

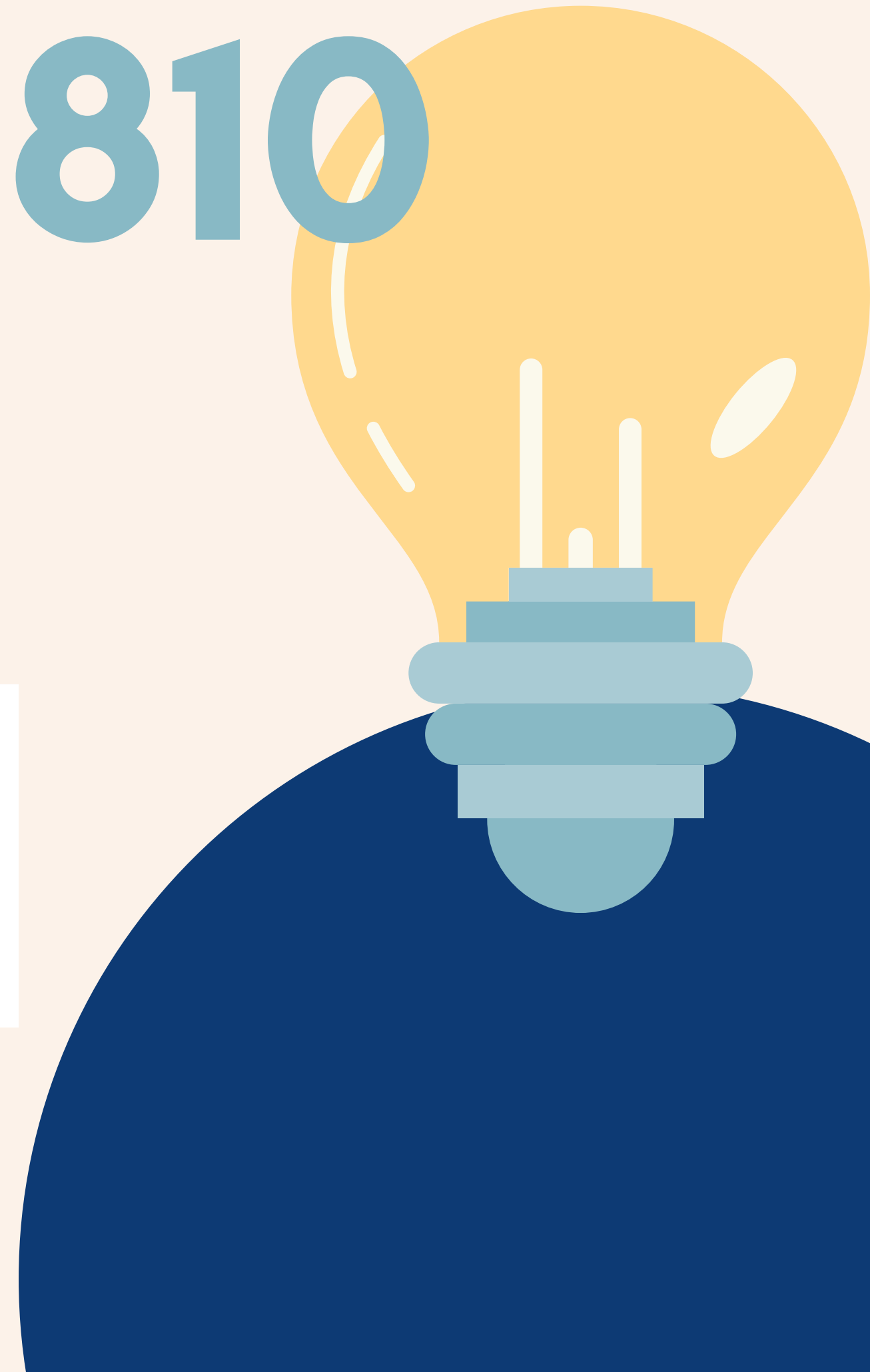
TSLE: EDRS 810

IN CANVAS



CHERYL BURRIS, YUEQING ZHONG, AND
RACHEL LUGO

EDIT 802: COGNITION AND TECHNOLOGY
DR. NADA DABBAGH
DECEMBER 10, 2024



INTRODUCTION



Objective: Analyze EDRS 810:
Education Research Methods in Canvas
LMS as a TSLE using the co-created
scale.

Key Points:

- Platform Overview: Canvas serves K-12, higher education, and professional learning.
- Course: Held weekly in person on Thursday evening

Canvas Features



- User-friendly, modular design.
- Tools: Assignments, feedback, announcements, and integrations (e.g., Zoom).
- Analytics for student engagement.
- Accessibility: Screen reader compatibility, mobile app, third-party integrations.
- Target Audience: Doctoral-level course at George Mason University.
- Learning Outcomes: Structured, adaptable educational delivery.
- Learning Activities:
 - Collaborative and socially engaged learning
 - Multifaceted communication approach
 - Collective knowledge building
- Assessment:
 - Diverse assessment methods
 - Personalized feedback and evaluation
 - Flexibility

Technology Overview

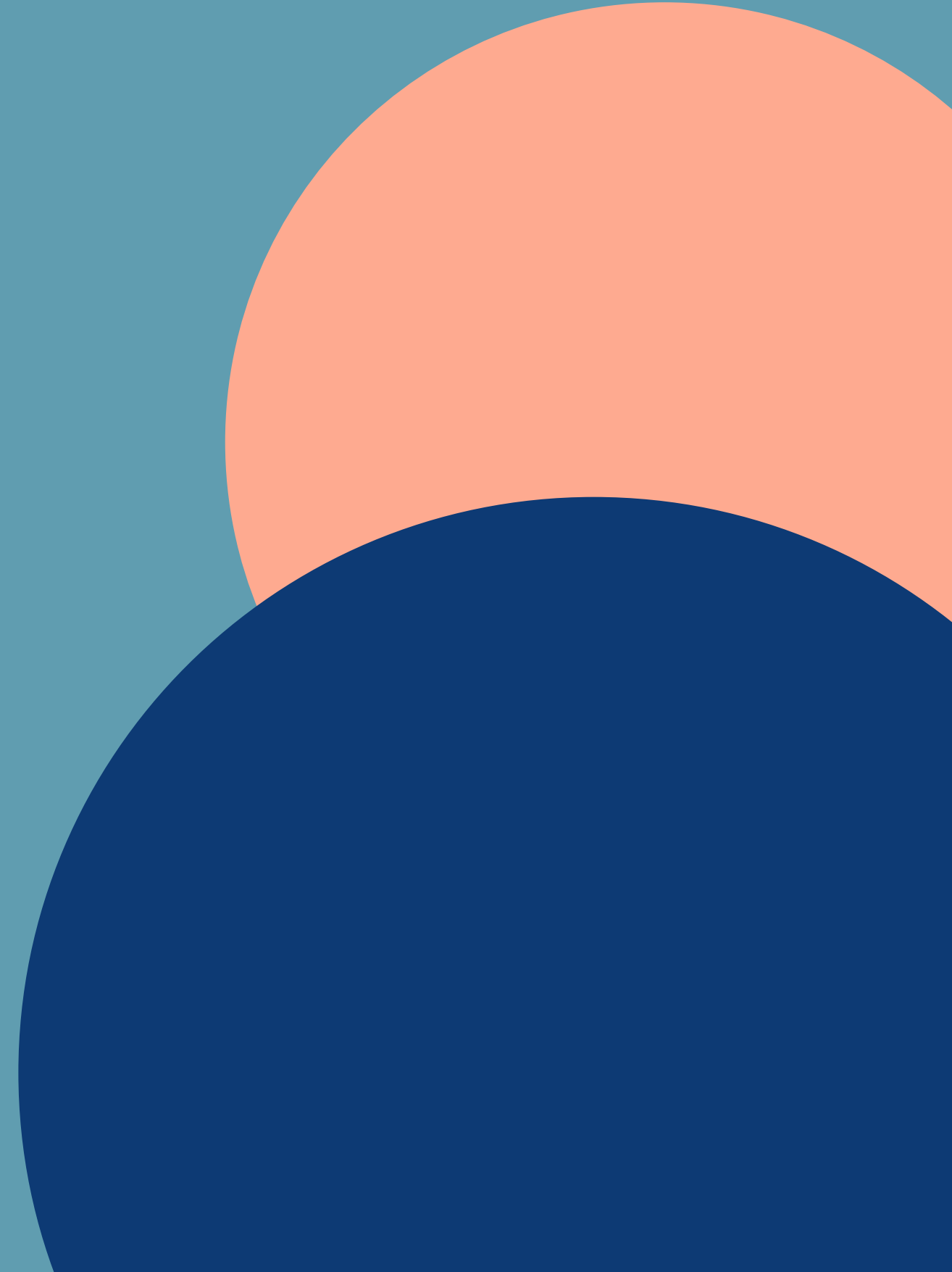


- **Core Features:**

- Modular content, multimedia tools, and communication features.
- Synchronous (video conferencing) and asynchronous (discussion boards).
- Analytics for performance tracking.

- **Classification Frameworks:**

- Kitsantas & Dabbagh (2010): Self-regulated learning through progress tracking and reflection.
- Dabbagh et al. (2019): Network-based tools fostering collaboration.



Observation Process



- **Observation Details:**
 - Independently observed and analyzed
 - Timeframe: November–December 2024.
- **Methodology:** Likert scale evaluation, individual and team assessments.
- **Data Sources:** Instructor tools, student interactions, and course structure.
- **Triangulation:** Ensured consistency in ratings.
- **Initial Expectations and Assumptions:** TSLE would contain all scale items
- **Challenges or Limitations:**
 - Lack of synchronous options
 - No adaptive technology integration

OBSERVATION RESULTS



Average Scores by Conditions:

- **Usability** – Perfect score: 100%
- **Feedback** – High score: 86%
- **Scaffolding** – Mixed performance: 58%
- **Accessibility** – High score: 83%
- **Social Interaction** – Moderate score: 69%

Overall Observations:

- Strong platform design with standout features in usability and accessibility.
- Targeted enhancements are recommended for scaffolding, feedback, and synchronous interaction tools.
- Course offered many options for engagement.

Analysis of Results



Overall Scores by Conditions:

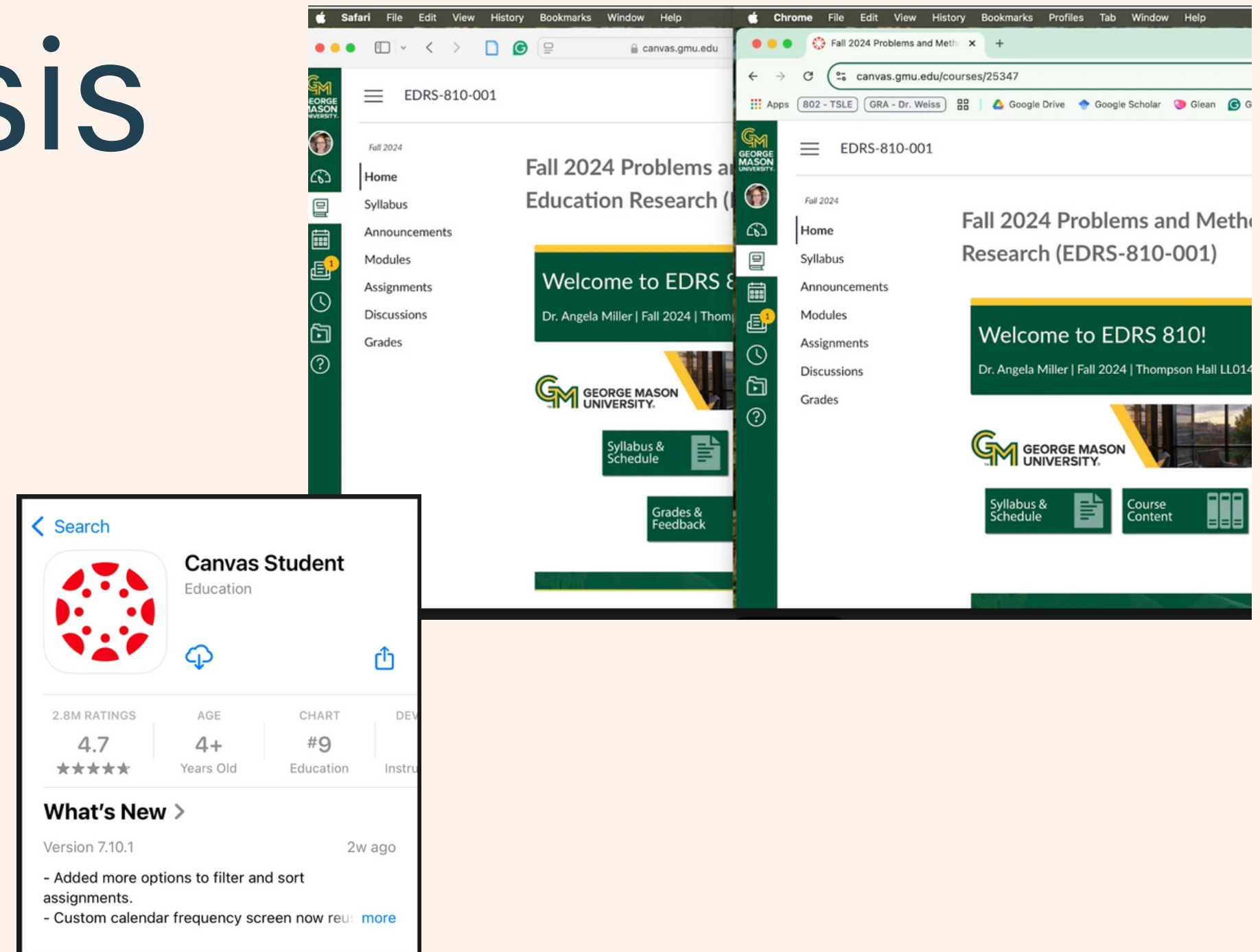
- Usability: $36/36 = 100\%$
- Feedback: $31/36 = 86\%$
- Scaffolding: $21/36 = 58\%$
- Accessibility: $30/36 = 83\%$
- Social Interaction: $25/36 = 69\%$

Explanation for Missing Features:

- Unobserved Criterion – Exclusion: Zoom can be integrated but was not activated
- Unobserved Criterion – Lack of Awareness: Lucid is collaborative and available but participants were not informed it was available for their use

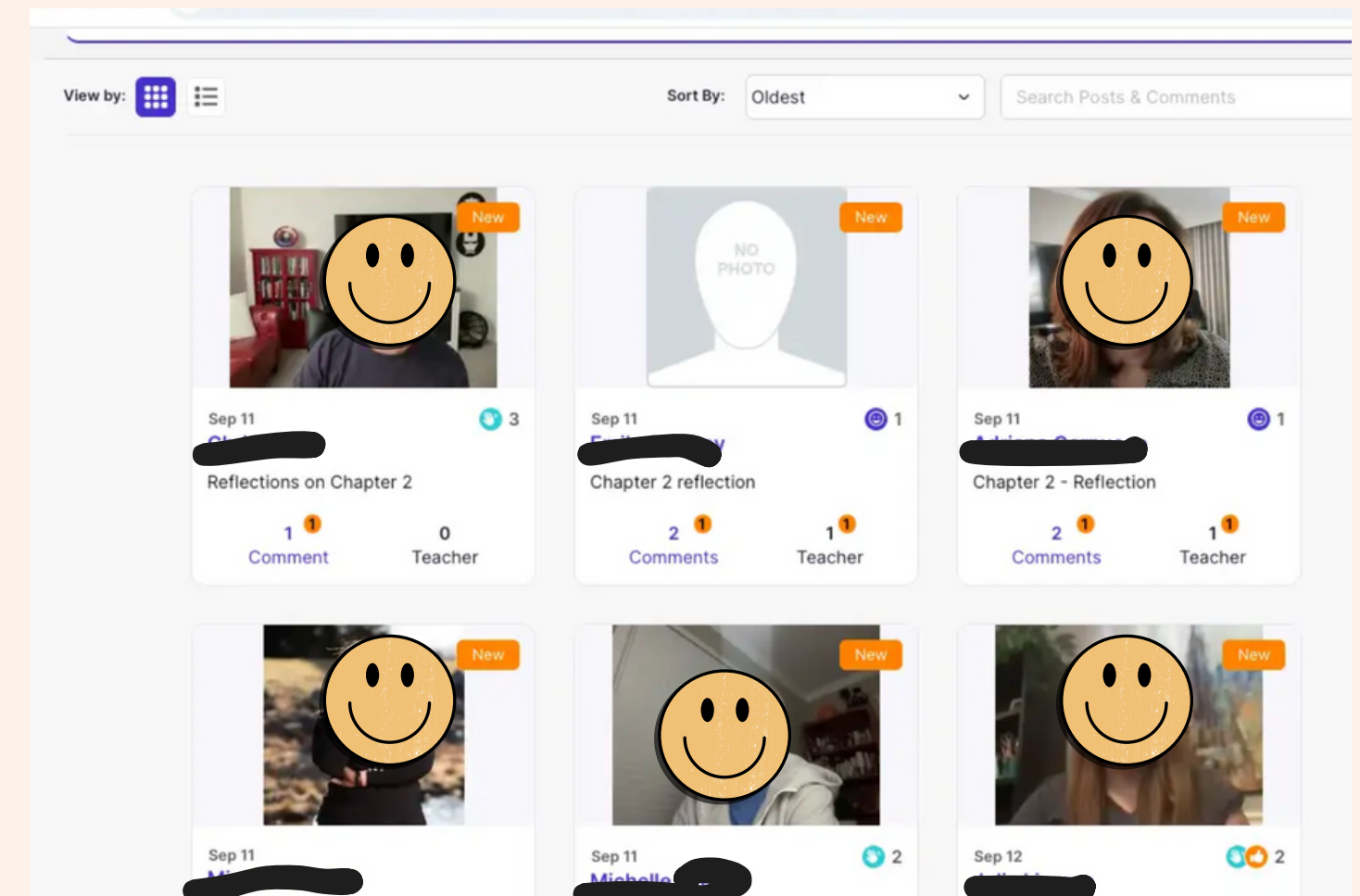
Usability Analysis

- **Strengths:**
 - Access across devices and browsers
 - Intuitive interface
 - Multimedia support
- **Challenges:** None observed

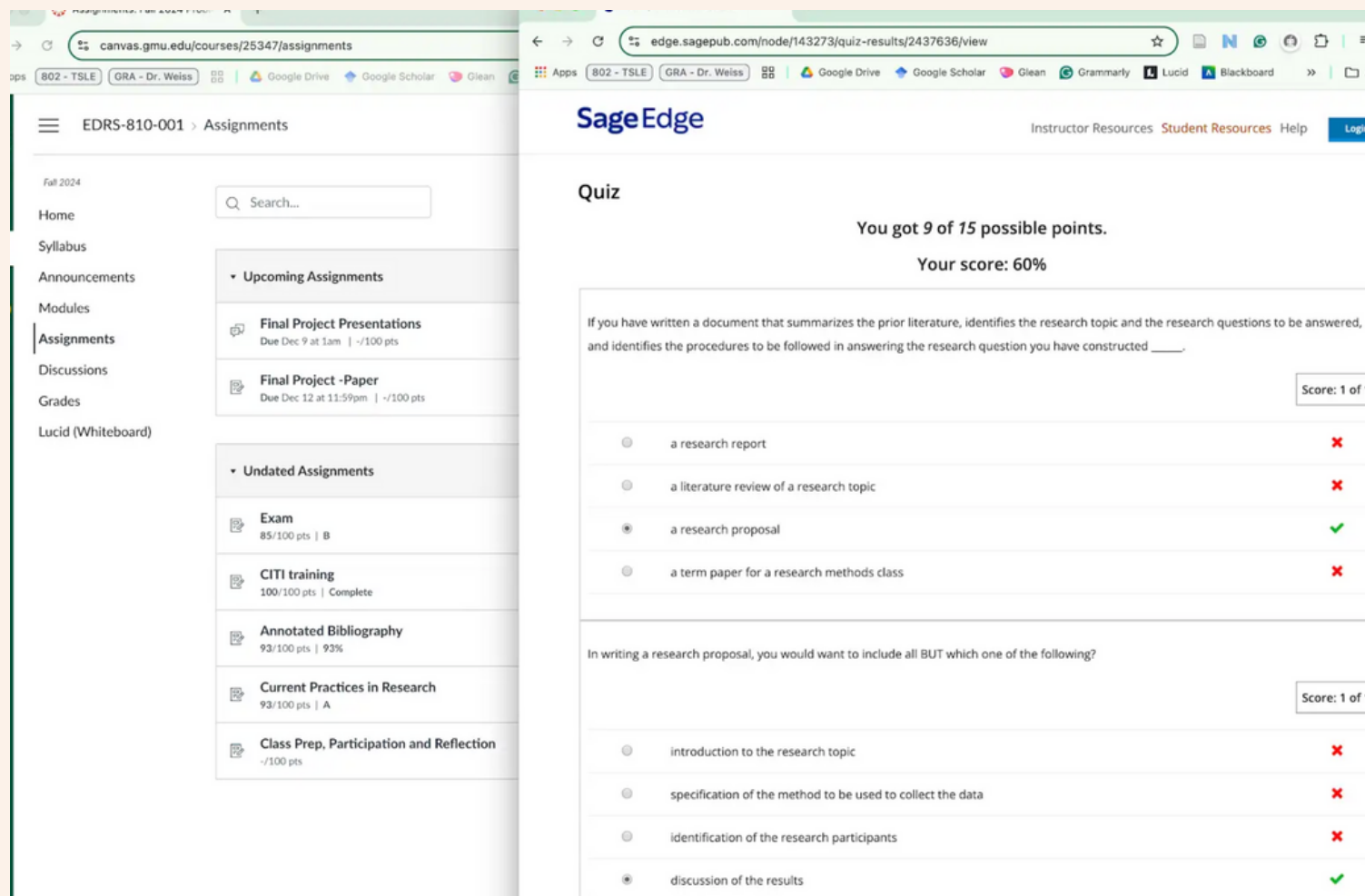


Feedback Analysis

- **Strengths:**
 - Personalized feedback for learners
 - Robust peer-to-peer and instructor feedback
- **Challenge:** Lower scores for automated feedback



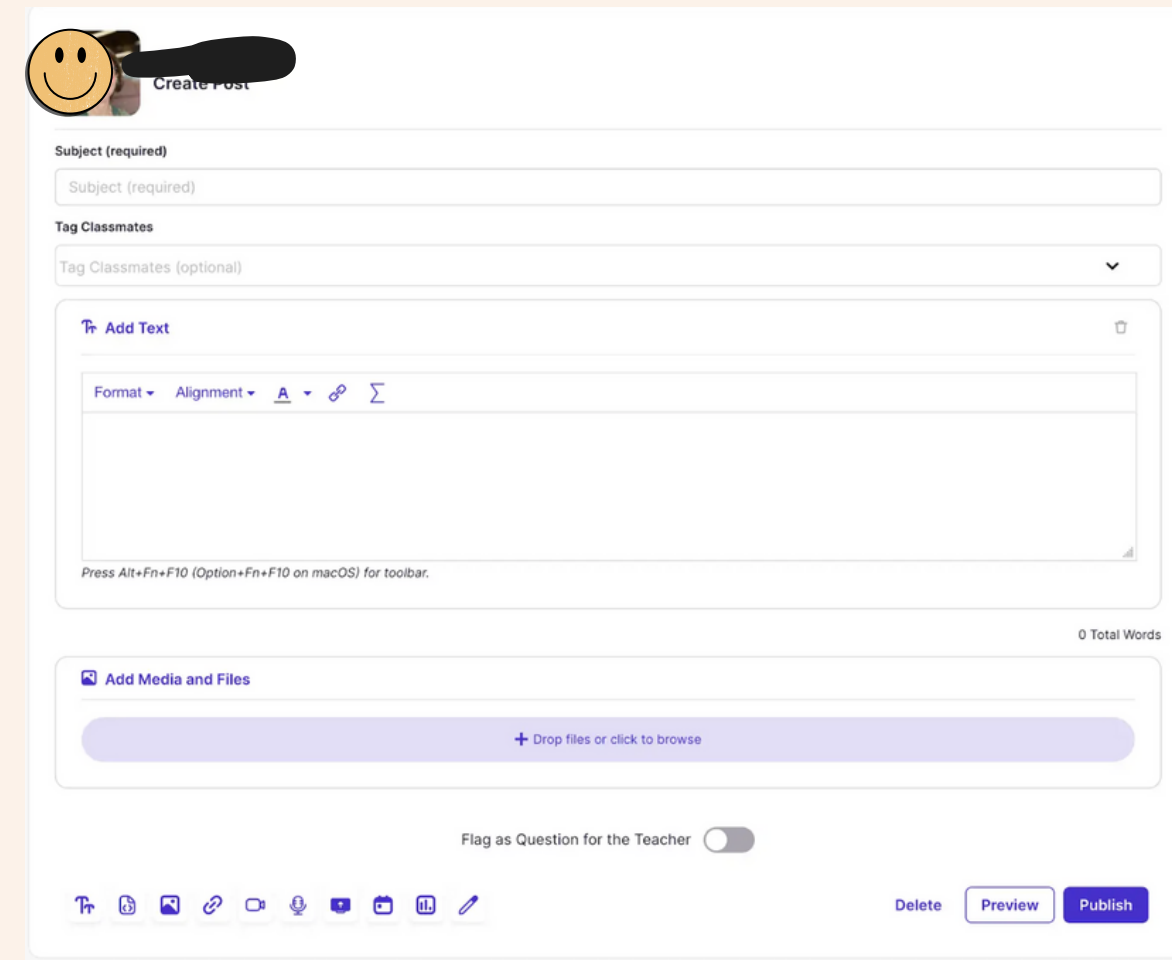
Scaffolding Analysis



- **Strengths:**
 - Tailored guidance through feedback
 - Complex problem-solving tools were available but not used
- **Challenges:** Limited self-assessment opportunities

Accessibility Analysis

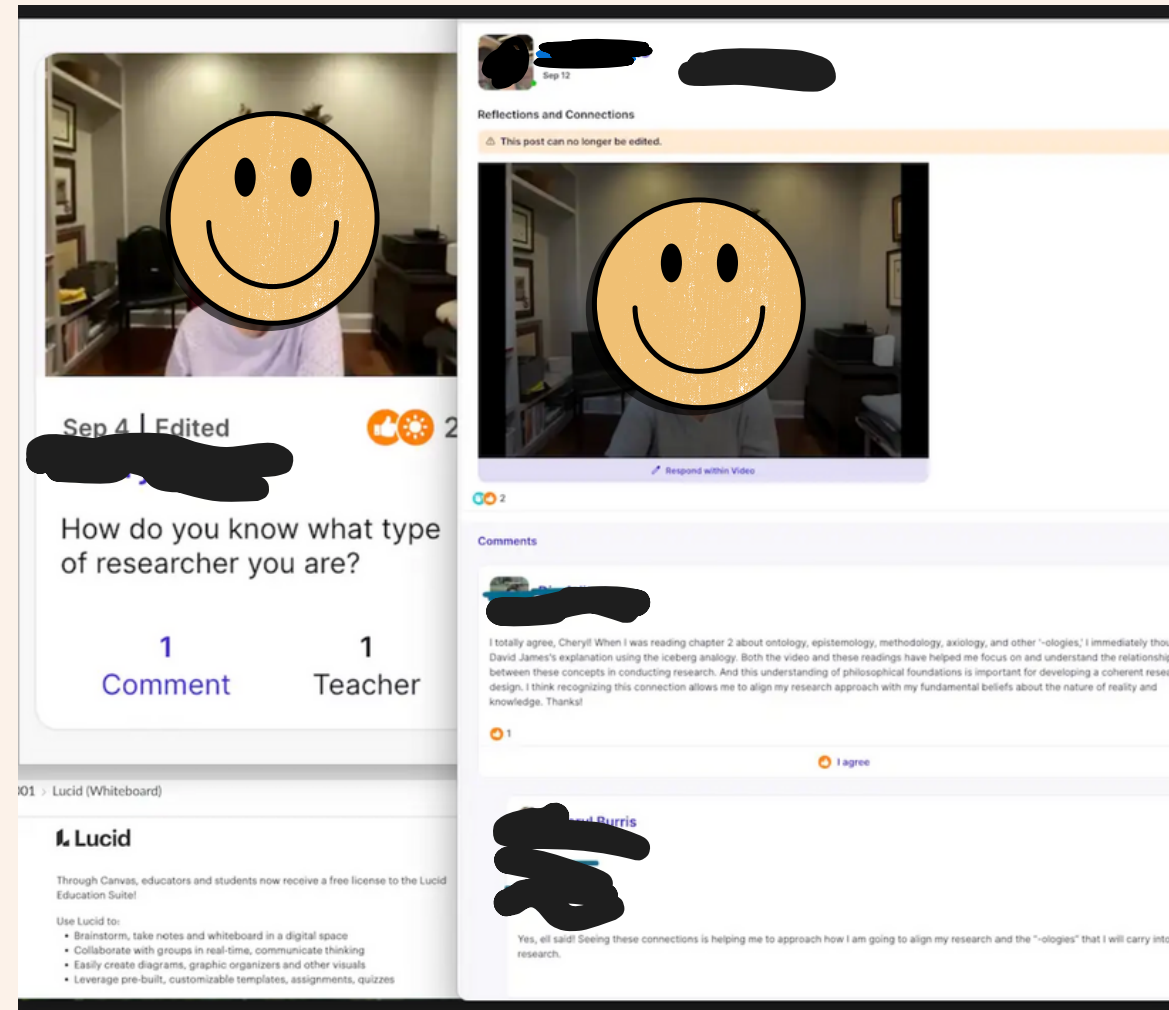
- **Strengths:**
 - Multiple engagement methods
 - Clear cognitive load reduction
- **Challenges:** Limited media control options



The screenshot shows a user interface for creating a post. At the top, there is a profile picture of a smiley face and a 'Create Post' button. Below this is a 'Subject (required)' text input field. Underneath is a 'Tag Classmates' section with a dropdown menu and a 'Tag Classmates (optional)' text input field. The main content area is titled 'Add Text' and contains a rich text editor with a toolbar showing options for Format, Alignment, Text Color, Link, and Summation. Below the editor is a note: 'Press Alt+Fn+F10 (Option+Fn+F10 on macOS) for toolbar.' To the right of the editor, it says '0 Total Words'. Below the text area is an 'Add Media and Files' section with a large purple button that says '+ Drop files or click to browse'. At the bottom, there is a toggle switch labeled 'Flag as Question for the Teacher'. The footer contains a row of icons for various media and editing functions, and three buttons: 'Delete', 'Preview', and 'Publish'.

Social Interaction Analysis

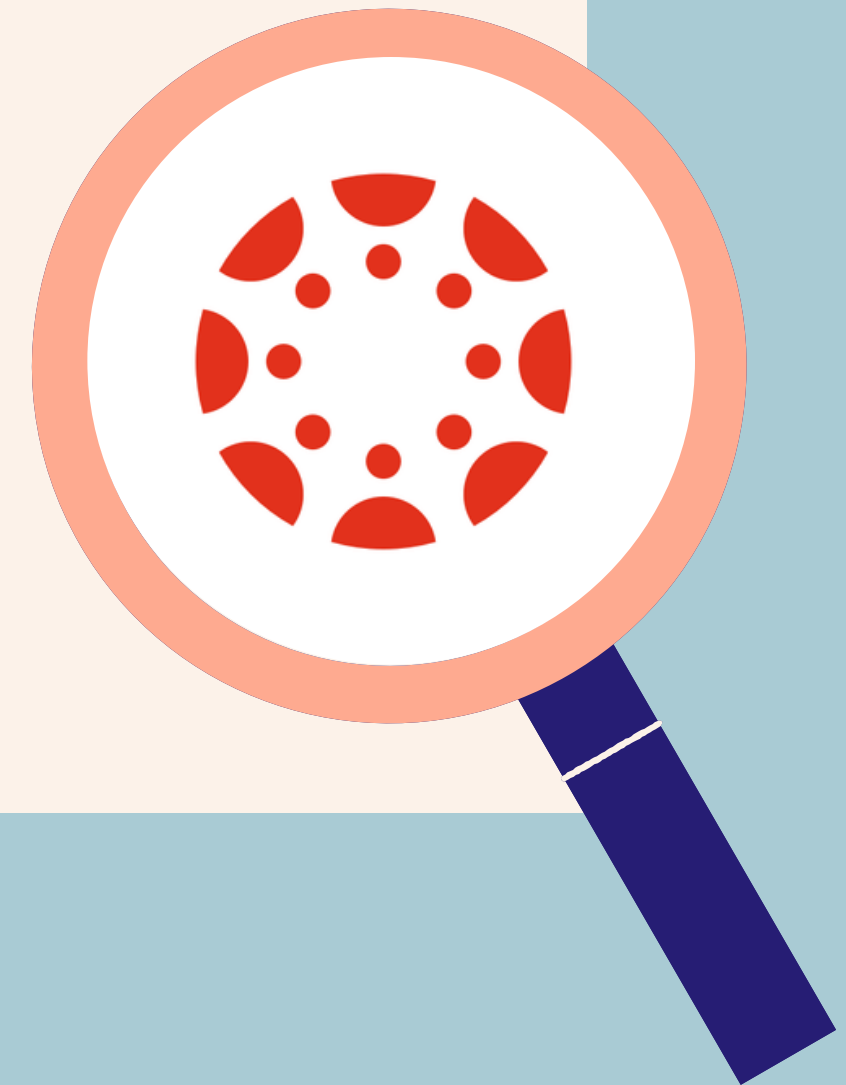
- **Strengths:**
 - Collaborative learning tools (discussion boards, group work)
- **Challenges:** Synchronous tools underutilized



A horizontal row of 25 orange dots of varying sizes, some solid and some outlined, arranged in a slightly wavy pattern across the width of the page.

- A robust, user-friendly platform supporting diverse learning environments
- High usability, feedback, and accessibility scores

- Enhance synchronous tools
- Improve self-assessment options
- Explore advanced media control features



References

Allen, M. W. (2016). Michael Allen's guide to e-learning: Building interactive, fun, and effective learning programs for any company. Wiley.

Chang, H., Wang, C., Lee, M., Wu, H., Liang, J., Lee, S., Chiou, G., Lo, H., Lin, J., Hsu, C., Wu, Y., Chen, S., Hwang, F., & Tsai, C. (2015). A review of features of technology-supported learning environments based on participants' perceptions. *Computers in Human Behavior*, 53, 223-237. <https://doi.org/10.1016/j.chb.2015.06.042>.

Dabbagh, N., Marra, R. M., & Howland, J. L. (2019). *Meaningful online learning: Integrating strategies, activities, and learning technologies for effective designs*. Routledge: New York.

Grassi, P., E. Garcia, M., & L. Fenton, J. (2017, January). Digital identity guidelines. National Institute of Standards and Technology. <https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-63-3.pdf>

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81-112. <https://doi.org/10.3102/003465430298487>

Iwarrson, S., & Ståhl, A. (2003). Accessibility, usability and universal design—positioning and definition of concepts describing person-environment relationships. *Disability and Rehabilitation*, 25(2), 57-66. <https://doi.org/10.1080/dre.25.2.57.66>

Kitsantas, A., & Dabbagh, N. (2010). *Learning to learn with integrative learning technologies (ILT): A practical guide for academic success*. Information Age Publishing.

Koh, C., & Koh, C. (2015). *Motivation, leadership and curriculum design: Engaging the net generation and 21st century learners* (2015 edition.). Springer Singapore Pte. Limited. <https://doi.org/10.1007/978-981-287-230-2>

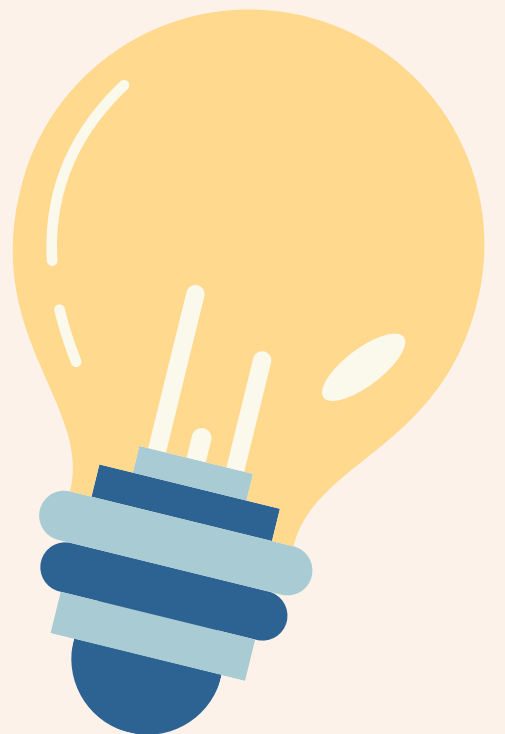
Rambe, P. (2012). Critical discourse analysis of collaborative engagement in Facebook postings. *Australasian Journal of Educational Technology*, 28(2), 1333-1345. <https://doi.org/10.14742/ajet.775>

Seale, J. (2014). *Digital inclusion: The role of technology in addressing digital divides*. Routledge

UX Magazine. (2020, December 20). Accessibility in UX: The case for radical empathy. <https://uxmag.com/articles/accessibility-in-ux-the-case-for-radical-empathy>

What is a likert scale? (n.d.) QualtricsXM. Retrieved December 7, 2024, from <https://www.qualtrics.com/experience-management/research/likert-scale/#:~:text=A%20likert%20scale%2C%20or%20rating,For%20example:>

Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry*, 17(2), 89-100. <https://doi.org/10.1111/j.1469-7610.1976.tb00381.x>



Questions or Comments?

No? Thanks for joining us today!

Yes? Reach out – Let's Chat!

