SLIDE 1

Hello! My name is Amelia Bates. Today, I'll be presenting the results of my user observational study, which compares two user interfaces: the Sequential Tutorial and the User-Managed Checklist. The purpose of this study was to determine which system offers better usability for college students using the SQ3R study method. Let's explore the methodology, results, and key insights.

SLIDE 2

To conduct the study, I recruited four participants, each with different academic backgrounds. These included majors like Elementary Education, Sociology, and Art, which provided some diversity in learning preferences. Future research would benefit from a larger sample size, increased diversity in age, and inclusion of STEM Majors.

The goal of this study was to measure usability through two metrics: how long it took participants to complete the SQ3R method and their performance on a five-question quiz about the material.

The study used a between-subjects design to avoid learning effects, meaning each participant used only one of the two systems. Participants were randomly assigned to either the Sequential Tutorial or the User-Managed Checklist using an online generator.

SLIDE 3

These are quiz questions created to measure participants' comprehension of the SQ3R method and the reading material.

The quiz consisted of five multiple-choice questions, such as:

- *Why is the 'Survey' step important in the SQ3R method?*
- *What is the main distinction between the 'Question' step and the 'Recite' step?*
- *What is the potential risk of burying the topic statement within a paragraph?*

The variety in question types ensured a balanced evaluation of their comprehension and critical thinking skills related to the method.

The purpose of this quiz is to gain insight into the effectiveness of the two systems, as it directly measured the impact of their designs on users' learning outcomes.

SLIDE 4 + 5

Moving on to the results, let's look at the quiz performance. The participants using the User-Managed Checklist achieved perfect scores, demonstrating strong comprehension. However, participants using the Sequential Tutorial scored lower on average.

This suggests that the flexible design of the checklist system allowed users to focus on comprehension, while the tutorial's structured design might have distracted them from the learning material. However, this may reflect individual prior knowledge and education rather than system design. This is especially plusable as both participants of the User-Managed Checklist System are in the educational field and in research/reading intensive majors.

SLIDE 6 + 7

Next, let's talk about task completion times. Participants using the Sequential Tutorial took an average of 15 minutes and 12 seconds, whereas those using the User-Managed Checklist took slightly longer at 17 minutes and 28 seconds.

This is interesting because it contrasts with my initial hypothesis. I expected the checklist system to be faster due to its flexibility, but it turns out that the extra freedom led to more self-directed exploration and, in some cases, backtracking.

The tutorial system's step-by-step design ensured that the participants worked linearly, which contributed to shorter completion times

SLIDE 8

To summarize, this study revealed an important tradeoff between structure and flexibility in user interface design. The Sequential Tutorial was better at guiding users through the process efficiently, making it ideal for beginners. However, the User-Managed Checklist enabled higher comprehension scores, showing its value for more experienced users. One thing of note is that despite all the participants being instructed on how to use the SQ3R method prior to the study, none of the participants completely applied the method. For instance, both participants in the User-Managed Checklist neglected to survey the material before writing notes. And the participants in the Sequential Tutorial did not Recite their questions and answers and only briefly did the Review step.

Overall, this project emphasized the value of user-centered design and iterative testing. By observing real users, it showed important insights that might otherwise be overlooked during development. Thank you!