Adoption of Innovative Online Pedagogies: Influences Measured by the Diffusion of Innovation Theory

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Research Problem

- One of the largest movements to online teaching and learning in higher education was due to a pandemic which shifted thousands of college students and faculty to online learning.

- ***This shift created a critical need for faculty resources and the adoption of new pedagogies.*** Faculty needed to develop new online teaching skills in order to create high-quality online instruction.

- The purpose of this study was to determine how the DOI characteristics influence faculty in the rate of adoption of innovative online pedagogies.

Theoretical Framework

This study was guided by the ***Diffusion of Innovations (DOI)*** theory with the purpose of determining how the DOI characteristics influence faculty in the adoption of innovative online pedagogies.

The DOI survey measures 8 perceived characteristics of innovation that faculty face in adopting new online pedagogies for online teaching.
1. Relative advantage
2. Image
3. Compatibility with existing values and practices
4. Ease of Use
5. Visability
6. Results Demonstrability
7. Trialability
8. Voluntariness

Question #9 is a self-rating of adoption of innovation.

Watch: Diffusion of Innovation

2.5% Innovators | Early Adopters 13.5% | Early Majority 34% | Late Majority 34% | Laggards 16%
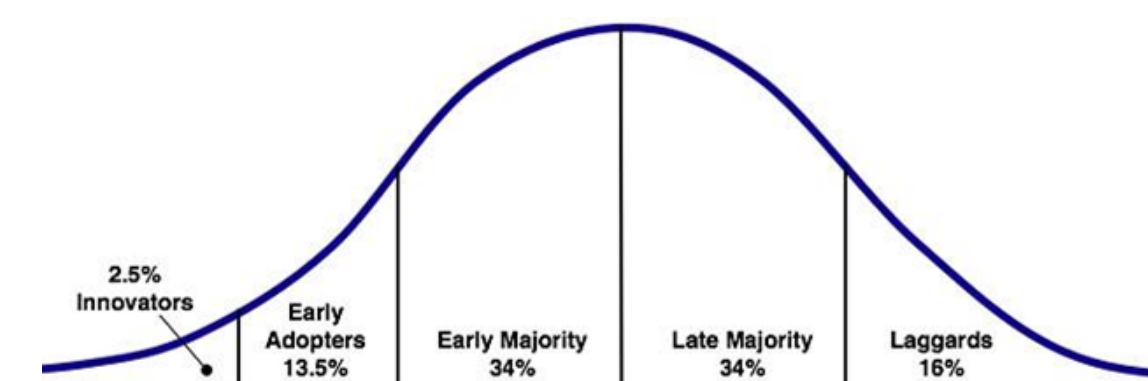
Demographics/ Methods / Analysis

After faculty participated in at least one of the three faculty development courses, they were invited to complete a Diffusion of Innovations (DOI) survey to measure their perception of the characteristics that influenced their level of adoption of new online pedagogies.

- **Sample**
  - The faculty participant list was deduplicated
  - Participants remained on the list if they had spent some time in at least one of the courses
- **Survey**
  - 25 DOI questions, 1 Innovation Score,and 2 qualitative questions that were open ended.
  - The survey was emailed to 121 participants; two reminders were sent after the initial email
  - 8 emails bounced
  - 21 surveys started
  - 17 surveys finished
  - 5 surveys blank
  - 12 surveys were completed

- **Limitations / Threats**
  - History: survey was conducted during a pandemic
  - Timing: The survey was first sent out in November which is a busy time of year. Would recommend finding a better time of the year to send out a survey so faculty are more likely to complete or offer an incentive to complete the survey.
  - Selection of subjects
  - Participant Bias: Survey said it was anonymous, however, this can still cause anxiety in participants
  - Research Bias: interpretation of the data, looking for results
  - Small sample size is not generalizable
  - Volunteer participation in survey can lead to bias
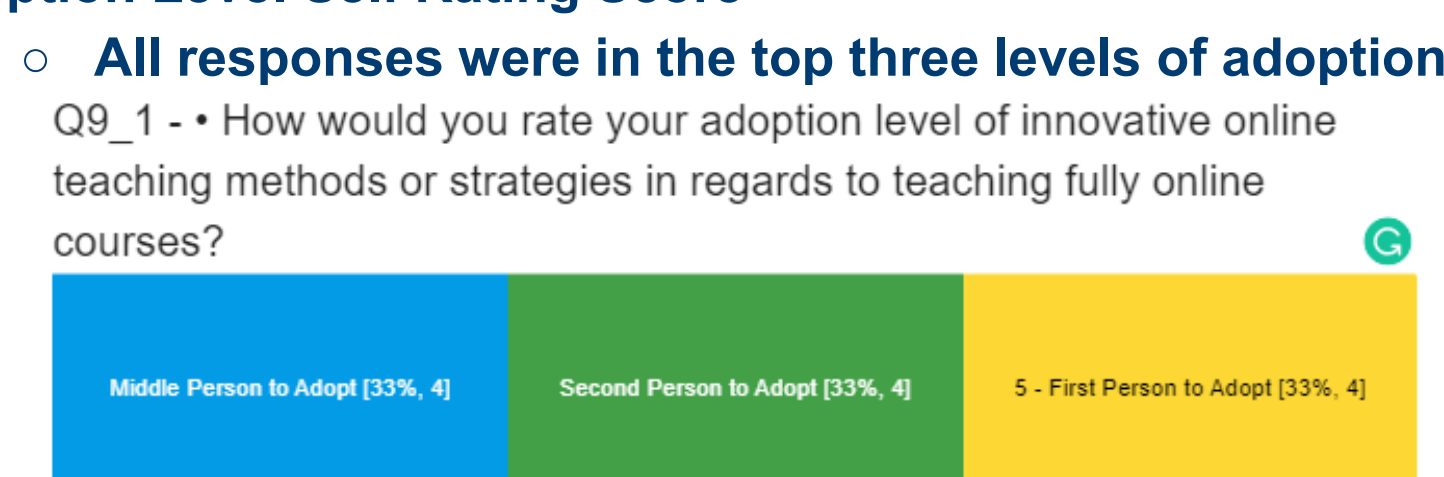
Copy of the Qualtrics Report

Qualitative Feedback

- **Please share what you think was most valuable to help faculty adopt new pedagogies in the Journey to Online Learning faculty development courses.**
  - I could work at my own pace, and I could review information when needed. The segment lengths were appropriate.
  - Learning the variety of tools available and also how courses online are designed for ease of use for students.
  - Streamline the process and transparency.
  - I used it when forced to teach online for the pandemic. I already had a lot of pedagogical knowledge so the modular design of the faculty development course was extremely valuable; I could spend time on new ideas and was not forced to review things I already knew.
  - Having examples is beneficial overall. On our campus, we were able to use information from these courses to help craft messaging and specific practice activities to our faculty based on what their specific and current needs were at the time.

- **Please share what you think could be changed to improve the Journey to Online Learning faculty development to help faculty adopt new online teaching strategies and methods.**
  - This survey provided no opportunity for a neutral of not applicable response.
  - I would like to have some more examples of course templates that are successful.
  - Shorter. Too much content.
  - The initial course -- the design course -- had no application to real life in the transition to online teaching caused by the pandemic.

Quantitative Results

Three questions stood out in the analysis of the data:
- **High Standard Deviation** (.92)
  - Q6.1 In my organization, I see other Journey to Online Learning Professional development faculty using the knowledge and skills I gained. (Mean= 2.25)
- **Low Standard Deviation** (.37)
  - Q5.1 I would have no difficulty telling others how I implemented the skills I learned. (Mean = 3.17)
- **Adoption Level Self Rating Score**
  - **All responses were in the top three levels of adoption**
    Q9_1 - • How would you rate your adoption level of innovative online teaching methods or strategies in regards to teaching fully online courses?

    Middle Person to Adopt [33%, 4] | Second Person to Adopt [33%, 4] | 5 - First Person to Adopt [33%, 4]

Conclusion / Further Research

- Higher Education is in a state of change and there is critical need to support faculty in their development of online teaching knowledge and innovation. Our ability to innovate depends upon the professional development provided and the adoption of innovative teaching strategies by faculty to create high quality educational courses. Further research needs to be conducted with a larger sample of faculty to determine how the DOI characteristics influence faculty adoption rates of innovative online pedagogies. This data will help instructional design professionals develop different faculty development practices and messages for different 'types' of adopters.

Acknowledgements