

Usability Study Report

Note: Don't forget to add evidence of the recordings, and that I can access the document from john.guerra@gmail.com

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Application scope

Application description

Bamboozled is an interactive quiz platform similar to Quizlet that allows users to test their knowledge through engaging multiple-choice questions across educational and entertainment topics.

Users - Target audience

User 1: Student/Learner

Persona: Alex, 20, is a dedicated pre-med student who studies between classes and clinical volunteer work. Tech-savvy but time-constrained, Alex needs study tools that provide quick feedback and track progress over time.

User 2: Educator

Persona: Ms. Rodriguez, 42, is a high school Spanish teacher with 15 years of experience who embraces educational technology but has limited prep time. She needs intuitive tools that help create structured assessments quickly and can be used repeatedly throughout the semester.

User 3: Entertainment fan

Persona: Jordan, 35, is a marketing professional and pop culture enthusiast who unwinds after work by engaging with entertainment content. Tech-comfortable and competitive, Jordan enjoys testing knowledge about favorite media franchises as both entertainment and preparation for social trivia events.

Data description: (what data is stored and displayed)

Main tasks - use cases

Task 1: Student/Learner

Specific Task: Complete 3 practice quizzes (20 questions each) on Advanced Biology terminology before your midterm exam next Tuesday, achieving at least an 85% accuracy rate.

Context: You're a pre-med junior at University of Washington with a heavy course load who needs efficient study methods to prepare for exams.

Motivation: You need to master complex biological concepts to maintain your 3.8 GPA and strengthen your medical school applications. Traditional note-taking hasn't been working well for the volume of material.

Measurability: Success is measured by quiz completion percentage, accuracy scores (target: 85%+), and improvement across practice attempts.

Task 2: Educator

Specific Task: Create a 30-question Spanish vocabulary quiz covering Chapter 4's food vocabulary and present tense verb conjugations for your 9th-grade class.

Context: You're teaching introductory Spanish to 60 students across three class periods who have varying levels of language exposure.

Motivation: You need to efficiently assess student comprehension before next month's unit test while providing enough practice for students to reinforce key concepts.

Measurability: Success is measured by quiz creation time (under 30 minutes), student completion rate (target: 95%), and improvement in class average scores compared to previous paper-based assessments.

Task 3: Entertainment Fan

Specific Task: Complete the "Ultimate 'Friends' TV Show Challenge" 50-question quiz and compare your score with the published leaderboard rankings (aiming for top 10% placement).

Context: You're preparing for your friend group's weekly virtual trivia night that focuses on 90s sitcoms this month.

Motivation: You want to test your knowledge of your favorite show and improve your trivia performance to earn bragging rights among friends who are fellow enthusiasts.

Measurability: Success is measured by quiz score (target: 90%+), completion time (under 10 minutes), and placement on the leaderboard.

Experiment

Preparation

Introduction

Hello, and thank you for participating in our usability study today. My name is Qian, and I'll be guiding you through this session.

Before we begin, I'd like to ask for your consent to record this session. We'll be recording your screen, audio, and video to help us analyze the results later. This recording will only be used internally by my course instructor and me. Do I have your permission to record?

[Wait for verbal consent]

Great. During this session, I'd like to ask you to think out loud as much as possible. This means verbalizing your thoughts, questions, and reactions as you interact with the system. There are no right or wrong answers—we're testing the system, not you. Your honest feedback will help us improve our product.

I want to emphasize that you can stop the session at any time if you feel uncomfortable, and you're free to take breaks if needed.

For today's session, I'd like you to approach the tasks as if you were a learner, an educator or an entertainment fan. This will help us understand how our target users might interact with the system.

Do you have any questions before we begin?

Task Scripts

Initial Approach (Intuitiveness Assessment)

I'm going to send you the homepage of the application. Could you please share your screen, first?

Without clicking on anything yet, please take a moment to look at the screen and tell me:

1. What do you think this platform is for?
2. What do you think you can do here?
3. What would be your first action if you were trying to [reference main purpose related to the upcoming task]?

Thank you. Now, let's move on to our first task.

Task 1: Student/Learner Scenario

Context Setting: For this task, I'd like you to imagine you're a student at Northeastern University. You have a heavy course load and need efficient study methods to prepare for exams.

Task: Your Web Development midterm-exam is next Tuesday, and you need to complete 3 practice quizzes on react domain knowledge. Each quiz has 20 questions, and you're aiming to achieve at least 85% accuracy.

Please begin by finding where you would go to access practice quizzes for React knowledge. Once you find them, complete one quiz while thinking aloud about your experience. After completing the quiz, tell me how you would check your progress across multiple practice attempts.

Observation Points:

- How easily can the participant find the relevant practice materials?
- Does the participant understand how to track progress across multiple quizzes?
- Can the participant identify their accuracy score?
- How does the participant react to the feedback mechanisms?

Task 2: Educator Scenario

Context Setting: For this task, I'd like you to imagine you're a high school Chinese teacher. You teach introductory Chinese to students with varying levels of language exposure. You embrace educational technology but have limited prep time.

Task: You need to create a 5-question Chinese vocabulary quiz for your class. You want to complete this in under 30 minutes.

Please begin by finding where you would go to create a new quiz. Then, start setting up a Chinese vocabulary quiz with appropriate settings.

Observation Points:

- How intuitive is the quiz creation process?
- Can the participant easily find relevant settings for a classroom context?
- How does the participant approach organizing the quiz content?

Task 3: Entertainment Fan Scenario

Context Setting: For this task, I'd like you to imagine you're Jordan, a 35-year-old marketing professional and pop culture enthusiast. You unwind after work by engaging with entertainment content and are preparing for your friend group's weekly virtual trivia night focused on 90s sitcoms this month.

Task: You want to complete the "Ultimate 'Friends' TV Show Challenge" quiz and compare your score with your friends. Your goal is to gain as many points as possible and compete with your friends.

Please begin by finding where you would go to access public quizzes about TV shows. Then locate and start the "Friends" quiz. Complete a quiz while thinking aloud about your experience.

Observation Points:

- How easily can the participant find themed entertainment quizzes?
- Does the participant understand the quiz navigation and timing features?
- How does the participant interpret their performance results?

Wrap-up Questions

Now that we've completed all the tasks, I have a few final questions:

1. On a scale of 1-5, how would you rate the overall effectiveness to complete the task? 4
2. On a scale of 1-5, how would you rate the overall ease of use to complete the task? 5
3. What did you find most intuitive about the platform? All elements are quiz related. This tells the purpose of the platform.
4. What aspects were most frustrating or confusing? Confusing: Management console instead of user's product.
5. How well do you think this platform would meet your needs if you were actually [reference to persona]? Animation, visualization. Share function. Leaderboard.
6. What one feature would you suggest we improve first? Add more visualization. More dynamic and entertaining.
7. Is there anything else you'd like to share about your experience today? Timer and progress bar should be more emphasized.

Closing Statement

Thank you so much for participating in my usability study today. Your feedback is incredibly valuable and will help me improve my application.

[End recording]

Experiment Notes

Experiment 1

Date: 04/16/2025 Participant Name: Yumeng Zeng Session Duration: 20mins

Key Observations:

- When completing the quiz, the user was not sure which option is correct and which is wrong after she made a response.
- The user noticed UI issues with the edit and delete buttons. In some cards, those 2 buttons are not aligned in one line.

- It's quite intuitive what users are expected to do in a quiz. The progress bar made things clear.

Technical Issues:

- When the user restarted the quiz she completed before, the last question was shown for her instead of the first question. In other words, the quiz status is not reset when the user restarts the quiz.

Priority Insights:

1. UI issues with the edit and delete buttons.
2. UI modification to make correct and wrong options more intuitive.
3. Technical issue to reset quiz status when the quiz is restarted.

Wrap-up Questions Response:

Question	Response
On a scale of 1-5, how would you rate the overall effectiveness to complete the task?	5
On a scale of 1-5, how would you rate the overall ease of use to complete the task?	5
What did you find most intuitive about the platform?	Progress bar is clear. It's quite clear what to do next in the quiz.
What aspects were most frustrating or confusing?	I don't know which option is correct and which is wrong.
How well do you think this platform would meet your needs if you were actually a student studying for your midterm exam?	It meets my needs perfectly.
What one feature would you suggest we improve first?	UI modification to align edit and delete button, and intuitive UI of correct and wrong options.

Is there anything else you'd like to share about your experience today?	No.
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Experiment 2

Date: 04/16/2025 Participant Name: Yingtong Dou Session Duration: 16mins

Key Observations:

- The platform looks more like a backend Quiz Management Console than a quiz application for customer users.
- There is no sharing and leaderboard function, which is crucial for an entertainment fan who might want to share his score with his friends and compete with friends.
- The user didn't notice the progress bar and the timer until I mentioned it to him.

Technical Issues:

- The finish screen disappeared too fast.

Priority Insights:

1. Visualization and animation improvement.
2. Differentiation between quiz application for customer users and management console for admin users.
3. Technical issue with the finish screen.
4. Sharing and leaderboard function.

Wrap-up Questions Response:

Question	Response
On a scale of 1-5, how would you rate the overall effectiveness to complete the task?	4
On a scale of 1-5, how would you rate the overall ease of use to complete the task?	5
What did you find most intuitive about the platform?	All elements are quiz related. This tells the purpose of the platform.

What aspects were most frustrating or confusing?	The platform looks more like a management console instead of a user's product.
How well do you think this platform would meet your needs if you were actually an entertainment fan?	Adding features of share and leaderboard would better meet my needs.
What one feature would you suggest we improve first?	Add more visualization. Make it more dynamic and entertaining.
Is there anything else you'd like to share about your experience today?	Timer and progress bar should be more emphasized.

Experiment 3

Date: 04/16/2025 Participant Name: Zhengyi Xu Session Duration: 15mins

Key Observations:

- The UI doesn't make it clear that users are expected to download a template first before they upload a quiz file when users are creating a quiz.
- Users might wish for other question types.
- The Create button and search feature stands out. The template instruction is concrete.

Technical Issues:

- The platform doesn't support Chinese characters. Chinese characters can't be normally displayed

Priority Insights:

1. UI modification to make it clear that users are expected to download a template first.
2. Support other question types.
3. Support Chinese characters.

Wrap-up Questions Response:

Question	Response
On a scale of 1-5, how would you rate the overall effectiveness to complete the task?	5
On a scale of 1-5, how would you rate the overall ease of use to complete the task?	5
What did you find most intuitive about the platform?	The Create button and search feature stands out. The template instruction is concrete.
What aspects were most frustrating or confusing?	I didn't know that I must download a template first when creating a quiz.
How well do you think this platform would meet your needs if you were actually an educator?	Supporting other question types would better meet my needs.
What one feature would you suggest we improve first?	Make the UI more clear that users should download a template first before they upload a file.
Is there anything else you'd like to share about your experience today?	No.

Prioritized list of issues and corresponding changes

Issue 1: Lack of clear feedback for quiz responses

Change: Implement clear visual indicators for correct and incorrect answers immediately after user response, using color coding (green for correct, red for incorrect) and icons (checkmark/X).

Priority: Must

Was implemented? Yes. Added color-coded response indicators that appears immediately after selection. Also included a brief explanation for incorrect answers to aid learning.

Issue 2: Platform appears as management console rather than user-facing application

Change: Redesign the interface with separate user and admin views; enhance the user interface with more engaging visual elements, animations, and a more intuitive navigation flow.

Priority: Could

Was implemented? No. An account system is required before I start this modification so that I could tell which interface should be presented to customer or admin users.

Issue 3: UI alignment issues with edit and delete buttons

Change: Standardize button placement and sizing across all cards and elements to ensure consistent alignment and improve visual hierarchy.

Priority: Must

Was implemented? Yes. Refactored the card component system to ensure consistent button placement and sizing across all quiz cards.

Issue 4: Lack of sharing and leaderboard functions for entertainment users

Change: Implement social sharing capabilities allowing users to post scores to social media platforms and create a global/friend leaderboard system for competitive engagement.

Priority: Should

Was implemented? No. A lot of effort is required.

Issue 5: Quiz status not reset when restarting

Change: Implement proper state management to ensure quizzes reset completely when a user chooses to restart, showing the first question and resetting all previous answers.

Priority: Must

Was implemented? Yes. Refactored the quiz restart functionality to properly reset all state variables and return to the first question.

Issue 6: Finish screen disappears too quickly

Change: Add a persistence mechanism for the quiz completion screen with a clear "Continue" button that requires user interaction before proceeding.

Priority: Must

Was implemented? Yes. Modified the quiz completion screen to remain visible until user interaction and added detailed performance statistics.

Issue 7: Unclear template download requirement for quiz creation

Change: Redesign the quiz creation flow with clear sequential steps and visual cues highlighting the template download requirement before file upload.

Priority: Would

Was implemented? No. Would provide a better design and improve UI in the future.

Issue 8: Limited question types available

Change: Expand available question types to include matching, fill-in-the-blank, short answer, and multimedia questions in addition to multiple choice.

Priority: Could

Was implemented? No. A lot of effort is required to do research, design and implement.

Issue 9: Lack of support for non-Latin characters (Chinese)

Change: Update the application to properly support Unicode character sets, especially for Asian languages including Chinese, Japanese, and Korean.

Priority: Should

Was implemented? No. Would do more research on this and try to fix it.