An Examination of Online Discussions in Higher Education: Leveraging Technology to Increase Learner Engagement and Collaboration

Bettina M. Mrusek Ph.D.
Assistant Professor - College of Aeronautics, Embry-Riddle Aeronautical University, mrusekb@erau.edu

Felix De Brito Neto Ph.D.
Assistant Professor - College of Aeronautics and Executive Director of Instructional Design & Development, Embry-Riddle Aeronautical University, debritoj@erau.edu

Follow this and additional works at: https://commons.erau.edu/ntas

Part of the Curriculum and Instruction Commons, Educational Assessment, Evaluation, and Research Commons, Educational Methods Commons, and the Higher Education Commons

https://commons.erau.edu/ntas/2018/presentations/24

This Presentation is brought to you for free and open access by the Conferences at Scholarly Commons. It has been accepted for inclusion in National Training Aircraft Symposium (NTAS) by an authorized administrator of Scholarly Commons. For more information, please contact commons@erau.edu.
An Examination of Online Discussions in Higher Education: Leveraging Technology to Increase Learner Engagement and Collaboration

Dr. Felix De Brito Neto and Dr. Bettina Mrusek
Embry Riddle Aeronautical University
Despite the popularity of online discussion forums, many do not achieve the intended transfer of knowledge.

• Research question
• Literature Review
• Theoretical Framework
• Research Methodology
• Conclusions and Recommendations
Research Questions

• **Q1.** Does the inclusion of audio technology, specifically VoiceThread, affect the transfer of knowledge?

• **Q2.** Does the inclusion of audio technology, specifically VoiceThread, affect learner engagement?

• **Q3.** Does the inclusion of audio technology, specifically VoiceThread, affect learner collaboration?
Literature Review

• Evolution of the online learning environment
• Quality
• Role of technology
Theoretical Framework

• Edward Deming’s Plan, Do, Check, Act (PDCA) Cycle

- Plan: The identification of a clear goal for which the cycle is applied.
- Do: The plan is implemented.
- Check: The outcomes are evaluated to determine if intent was met.
- Act: Continue to monitor and test process; adjust as needed.
Research Methodology

• Independent variable:
  • Discussion forums with enhanced audio/visual applications
  • Discussion forums without enhanced audio/visual applications

• Dependent variable: Engagement of online learners

• Causal-effect relationship

• Pre-test/post-test – Quasi-experimental design

• Measure: Grades of participation in discussion forums
Conclusions and Recommendations

• VoiceThread is AWESOME! When used properly, and in the right conditions, it can improve learner engagement and collaboration in aviation and aerospace education.
QUESTIONS?