessary adjustments to ensure success.

PARTICIPANTS

How many participants will be recruited? What are their key characteristics?

Given the project size and resources available, the typical discount usability "group of five" is downshifted for a **target recruitment of three participants**. To make the most of the data, all participants should come from the same pool of learners as would ultimately have access to the finished course and be demographically diverse (different ages, different levels of technological comfort, etc.).

MATERIALS & EQUIPMENT

What equipment is required? How will you record the data?

The only equipment needed by participants will be an internet-connected device, such as a computer or tablet. Participants will toggle between a Google Form and the Google Classroom, so they will need access to both provided by a Polly Cooper Chapter technology administrator.

TEST TASKS

What are the six test tasks?

Participants will open the Google Form survey where they will read a welcome message, consent to the test, and answer a few demographics questions (including a question on educational attainment that is adapted from the American Community Survey and another about technology that is based on the NIH proficiency scale). They'll then proceed to complete the following six representative tasks:

1. Login to the classroom experience and arrive at the "classwork" tab
2. Find Unit 1.1 and view its contents
3. Submit the "knowledge and confidence" survey
4. Play the videos embedded in Unit 1.2
5. Download and view the personal milestones calendar worksheet
6. Per Unit 1.3, post a sample sentence in the classroom discussion

RESPONSIBILITIES

Who is involved in the test and what are their responsibilities?

Jennifer Brola is the project manager, designer, and researcher for this exercise.

Martha Jordan, as key stakeholder, will ensure that essential information reaches all participants.

LOCATION & DATES

Where and when will the test take place? When and how will the results be shared?

The usability test materials will be distributed on **Friday, February 25th** for at-home completion with the hopes that they are returned on February 26th (but no later than the 28th). Results will be posted to the project's website and integrated in future project development.

PROCEDURE

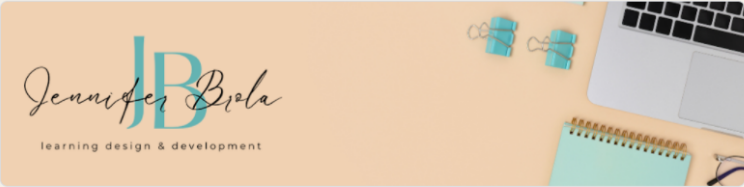
What are the main steps in the test procedure?



RECRUITMENT STATEMENT

With a nominal investment of 30 minutes (or less), three study participants can shape the development of this project all within the comfort of their home. Tasks will be as simple as reading a document or playing a video, then ranking ten dimensions of their experience. Their insights will bring greater satisfaction to future course participants.

SURVEY DESIGN



Section 1 of 5

Course Usability Study

This usability study has been customized for the Polly Cooper Chapter course titled, "Digital Chapter Management." With a nominal investment of 30 minutes (or less), your participation can shape the development of this project all within the comfort of your home. Tasks will be as simple as reading a document or playing a video, then ranking ten dimensions of your experience. Your insights are valued and will bring greater satisfaction to future course participants.



After section 1 Continue to next section

Section 2 of 5

Consent for Participation

This usability study is part of a University of Maryland (UMGC) capstone project. As part of this study, you will be asked to interact with the course titled "Digital Chapter Management" and provide feedback. This is not a test of you, and your participation is entirely voluntary. There are no right or wrong answers to the questions asked.

In this session, you'll be working with the first unit of the course, although you won't need to complete all of its requirements. All information collected, either within Google Classroom or this form, will be used for internal purposes. However, a UMGCC representative may access the findings. Any data made publicly available will be scrubbed of any identifying information.

Please feel free to answer honestly. The goal is to find out what aspects of the experience are difficult so they can be made better. You may take breaks as needed, returning to complete this study as time allows, or stop your participation at any time.

Would you like to continue? *

☐ Yes

☐ No

After section 2 Continue to next section

Section 3 of 5

Demographics

Please share just a bit about yourself so we know how your responses might align with users who are demographically similar.

What is your current age? *

- ☐ <29 Years
- ☐ 30-39 Years
- ☐ 40-49 Years
- ☐ 50-59 Years
- ☐ 60-69 Years
- ☐ 70-79 Years
- ☐ 80+ Years

What is the highest level of school you completed? *

- ☐ High school, GED, HSE, NEDP, or similar diploma
- ☐ Some college credit, but less than 1 year of college
- ☐ 1 or more years of college credit, no degree
- ☐ Associates degree (AA, AS)
- ☐ Bachelor's degree (BA, BS)
- ☐ Master's degree (MA, MS, MEd, MSW, MBA, etc.)
- ☐ Doctorate or professional degree (MD, DDS, DVM, JD, PhD, EdD, etc.)

How would you rank your technology proficiency? *

- | | | | | | | |
|-----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| | 1 | 2 | 3 | 4 | 5 | |
| Novice (Limited Experience) | ☐ | ☐ | ☐ | ☐ | ☐ | Expert (Recognized Authority) |

After section 3 Continue to next section

Complete Six Tasks

Please take note of the time when you begin the sequence of tasks as well as when you end. The time it takes is a valuable metric.

- ☐ Login to the classroom experience and arrive at the "classwork" tab
- ☐ Find Unit 1.1 and view its contents
- ☐ Submit the "knowledge and confidence" survey
- ☐ Play the videos embedded in Unit 1.2
- ☐ Download and view the personal milestones calendar worksheet
- ☐ Per Unit 1.3, post a sample sentence in the classroom discussion

Short answer text

1

System Usability

1 2 3 4 5

Strongly Disagree Strongly Agree

1 2 3 4 5

Strongly Disagree Strongly Agree

1 2 3 4 5

Strongly Disagree Strongly Agree

I think that I would need the support of a technical person to be able to use this system. *

1 2 3 4 5
Strongly Disagree ☐ ☐ ☐ ☐ ☐ Strongly Agree

I found the various functions in this system were well integrated. *

1 2 3 4 5
Strongly Disagree ☐ ☐ ☐ ☐ ☐ Strongly Agree

I thought there was too much inconsistency in this system. *

1 2 3 4 5
Strongly Disagree ☐ ☐ ☐ ☐ ☐ Strongly Agree

I would imagine that most people would learn to use this system very quickly. *

1 2 3 4 5
Strongly Disagree ☐ ☐ ☐ ☐ ☐ Strongly Agree

I found the system very cumbersome to use. *

1 2 3 4 5
Strongly Disagree ☐ ☐ ☐ ☐ ☐ Strongly Agree

I felt very confident using the system. *

1 2 3 4 5
Strongly Disagree ☐ ☐ ☐ ☐ ☐ Strongly Agree

I needed to learn a lot of things before I could get going with this system. *

1 2 3 4 5
Strongly Disagree ☐ ☐ ☐ ☐ ☐ Strongly Agree

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