And Finally Some Empirical Data: Validating the Assessment of Collaborative Problem Solving in PISA

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Abstract: Due to the increasing relevance of collaborative problem solving (CPS) as 21st century skill, the Programme for International Student Assessment (PISA) assessed CPS in its 2015 cycle in over 50 countries worldwide. International comparisons coming out of PISA are published in policy reports and have substantial impact on educational policy decisions. However, knowledge on the validity of the CPS assessment is particularly crucial because no empirical data is yet available at all. In PISA 2015, CPS was assessed with an innovative computer-based human-agent (H-A) approach, in which students collaborated with virtual collaboration partners while working on problem situations. We investigated the validity of the original PISA 2015 CPS assessment approach by assessing its relations with external face-to-face, self-reported and external teacher-reported collaboration measures and by controlling for a number of additional variables. The results of this study are the only available empirical evidence that can inform policy stakeholders on how to interpret differences between countries and other groups of interest such as gender, socioeconomic background, and so forth when making political decisions. Implications for research on CPS and for international large-scale assessments are discussed.

Bio: Dr. Samuel Greiff is research group leader, principal investigator, and ATTRACT Fellow at the University of Luxembourg. He holds a Ph.D. in cognitive and experimental psychology from the University of Heidelberg (passed with distinction). Dr. Greiff has been awarded several national and international research funds by the German Ministry of Education and Research and by the European Union (with overall funding of approximately €3.5 million), is currently a Fellow in the Luxembourg Excellence Program for Research, and has published articles in national and international scientific journals and books, including over 40 contributions to peer-reviewed journals. He has an extensive record of conference contributions, has given more than 150 invited talks and serves as editor for several journals, e.g., Editor of the Journal of Educational Psychology and Associate Editor of the European Journal of Psychological Assessment and Technology, Knowledge, and Learning.

He has been involved in the Program for International Student Assessment (PISA) as an external advisor to the PISA 2012 and 2015 Expert and Subject Matter Expert Groups and has considerably shaped the understanding of problem solving in PISA 2012 and 2015.

He has been working for several years on the assessment of transversal skills such as complex and collaborative problem solving and their role in the classroom, at work, and in private life. He is currently involved in the large-scale assessment of problem solving, collaboration, and life-long learning in various populations and leads a team of test developers, research assistants and graduate students dedicated to increasing the understanding, measurement and application of different aspects of transversal skills and lifelong learning in educational contexts.