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Teaching cases in software engineering

Discussion on use, experience and needs for development of material

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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.***

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”.

Own examples from software engineering

Development Model in a Large-scale Public Sector IT Program

To replace legacy solutions from the 1970s, a program with a cost limit of USD 130 million was initiated by the Norwegian Labour and Welfare Administration. The program aimed to enable advanced self-service solutions and to automate applications for parental benefit. It was seen as a large, complicated and risky program and initially planned with three main releases and used a development model combining project management with agile methods. While working on the second release, the program experienced challenges with coordinating work across the business- and development-projects. The program manager established a task force with a mandate to propose changes in the development model for the last release. This teaching case is based on a longitudinal case study, where we focus on the first two releases. We ask the following question: If you were part of the task force, what would you recommend? This teaching case is relevant for graduate or continuing education courses in information systems development or IT project management.

The Tollgate Project

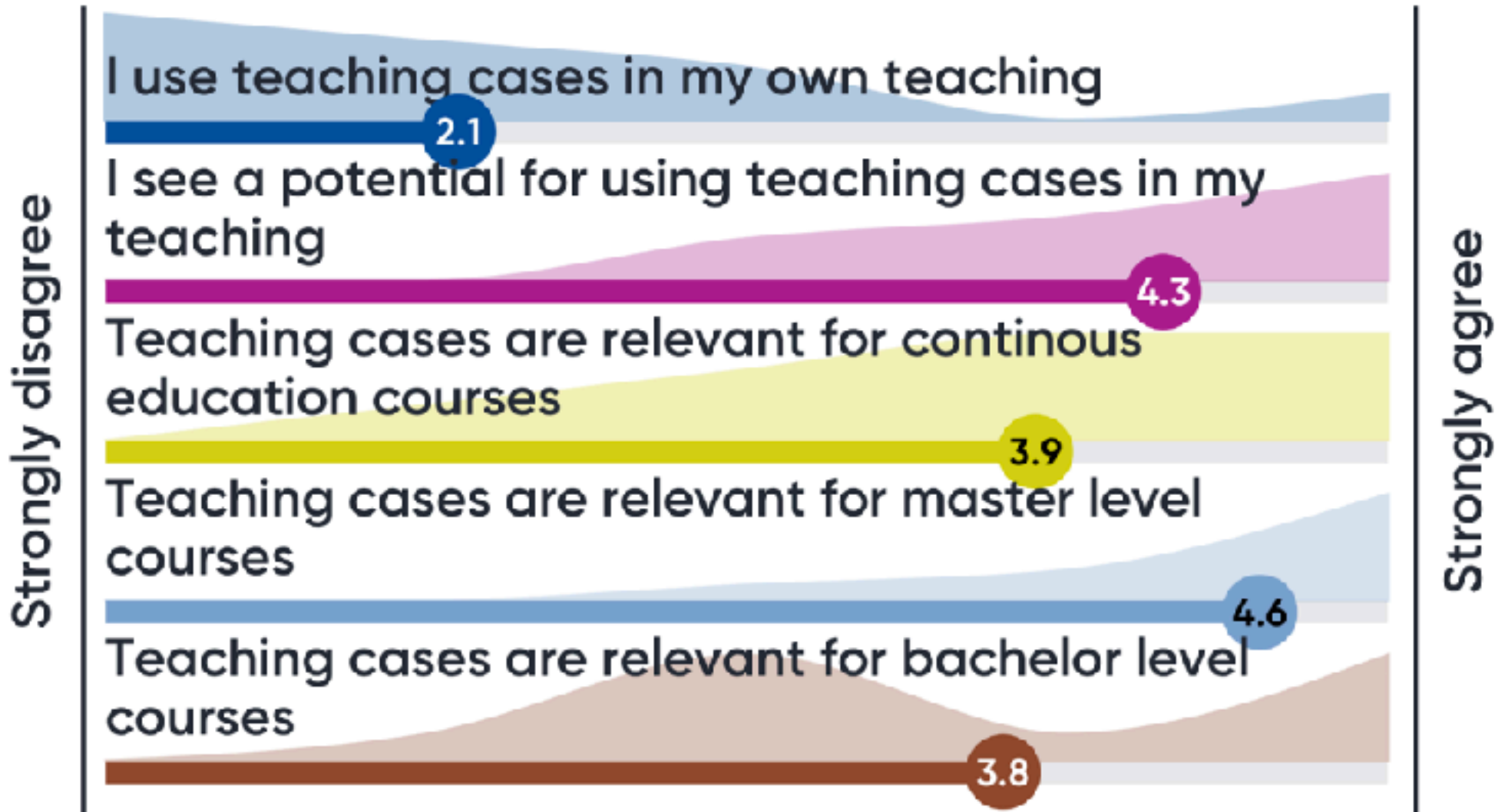
The following teaching case is based on a court case between the Norwegian Road Authority and IBM from the city court of Oslo with court decision on 31. January, 2020.

Norway has had a national system for automatic tolling of vehicles. Over 50 tolling companies finance the road infrastructure and sometimes local public transport through invoicing of owners of passing vehicles. The system was developed for the Norwegian Road Authority ("Road Authority") by Q-free from 2006. It was owned by Q-free, but the Road Authority was licensed to use. This agreement was about to end, and in 2011 the Road Authority decided to procure their own solution. There were three companies bidding for the project. The Road Authority wrote a contract with IBM in the end of 2013 for delivering a new ICT solution for tolling in Norway, and also operation, maintenance, further development and consulting. The new project was named AutoPASS Tollgate.

In June 2015, the Road Authority terminated the contract. IBM thought the termination was unjustified and the parties met in a court case that would finally end by a decision by the Norwegian supreme court in 2023.

If you were the project manager from the Road Authority, what would you do to mitigate the challenges with requirements experienced in the project?

Use, experience and potential needs?



Sources of teaching cases

