

Grapevine Public Library Usability Testing

INFO 5735 Summer 2024

Instructor: Xin Wang

Assignment-2



Introduction

- Usability testing is a technique of determining the extent to which end users can easily use a product, system, or website by monitoring the users as they perform tasks.
- The testing includes two methods, moderated and unmoderated testing.
- In this assignment, a website is tested by using the above two testing methods which give accurate rates.
- Three tasks are provided in each test and results are compared.

Testing Website

- Website: Grapevine Public Library
- URL: <https://www.grapevinetexas.gov/1240/Library>
- Grapevine Public Library has been serving the community for over 90 years, providing wonderful materials for checkout, programs for all ages, and spaces for all.
- The website is tested in Loop 11.
- Loop11 is a user research tool that helps improve digital user experiences by gathering insights.

Unmoderated Testing

Steps:

- Create a project with a project title as a website study and select the type as unmoderated.
- For the project screen select all categories as ‘required for all participants.’

1 Choose Project Format

☒ Un-Moderated ☐ Moderated

Project Title Internal use only, not seen by participants

website study

Language

English

For this project screen recording

is required for all participants

For this project webcam/face recording

is required for all participants

For this project audio recording

is required for all participants

- Create 3 tasks as mentioned in the study objectives. Fill in the task name, task scenario, success URL, and page count.

1 Choose Project Format

2 Tasks & Questions ✓ Done

Task

library timings

Type: Standard

find when the library is open on weekends.

Task

borrow e-books

Type: Standard

find how one can borrow e-books.

Task

volunteer opportunities

Type: Standard

find if this library provides volunteer opportunities for youth.

Task

Task Name ?

borrow e-books

Task Scenario ?

Paragraph
B
I
Link
Quote
List

find how one can borrow e-books.

Cancel
Save & continue editing
Save

1 Choose Project Format

2 Tasks & Questions ✓ Done

project is a collection of tasks and questions.
For example, a task might be: "Find the page on our website that has our contact details."
A good question might be: "How would you rate the ease of finding what you need on this website?"
You can find more information [here on creating good task scenarios.](#)

Participant Introduction

Task

library timings

Type: Standard

find when the library is open on weekends.

+ New Task
+ New Question

Task

Task Name ?

library timings

Task Scenario ?

Paragraph
B
I
Link
Quote
List

find when the library is open on weekends.

Cancel
Save & continue editing
Save

1 Choose Project Format

2 Tasks & Questions ✓ Done

Task

library timings

Type: Standard

find when the library is open on weekends.

Task

borrow e-books

Type: Standard

find how one can borrow e-books.

Task

volunteer opportunities

Type: Standard

find if this library provides volunteer opportunities for youth.

Task

Task Name ?

volunteer opportunities

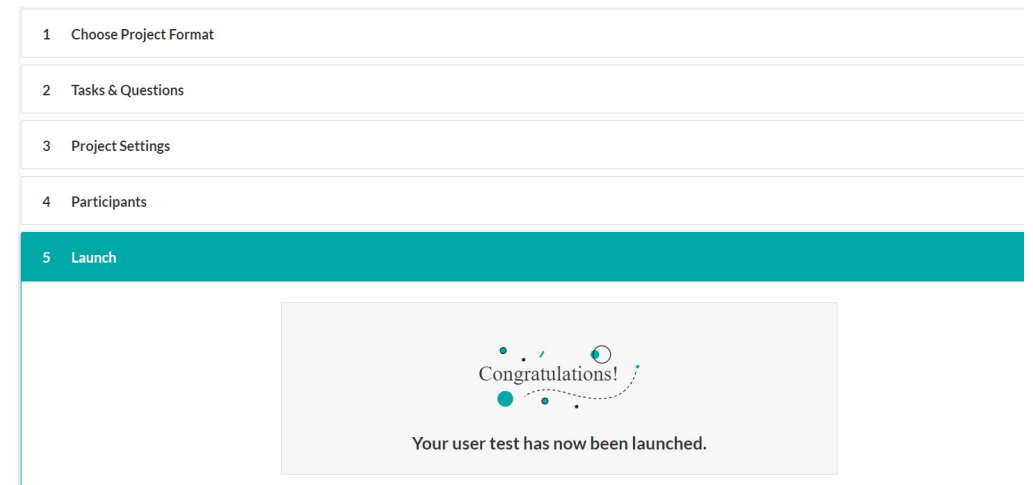
Task Scenario ?

Paragraph
B
I
Link
Quote
List

find if this library provides volunteer opportunities for youth.

Cancel
Save & continue editing
Save

- Mention No. of participants and allow multiple responses.
- Select the option, that how participants will access the testing link.
- Launch the project and share the URL with participants
- URL:
https://www.loop11.com/ui/?l11_uid=103891



Results of unmoderated testing

Total tasks & questions

Success	Fail	Abandon	Lostness	Avg duration	Participants	Complete	Incomplete
14%	71%	14%	0.40	01:35	6	4	2

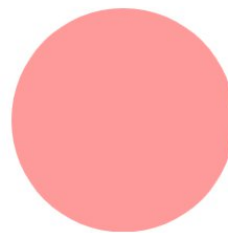
Task: Library timings on weekends



Success (33%) Fail (33%) Abandon (33%)

Page views (avg)	5.2
Time on task (avg)	01:38
Lostness	0.43

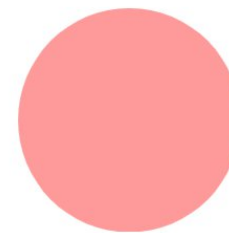
Task: borrow e-books.



Success (0%) Fail (100%) Abandon (0%)

Page views (avg)	9.0
Time on task (avg)	02:01
Lostness	0.69

Task: volunteer opportunity for youth.



Success (0%) Fail (100%) Abandon (0%)

Page views (avg)	3.0
Time on task (avg)	01:06
Lostness	0.08

Moderated Testing

- Create a project with a project title as a website study and select the type as moderate.
- For the project screen select all categories as 'required for all participants.'

1 Choose Project Format

Type

☐ Un-Moderated ☒ Moderated

Project Title Internal use only, not seen by participants

website study

Language

English

For this project screen recording

is required for all participants

For this project webcam/face recording

is required for all participants

For this project audio recording

is required for all participants

- Create 3 tasks as mentioned in the study objectives. Fill in the task name, task scenario, success URL, and page count.

1 Choose Project Format

2 Tasks & Questions

✓ Done

project is a collection of tasks and questions.
 or example, a task might be: "Find the page on our website that has our contact details."
 good question might be: "How would you rate the ease of finding what you need on this website?"
 you can find more information [here on creating good task scenarios.](#)

⌕ Participant Introduction

Task	library timings
Type: Standard	find when the library is open on weekends.

+ New Task + New Question

Task

Task Name ⓘ

library timings

Task Scenario ⓘ

↶ ↷ Paragraph

B I

🔗

“ ”

⋮

⋮

⋮

find when the library is open on weekends.

Cancel

Save & continue editing

Save

1 Choose Project Format

2 Tasks & Questions

✓ Done

Task	library timings
Type: Standard	find when the library is open on weekends.
Task	borrow e-books
Type: Standard	find how one can borrow e-books.
Task	volunteer opportunities
Type: Standard	find if this library provides volunteer opportunities for youth.

Task

Task Name ⓘ

borrow e-books

Task Scenario ⓘ

↶ ↷ Paragraph

B I

🔗

“ ”

⋮

⋮

⋮

find how one can borrow e-books.

Cancel

Save & continue editing

Save

1 Choose Project Format

2 Tasks & Questions

✓ Done

Task	library timings
Type: Standard	find when the library is open on weekends.
Task	borrow e-books
Type: Standard	find how one can borrow e-books.
Task	volunteer opportunities
Type: Standard	find if this library provides volunteer opportunities for youth.

Task

Task Name ⓘ

volunteer opportunities

Task Scenario ⓘ

↶ ↷ Paragraph

B I

🔗

“ ”

⋮

⋮

⋮

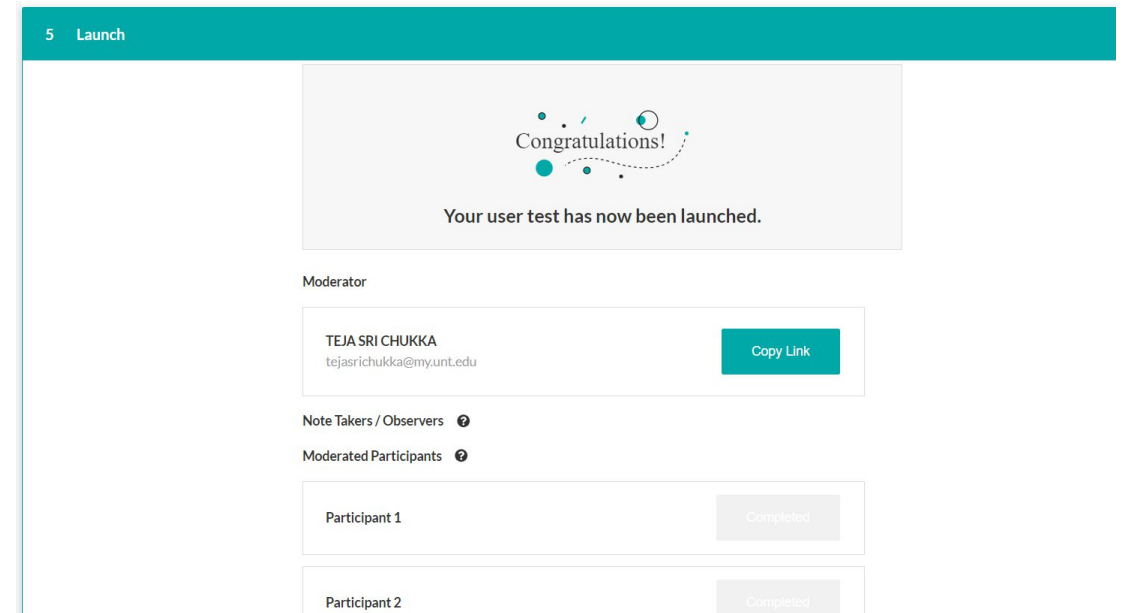
find if this library provides volunteer opportunities for youth.

Cancel

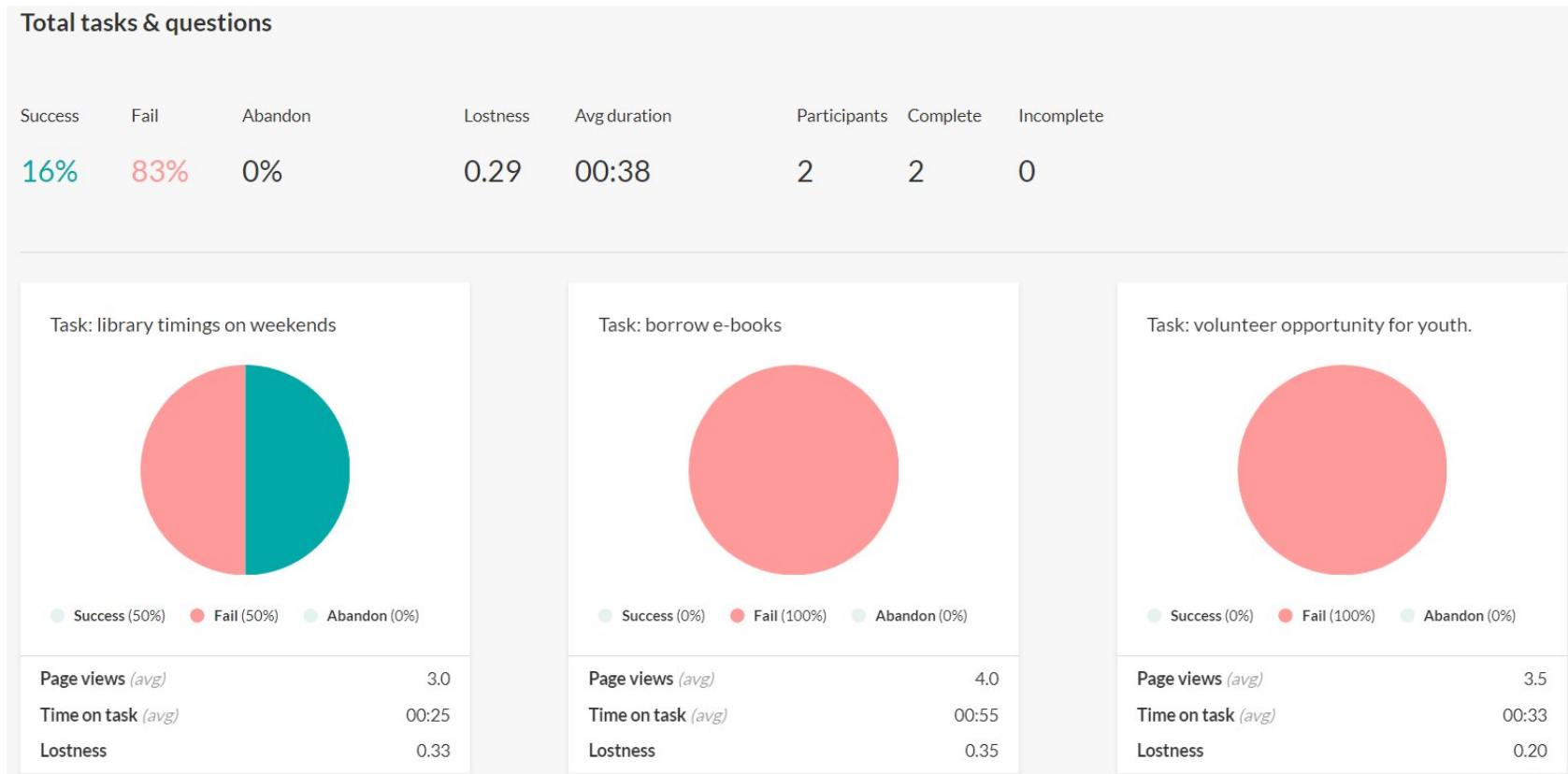
Save & continue editing

Save

- Specify No. of participants and allow multiple responses.
- Mention the moderator and share how to access links.
- Launch the project and share respective participant links with participants.
- URL:
<https://www.loop11.com/ui/#/usertest/moderated/start/cdfbc8f3-38c7-4378-82f8-0d198d6a6e64>

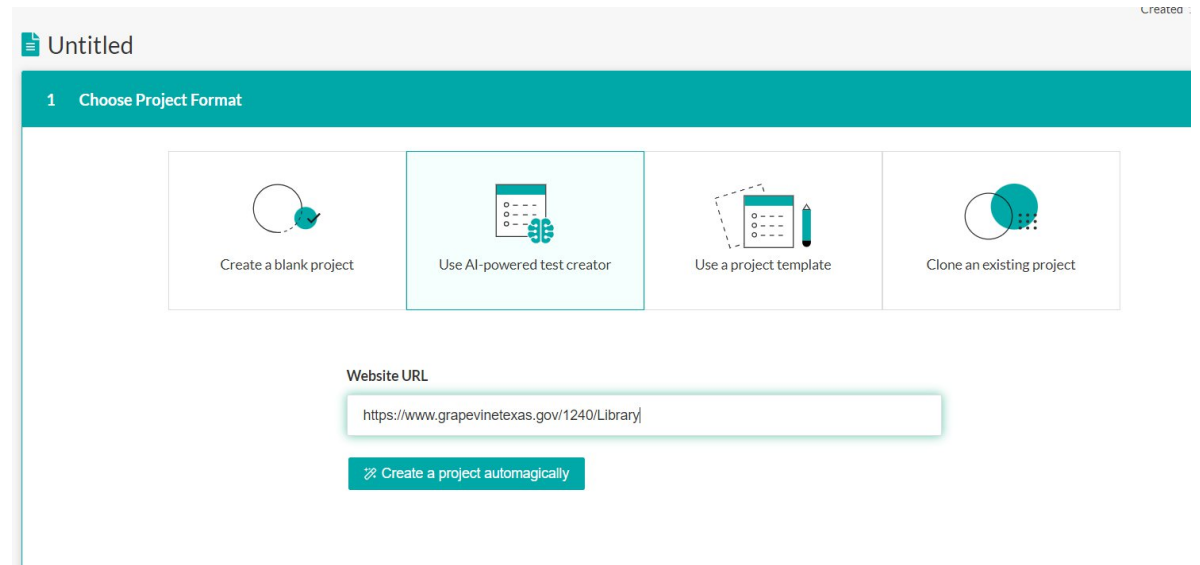


Results of Moderated Testing



AI Facilitated testing

- Create a project using the AI test creator template.
- Insert the website URL.
- Project is created automatically.
- URL:
https://www.loop11.com/ui/?l11_uid=103893



The screenshot shows the Loop11 AI Test Creator interface. At the top, it says 'Untitled' and 'Created'. Below that is a teal header bar with the text '1 Choose Project Format'. The main area contains four options, each with an icon and a label: 'Create a blank project' (circular arrow icon), 'Use AI-powered test creator' (calendar with AI icon, highlighted with a teal border), 'Use a project template' (calendar with pencil icon), and 'Clone an existing project' (two overlapping circles icon). Below these options is a 'Website URL' label and a text input field containing 'https://www.grapevinetexas.gov/1240/Library/'. At the bottom is a teal button with a circular arrow icon and the text 'Create a project automatically'.

Untitled Created

1 Choose Project Format

Create a blank project

Use AI-powered test creator

Use a project template

Clone an existing project

Website URL

<https://www.grapevinetexas.gov/1240/Library/>

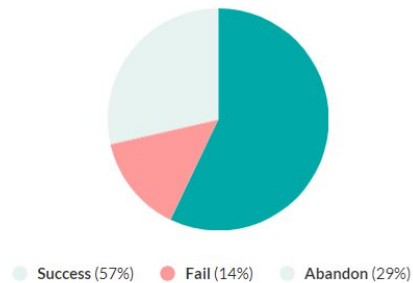
Create a project automatically

Results of AI-Facilitated Testing

Total tasks & questions

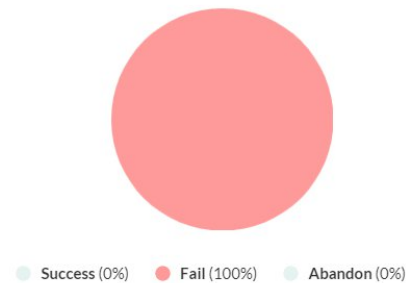
Success	Fail	Abandon	SUS	Lostness	Avg duration	Participants	Complete	Incomplete
21%	68%	10%	61	0.62	01:15	7	3	4

Task: library timings on weekends



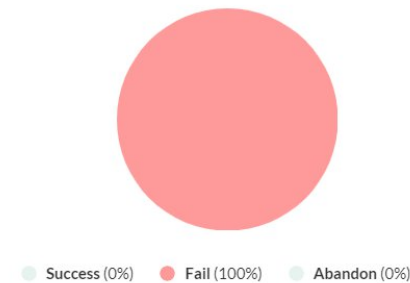
Page views (<i>avg</i>)	1.0
Time on task (<i>avg</i>)	00:28
Lostness	2.00

Task: e-books



Page views (<i>avg</i>)	4.7
Time on task (<i>avg</i>)	02:01
Lostness	0.36

Task: volunteer opportunity for youth.



Page views (<i>avg</i>)	5.0
Time on task (<i>avg</i>)	01:46
Lostness	0.45

Comparing the methods “Unmoderated Usability Testing” with “Moderated Usability Testing” sessions.

Metrics	Un-moderate	Moderate	AI
Average time of completing task 1	1 min 38 secs	25 secs	28 secs
Average time of completing task 2	2 min 01 sec	55 secs	2 mins 01 sec
Average time of completing task 3	1 min 06 secs	33 secs	1 min 46 secs
Task completion rate	14%	16%	21%
Task failure rate	71%	83%	68%
Task Abandon rate	14%	0%	10%
Success tasks	Task 1	Task 1	Task 1
Failure tasks	Task 2, Task 3	Task 2, Task 3	Task 2, Task 3
Page view of task 1	5.2	3	1
Page view of task 2	9.0	4	4.7
Page view of task 3	3.0	3.5	5.0

Reporting user's behavior and requirements using various metrics.

- **Average rate of tasks:** The average time spent on each task in moderate testing is lower than in unmoderated testing and AI testing. This suggests that moderate testing helps people complete tasks more quickly.
- **Task Completion rate:** In AI testing, the task completion rate is slightly higher compared to moderated, and unmoderated testing indicating that tasks are more user-friendly in AI testing.
- **Task Failure rate:** Even though with guidance, few users are unable to complete their tasks in moderate testing when compared to unmoderated testing.
- **Task Abandon rate:** In unmoderated, and AI testing, few tasks are abandoned as users can't finish their task whereas with proper instructions it was completed in moderate testing.

Similarities and differences in terms of testing procedures, effects between “Moderated Usability Testing”, “unmoderated testing”, and “AI Facilitated Testing

- **Moderated testing:** In moderated usability testing, a moderator leads participants through pre-planned tasks while keeping an eye on them and gathering comments in real-time. By using this technique, user experiences can be explored in a more dynamic and participatory way, allowing the moderator to get more qualitative insights from the comments of the users.
- **Unmoderated testing:** This method is more self-governing; participants complete tasks on their own and offer comments without close supervision. Large-scale and distant investigations can benefit from unmoderated testing since it is scalable, economical, and efficient. The degree of qualitative insights gathered may be limited by the absence of direct moderator contact, and participants may experience difficulties that are not resolved during the testing session.
- **AI-facilitated testing:** AI-facilitated testing automates administration, real-time analysis, and data collection, providing scalable, efficient, and cost-effective testing with deep insights into user behavior and performance patterns.

An example of a positive experience in unmoderated testing

The screenshot displays a web browser window with multiple tabs open, including 'Assignment #2: Usability T...', 'Topic: Participation in Peer...', 'Videos: Library timings on...', 'Library | Grapevine, TX - O...', 'AI Text Summarizer - One...', and 'ChatGPT'. The address bar shows the URL: loop11.com/dashboard/reports/project/c7372e4d-d76b-49f1-a1a2-7afdc5a6354f/videos/task/cbfd7c1-c570-45c4-a171-012695a9dc25/#video.

The main content area shows a video player displaying the Grapevine Public Library website. The website features a header with 'GRAPEVINE PUBLIC LIBRARY' and navigation links: 'About Us', 'Services', 'Outreach', and 'How Do I...'. A search bar is located on the right. The main body of the website shows a large image of the library interior with people browsing. Below the image is a row of icons for various services: 'Select Language', 'Account & Catalog', 'Calendar', 'eBooks & Audiobooks', 'Online Resources', 'Program Registration', and 'Wireless Printing'. A 'Have a question?' button is also visible.

On the right side of the video player, there is a sidebar with a video feed of a participant (Participant 6) and a 'Notes' section. The 'Notes' section contains a timestamped note: 'A note is timestamped based on the participant's time within the study. Notes can be edited, deleted and reviewed within reports. Within reports video clips can be generated and shared based on a note. Notes can only be seen by the moderator and notetakers.' Below the notes is a text input field labeled 'Write a note...' and an 'Enter' button.

At the bottom of the video player, there is a 'Task Start' button and a progress bar. Below the video player, the participant's information is displayed: 'Participant 6', 'Denton, TX, United States of America', '6 sec', 'Chrome (Mac OSX)', 'Task result: Success', and 'Pages : 1'.

The bottom of the screenshot shows a Windows taskbar with the date and time '3:29 PM 7/14/2024' and a weather widget showing '97°F Mostly sunny'.

Participant completed task 1 in secs.

An example of a negative experience in unmoderated testing

The screenshot displays a web browser window with multiple tabs open, including "Assignment #2: Usability T...", "Topic: Participation in Peer...", "Task: Library timings...", "Library | Grapevine, TX - O...", "AI Text Summarizer - One...", and "ChatGPT". The address bar shows the URL: `loop11.com/dashboard/reports/project/c7372e4d-d76b-49f1-a1a2-7afdc5a6354f/task/cbfcd7c1-c570-45c4-a171-012695a9dc25/#video`.

The main content area shows a "Website Study / Participant 5" interface. The central video feed displays the "GRAPEVINE PUBLIC LIBRARY" website. The website's navigation menu includes "About Us", "Services", "Outreach", and "How Do I...". A dropdown menu for "How Do I..." is open, showing options: "Open the How Do I... page", "Access Catalog & Renew", "Support the Library", "Volunteer", "Program Registration", "Wireless Printing", "FAQs", and "Use the Library" (with sub-items "Get a Card" and "Policies & Procedures"). A search bar labeled "Search Library Catalog" is visible. A "Select Language" dropdown and a "SHOW" button are also present.

On the right side of the interface, there is a video feed of the participant, a "Notes" section with tabs for "Notes", "Summary", and "Transcription", and a "Write a note..." text area. A "Have a question?" button is located below the video feed.

At the bottom of the interface, a "Participant 5" summary box shows the location "Irving, TX, United States of America", a duration of "117 sec", the browser "Chrome (Windows 10)", and a "Task result: Fail" status. A "Mail - Chukka, Teja Sri - Outlook" window is also visible in the bottom right corner.

The Windows taskbar at the bottom shows the time as 3:41 PM on 7/14/2024, along with various system icons and a search bar.

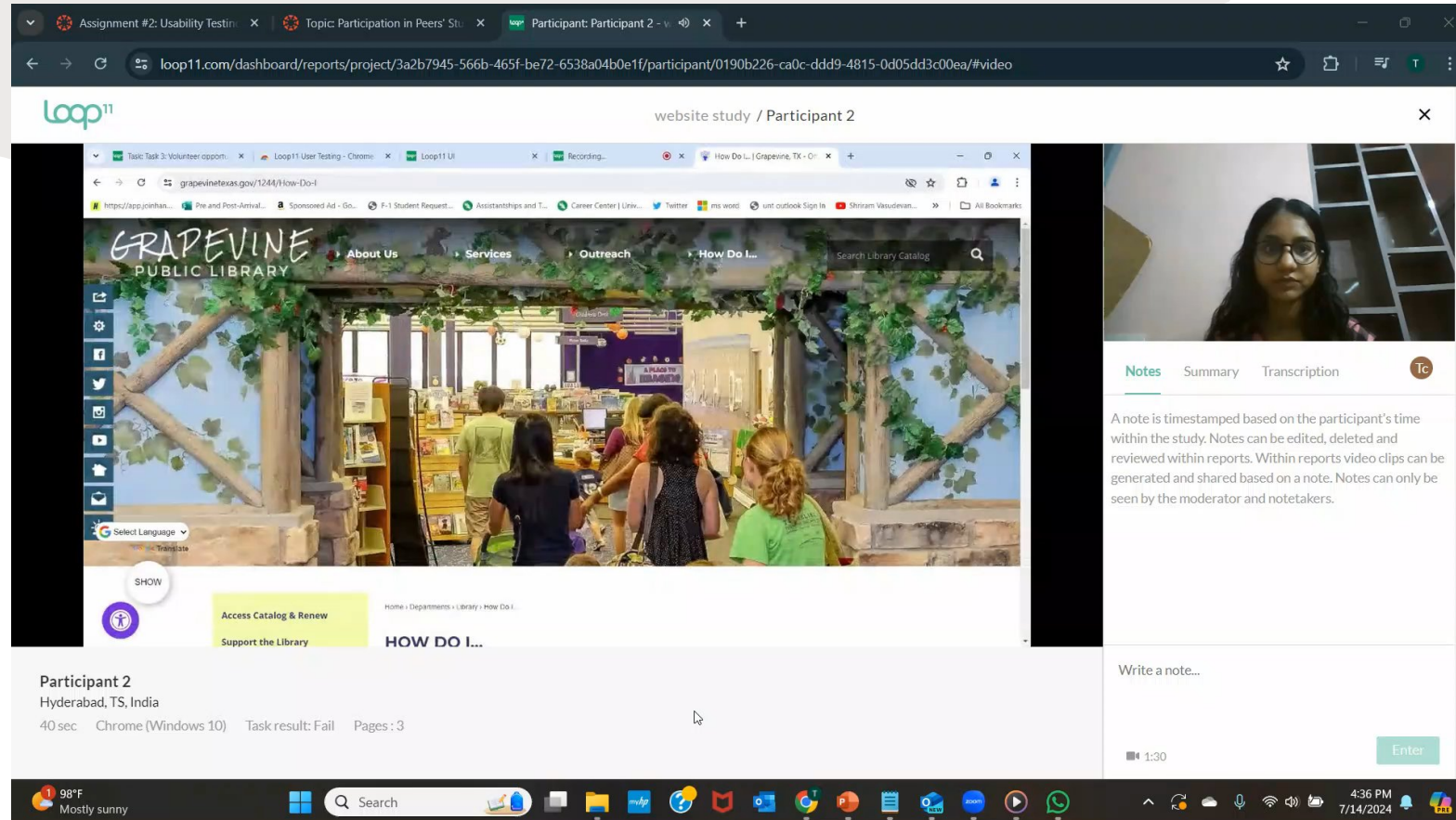
Participant unable to find the task 2

An example of a positive experience in moderated testing

The screenshot displays a web browser window with multiple tabs open, including 'Assignment #2: Usability T...', 'Topic: Participation in Peer...', 'Task: library timings on...', 'Library | Grapevine, TX - O...', 'AI Text Summarizer - One...', and 'ChatGPT'. The address bar shows the URL 'loop11.com/dashboard/reports/project/3a2b7945-566b-465f-be72-6538a04b0e1f/task/4f76da57-b15b-496f-8821-2824545d6962/#video'. The main content area is titled 'website study / Participant 2' and features a video player showing a participant's screen. The participant's screen displays a website with a navigation bar containing 'About Us', 'Services', 'Outreach', and 'How Do L...', and a search bar labeled 'Search Library Catalog'. The video player has a progress bar at the bottom showing a duration of -2:00. To the right of the video player is a sidebar with tabs for 'Notes', 'Summary', and 'Transcription'. The 'Notes' tab is active, showing a text area with the instruction: 'A note is timestamped based on the participant's time within the study. Notes can be edited, deleted and reviewed within reports. Within reports video clips can be generated and shared based on a note. Notes can only be seen by the moderator and notetakers.' Below this is a text input field labeled 'Write a note...' and an 'Enter' button. At the bottom of the screen, a Windows taskbar is visible, showing the system clock as 3:59 PM on 7/14/2024 and the weather as 98°F Mostly sunny.

For the task in the Moderate test, participant able to find the information easily regarding task 1.

An example of a negative experience in moderated testing



For the Moderate test task, participant completed task 3 consuming more time, and finally was done with guidance.

Summary

- The analysis of the unmoderated and moderated usability testing conducted on the Grapevine Public Library website uncovers trends in user behavior and their implications for assessing user experience. In unmoderated testing, users showed independence in task completion without real-time coaching; this led to longer average times, lower success rates, and a notable failure rate for Tasks 2 and 3. Conversely, moderated testing led to a notable improvement in user data, including reduced average times, increased success rates, and no task abandonment.