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**Abstract**

Several concepts have been developed to implement research-oriented teaching in higher education in the last 15 years. The definition of research competences, however, has received minor attention so far. Some approaches to modeling research competences describe these competences along the research process but either focus on a specific academic discipline and/or specific facets or offer no empirical verification for cross-disciplinary approaches. We have developed a new approach to model research competences across various academic disciplines in form of a competence model—the RMRC-K-model. This model comprises five dimensions: skills in reviewing the state of research, methodological skills, skills in reflecting on research findings, communication skills, and content knowledge. In this study, we present an instrument (R-Comp) developed on the basis of this cross-disciplinary competence model. The factorial structure of the R-Comp was examined with data from 391 university students in three groups, either enrolled in a Bachelor's degree, Master's degree, or a PhD program. The sample represented various academic disciplines. Results from confirmatory

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factor analyses supported the hypothesized structure of the R-Comp for the five dimensions in accordance with the RMRC-K-model. Additionally, results provided evidence for a more detailed differentiation of all dimensions with sub-dimensions reflecting theorized facets of the model. Both Cronbach's  $\alpha$  and construct reliability  $H$  indicated overall good reliability. Despite limitations to this study, there is some first evidence of a valid and reliable assessment of student research competences.

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