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Applying Design Science research as a methodology in post graduate studies: A South African perspective

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Abstract

The purpose of the paper is to identify minimum design element requirements from various Design Science Research (DSR) papers that have to be considered when applying the methodology. Then to demonstrate how these were addressed in various South African postgraduate studies. Applying this methodology allows for new opportunities for future needs. The focus will be to provide this from a South African perspective. The methodology applied in this paper to analyze the literature to determine the minimum list, as well as the studies, is a qualitative descriptive exploratory study. Relevant and recent papers on DSRM were identified that provided various concepts for the minimum design elements requirements and specifically selected South African postgraduate studies (five graduated PhDs from 2017-2020) were analyzed to determine if and how these address the requirements list. It was found that all of the studies did address the identified minimum design element requirements for it to be regarded as a DSRM study. During the findings, some challenges experienced by the students and from the literature support the minimum design elements requirements. New opportunities that emerged are multi- and transdisciplinary implementations of artefacts and allowing students to develop methodological dexterity.