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Design Science Research Academy: Teaching Students to Solve Problems That Have not Been Identified yet, Using Technologies That Have not Been Invented yet

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TREO
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Design Science Research Academy

Teaching Students to Solve Problems That Have not Been Identified yet, Using Technologies That Have not Been Invented yet.

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Information Systems (IS) is a diverse and multidisciplinary field using different research methods in scientific and practitioner-oriented IS research, allowing other researchers to test prior findings and theories (Bhattacherjee, 2012). Traditional scholarly approaches focus on observing and predicting reality and are typically part of research method courses. However, methods that aim to create knowledge about solving problems are underrepresented in business school courses, even though businesses and societies are full of problems (Seckler et al., 2023). The challenge, however, is that problems are ephemeral and evolve, thus hard to catch. From an educational viewpoint, we need to teach students to solve problems that have not been identified yet using technology that has not been invented yet (Hevner & vom Brocke, 2023). How shall we do this? Courses on Design Science Research (DSR) can help to provide students with such competencies as developing general problem-solving competencies. Despite the relevance and maturation of DSR into a well-established research paradigm, few teaching and learning resources are available. Increasingly, fellow educators are asking for reference curricula, reading lists, and didactical designs to teach DSR in different settings.

This research project aims to design and develop teaching materials supporting educators in teaching DSR classes at different university levels. Specifically, we propose three courses, including syllabi, reading lists, and additional exercises, to introduce, organize, and teach DSR classes. The first-level DSR course aims to support students in practical classes, such as capstone or project seminars, by introducing the basics of applying DSR to practical problems. The second-level course is designed for students applying DSR in their thesis. An extended reading list and additional exercises guide students through the different cycles of DSR. The third level course is designed to support junior researchers conducting and publishing DSR studies, including in-depth knowledge of the DSR methodology and critical reflection and advancement of DSR knowledge.

In this talk, we will present the proposed teaching materials and how they can be embedded in existing or new method courses, guiding students in conducting DSR research projects.

References

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