Teaching cases in software engineering

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simulamet

Motivation for this session

1. Inform of teaching cases as an industry-relevant pedagogical approach in software engineering education

2. Give insight into what a teaching case is and how they can be used

3. Prepare you for the call for teaching cases for special issue in *Journal of Systems and Software*

Agenda

1. What is a teaching case and why is it relevant in software engineering education?

2. Demonstration of teaching cases

3. Ideas for teaching cases? Call for special issue in Journal of Systems and Software

4. Summary and next steps

What is a teaching case?

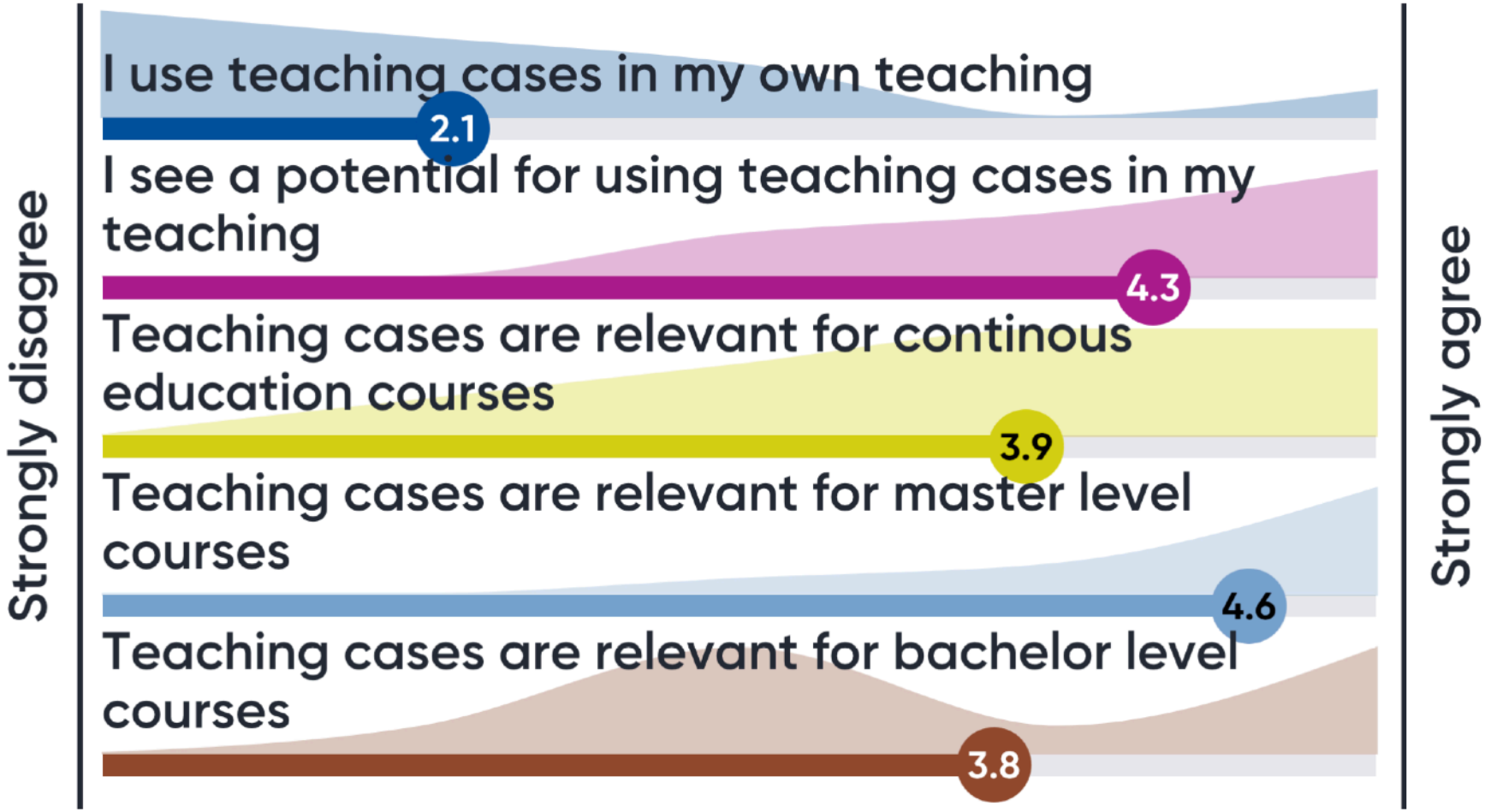
*"A teaching case or case study provides **a narrative about an organization that faces several possible business opportunities and outcomes**.*
*…a teaching case **combines practical and theoretical understanding** and focuses on a business organization*
…A teaching case resembles a detective thriller: they both have several different outcomes (suspects) and a central engaging dilemma. To begin with, a case must interest students and present an overriding issue that pulls together a managerial issue or decision that requires urgent attention"

- "Writing a teaching Case and Teaching Note: A Reference Guide", Communications of the AIS

*Format is usually a **teaching case description** and **teaching notes**.*

Sipior, J. C., Granger, M., & Farhoomand, A. (2021). Writing a Teaching Case and Teaching Note: A Reference Guide. *Communications of the Association for Information Systems, 49*(1), 35.

From last year…



Why use teaching cases?

"The case method is a powerful approach to teaching and learning business subjects. ***Its main advantage comes from the fact that it adopts a problem-based as opposed to a solution-based approach to teaching and learning****. It allows students to participate in "real-life" decision-making processes by first identifying the major "question(s)" in the case before formulating appropriate solutions.*

Using a teaching case in the classroom should be compelling and fun. ***It should create a participatory learning experience wherein students engage with each other to share opinions and perspectives.*** *In doing so, they expand their thinking by drawing on the rich diversity of experiences and approaches that their classmates introduce, which can stimulate creativity and thought-provoking insights and, thus, lead to better decisions".*

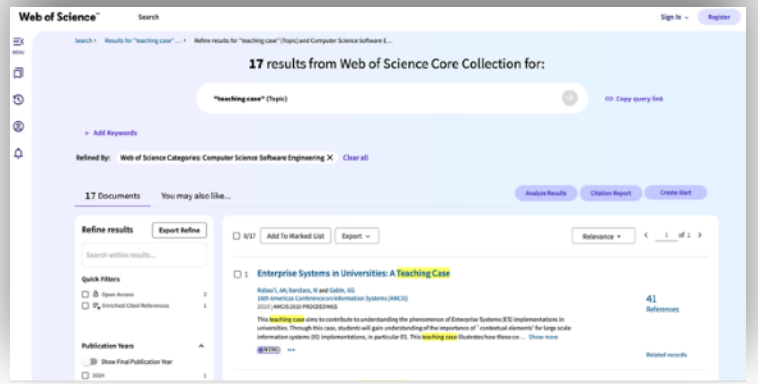
Sipior, J. C., Granger, M., & Farhoomand, A. (2021). Writing a Teaching Case and Teaching Note: A Reference Guide. *Communications of the Association for Information Systems, 49*(1), 35.

Sources of teaching cases

Project management

Information systems

Software engineering



2. Demonstration of teaching cases

- Select teaching case A or teaching case B
- Skim the teaching case (15 min individually)
- Discuss in groups of 2-3:
    - Learning objectives
    - Questions that are asked
    - Suggestions on how to use them in class
    - Material cases are based on

A:

https://bit.ly/3YWkv57

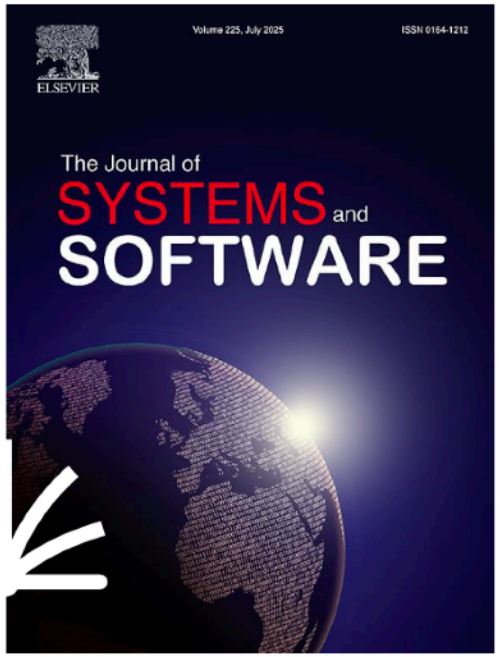
B:

http://bit.ly/3SbLd63

Special Issue

Software engineering teaching cases

Journal of Systems and Software



Guest Editors

Professor Torgeir Dingsøyr
Norwegian University of Science and Technology, Norway

Professor Casper Lassenius
Aalto University, Finland

Professor Maria Paasivaara
School of Engineering Science, LUT University, Finland

For this special issue, we seek teaching cases based on ongoing or completed empirical studies of software engineering practice that are relevant to software engineering education at the bachelor, master, or continuous education levels.

Teaching cases could be textual descriptions of situations, typically with a protagonist who has to make a choice. The written description can be supplemented with interactive material such as videos or other digital formats like links to source code repositories. A teaching case must be accompanied by a teaching note that gives information on which courses the teaching case is suitable for, the main learning objectives, and how the teaching case can be used, for example, with questions for students or tasks for student assignments. For more background on teaching cases, we refer to a reference guide from information systems (Sipior et al. 2021).

Submission open date: 1st November 2025 **Submission deadline: 1st December 2025**

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