ENHANCING INSTRUCTOR DIGITAL LITERACY: EVALUATING AND UTILIZING TECHNOLOGICAL TOOLS

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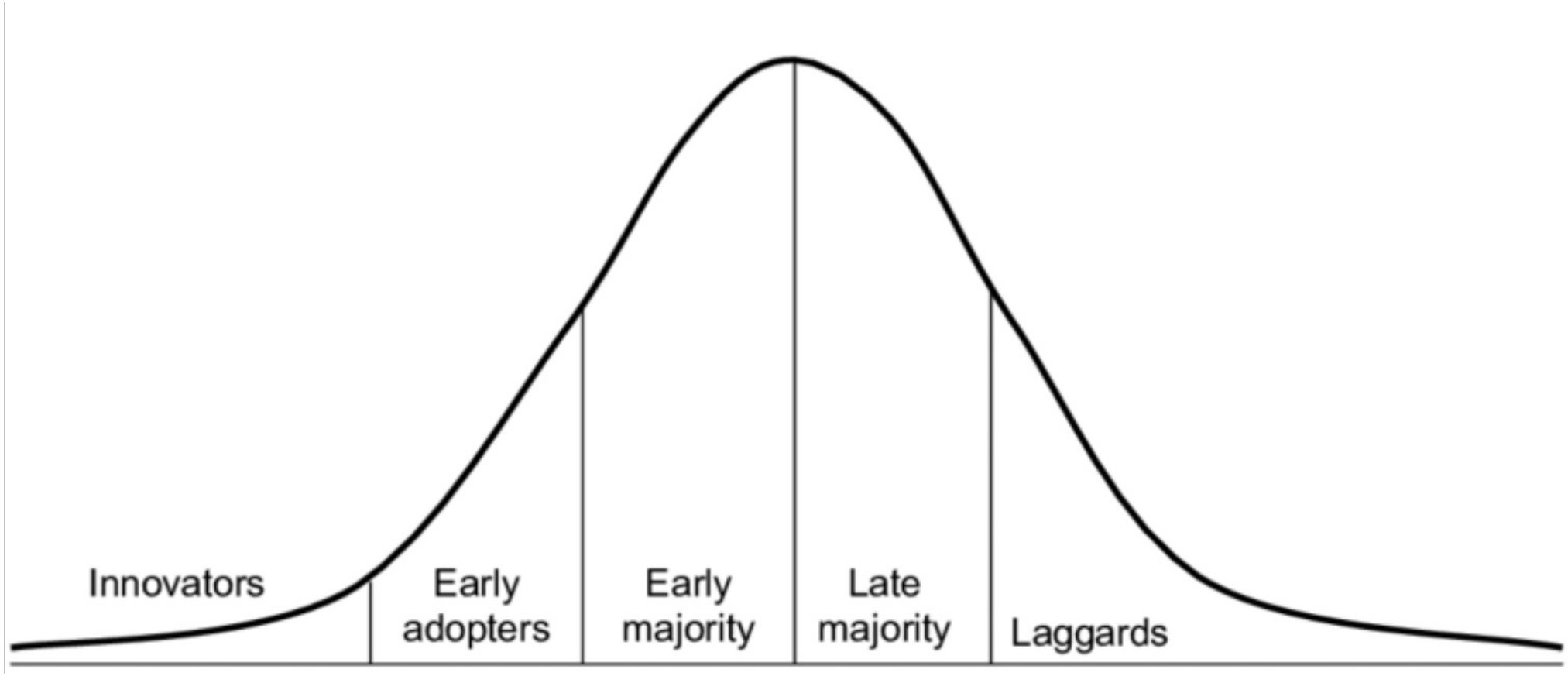
SFU CENTRE FOR EDUCATIONAL EXCELLENCE

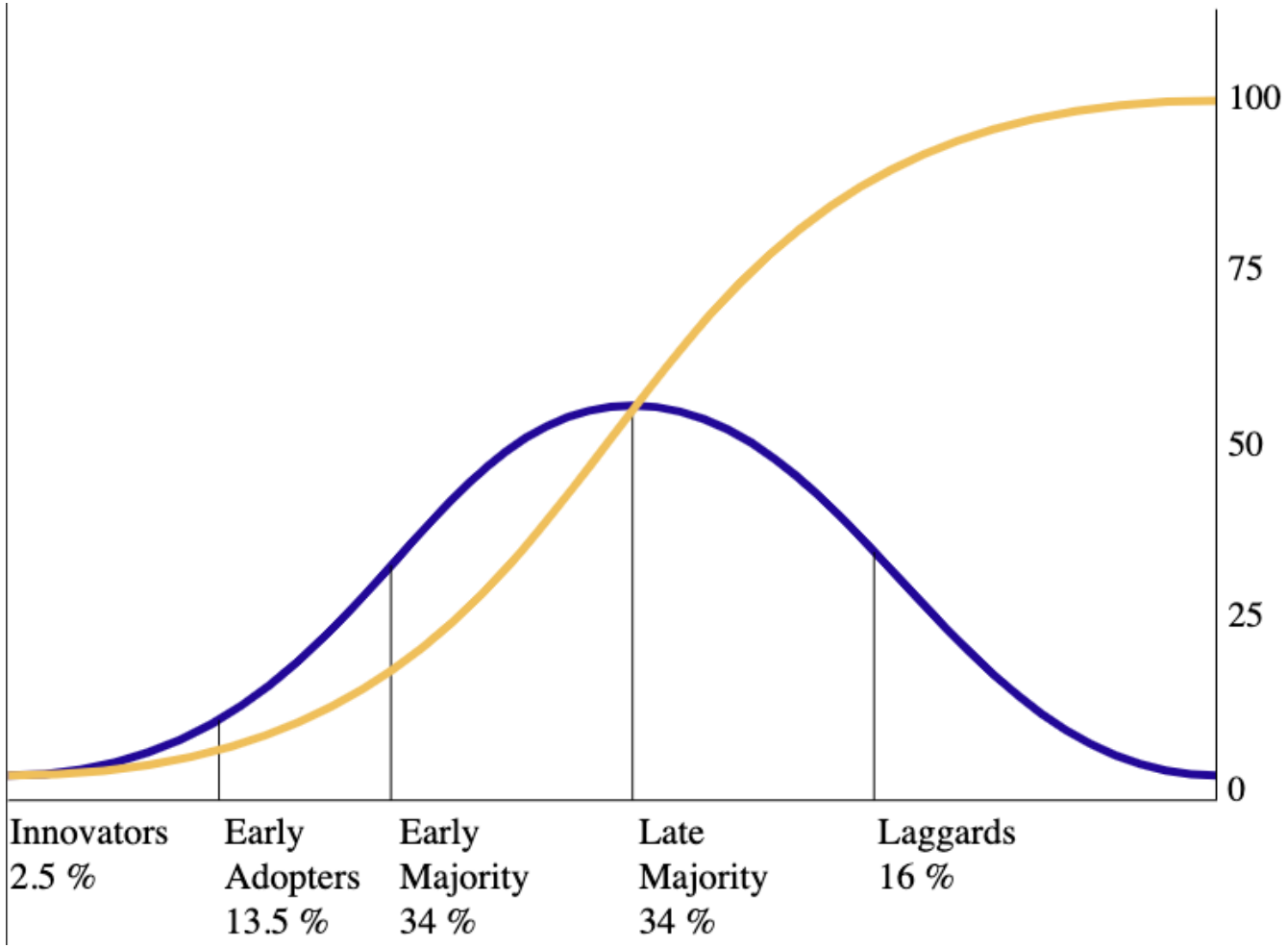
Introduction

Background



Adapted from: (Adapted from Rogers, 1995)

Background



By Rogers Everett - Based on Rogers, E. (1962) Diffusion of innovations. Free Press, London, NY, USA., Public Domain, https://commons.wikimedia.org/w/index.php?curid=18525407

Session Outcomes

- Identify common challenges and barriers to technology integration and adoption for higher education educators
- Explore practical strategies to address the barriers
- Present a draft of a guide to assist in mindful tool selection

Technology Supports for Digital Literacy

- **A range of digital tools:** Basic software & advanced educational technology
- **Professional development:** Technical skills & pedagogical strategies
- **Technical support:** Help desks, online resources, & consultations
- **Policies and guidelines:** Security, data privacy, & ethical technology use
- **Accessibility and inclusivity:** Accessible learning materials, alternative formats, & flexible learning opportunities
- **Collaborative learning:** Interactive engagement & social learning
- **Evaluation and feedback:** Pilot programs, surveys, data-driven decisions

Benefits of Technology Adoption / Integration

Students

Benefit	Example
Personalized Learning	Adaptive Learning Platforms
Collaborative Learning	Digital Collaboration Tools
Digital Literacy	Being job ready
Accessibility	Assistive Technologies, Digital Access
Engagement and Interaction	Student Response Systems, Discussions

Benefits of Technology Adoption / Integration

Instructors

Benefit	Example
Organization and efficiency	Grouper, AI, LMS, Integrations
Providing Timely Feedback	Crowdmark, Comment Library
Accessibility	Multi-modal learning, LMS
Supporting Pedagogy	Everything

Activity: Self-Evaluation on Technology

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Self Evaluation on Digital Literacy Supports

a) I am curious about new technologies

b) I feel confident in investigating new technologies on my own

c) I feel confident in troubleshooting and supporting faculty with technologies

d) I feel confident in assisting faculty to select tech tools to support various learning and teaching objectives

Barriers to the Development of Digital Literacy

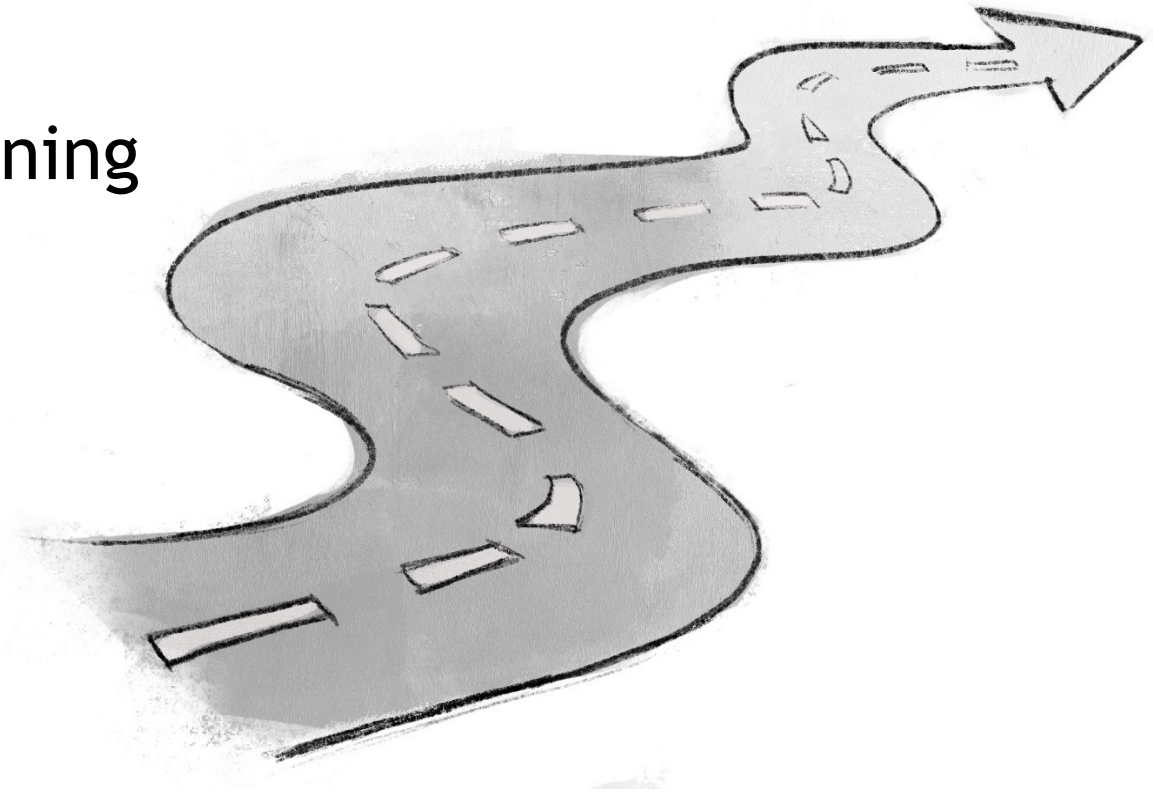
- **Extrinsic Factors**
  - Institutional support
    - Administrative prioritization and technical support
    - Clarity of expectations
    - Funding for technology integration
  - **Resource Constraints**
    - Limited access to devices for both instructors and students
    - Insufficient time allocated for professional development and lesson redesign
- **Intrinsic Factors**
  - Perceptions and beliefs
    - Negative attitudes towards technology
    - Skepticism about its pedagogical value
    - Resistance to changes in established teaching practice
  - Digital literacy and skills
    - Inadequate knowledge and experience
  - Self-efficacy
    - Low confidence in implementing new technologies in teaching

Resistance To Adopting Technology

- Perceptions about Technology Enhanced Learning (TEL)
- Heavy lifting to get started
- Lack of confidence
- Support for Technology adoption
- Change Management

Strategies for Future Consideration

- Support for Innovation
- Change Management
- Technology Upskill and Training



Digital Literacy Gap

Contributors

- Technology over pedagogy
- Mismatch between technology and pedagogical goals
- Insufficient training and support
- Unclear institutional goals and guidelines

Bridging Digital Literacy Gap

- **Targeted training and professional development**

  (Fernández-Batanero et al., 2022; Hobbs & Coiro, 2019; Zimmer & Matthews, 2022)

  - Workshops, seminars, and training sessions
  - Tailor to faculty needs, preferences, and skill levels
  - Select relevant topics

- **Emphasis on knowledge integration**

  (TPACK model - Mishra & Koehler, 2006)

  - Integrating technological knowledge and pedagogical knowledge

Bridging Digital Literacy Gap

- **Ongoing support**

  (Detlor et al., 2022; Eyman, 2020; Ghamrawi, 2022)

  - Online tutorials, help desks, and communities of practice

- **Showcase effective practices**

  (NMC Horizon Project Strategic Brief, 2016, 2017; Radovanović, 2023)

  - Within institution & external sources
  - Case studies, success stories, and innovative approaches

- **Collaboration and peer learning**

  (Hord & Sommers, 2008; Ma et al., 2018)

  - Peer learning communities, train the trainer approach

Group Activity - Collaborative Brainstorming

- **Scenario 1.**
  - Barrier: Faculty Resistance
  - Objective: Design training or support for resistant faculty

- **Scenario 2**
  - Barrier: Mismatch of technology and pedagogical goals
  - Objective: Integrate technological knowledge and pedagogical practice

Group Activity - Collaborative Brainstorming

https://tinyurl.com/etug2024

Collaborative Brainstorming Group Activity

Tech Tool Selection Guide

- Ability for instructors to mindfully select technology is part of being digitally literate
- Barriers to this ability include lack of experience, time and training as discussed
- Solution: an educational technology checklist outlining important issues the instructor needs to consider
- Checklist includes areas of privacy, accessibility, technology and teaching and learning

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EDUCATIONAL TECHNOLOGY CHECKLIST

	Functionality
☐	Does the tool have a user-friendly interface and is it intuitive/easy to use?
☐	Can the tool be scaled to accommodate various class sizes?
☐	Does it allow for flexible and adaptive engagement with material?
	Technical
☐	Can any standard up to date browser and operating system be used?
☐	Is technical support and documentation readily available?
☐	Does the tool integrate with Canvas?
	Accessibility & Inclusion
☐	Does the tool meet accessibility standards? (eg. W3C WCAG 2.0/3.0 standards)
☐	Can the tool be accessed through a mobile device without any functional differences?
☐	Does the tool allow learners to communicate in different ways (audio, visual, textual)?
☐	Is the tool free or reasonably priced for students?
	Privacy
☐	Does the tool require the creation of an external account or log in? Have you contacted the SFU privacy office at privacy@sfu.ca and cleared privacy including a Privacy Impact Assessment for the tool?
☐	Does the instructor retain ownership over their intellectual property?
	Teaching and Learning Considerations
☐	Does the tool support a community of learning?
☐	Does the tool enhance and improve learning engagement?
☐	Is the tool easily customized to suit the classroom context and learning outcomes?
☐	Does the tool easily facilitate learners' ability to exercise higher order thinking skills?
☐	Can instructors monitor students' performance on a variety of measures?
☐	Can learners effectively receive formative and summative feedback on learning?

Activity 2: Self-Evaluation on Technology

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Self-Evaluation on Technology 2 Question 1

Do you think a rubric or checklist to guide an instructor's selection of an educational technology can be useful?

a) Yes

b) No

c) Maybe

Self-Evaluation on Technology 2 Question 2

Which format of an educator's guide to technology selection do you think is most useful?

a) A comprehensive rubric is beneficial

b) A concise checklist is more practical

c) Both would be useful depending on the instructor's expertise and needs

d)I prefer to meet with the instructor and understand their specific needs

What's Next?

Thank you

Contact us at: ceehelp@sfu.ca

References

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