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Differential Contributions of Socially Shared Regulation Processes to Collaborative Problem Solving: Evidence from PISA 2015

BACKGROUND

Collaborative problem solving (CPS) is considered a key competency in contemporary education. **Socially shared regulation of learning (SSRL)** may support successful collaboration by helping learners coordinate shared understanding and group processes. However, less is known about how different SSRL processes contribute to CPS achievement.

METHOD

Data Source: PISA 2015
Sample: 28,096 students, 17 countries
Analysis: Three-level multilevel modeling
Variables: SSRL processes, CPS achievement, Student- and school-level factors

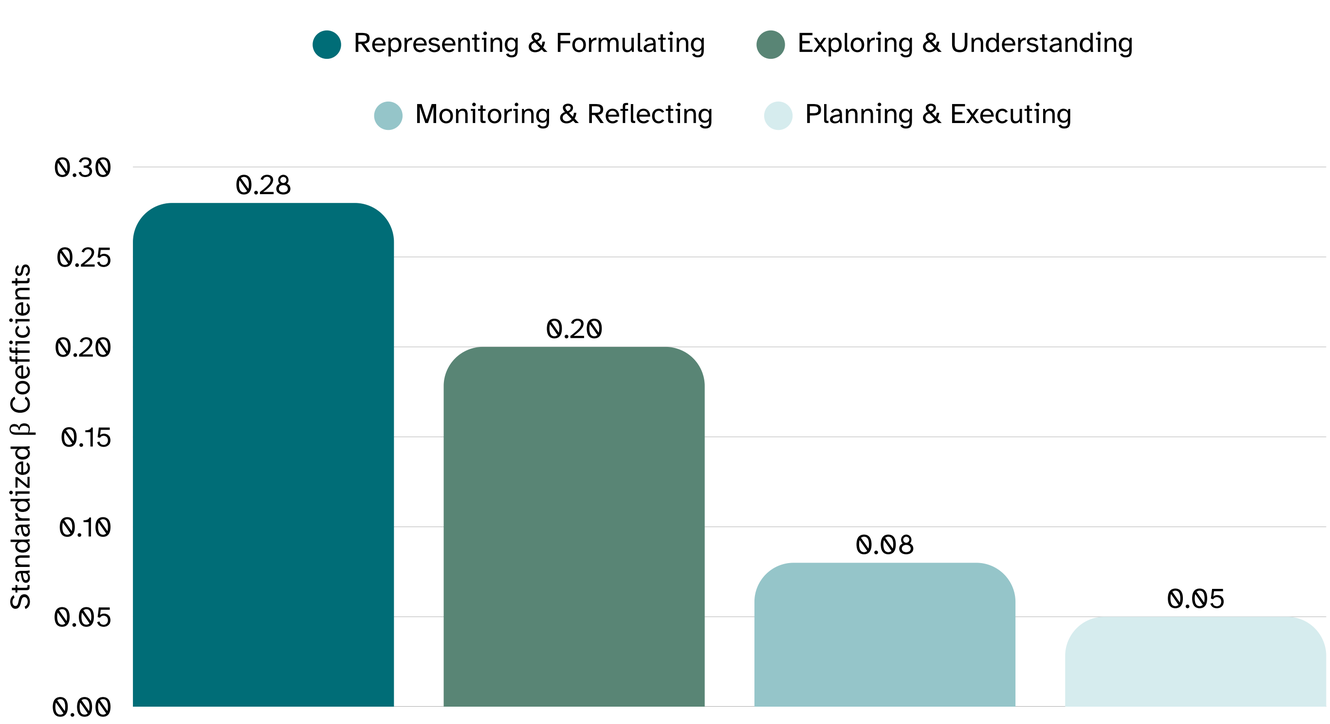
RESEARCH AIM

This study examined how four SSRL processes: ***Exploring and Understanding, Representing and Formulating, Planning and Executing, and Monitoring and Reflecting*** predict collaborative problem-solving achievement using PISA 2015 data.

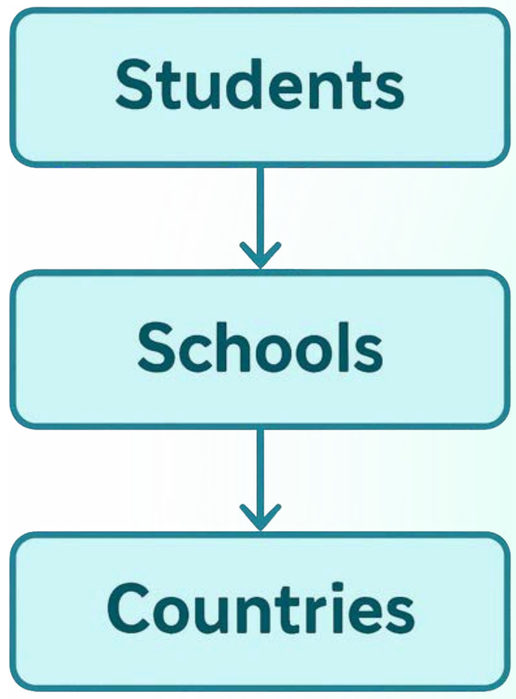
KEY FINDINGS

- All four SSRL processes significantly predicted CPS achievement.
- Representing and formulating showed the strongest contribution across models.
- Exploring and understanding also demonstrated a substantial contribution.
- Monitoring and reflecting showed smaller but significant effects.

DIFFERENTIAL CONTRIBUTIONS OF SSRL PROCESSES TO CPS ACHIEVEMENT



Representing and Formulating emerged as the strongest predictor of CPS achievement



Three-level multilevel model

IMPLICATIONS

- Early shared meaning-making processes may play a central role in CPS.
- SSRL should be viewed as a multidimensional construct.
- Educational settings should support collaborative understanding and shared goal alignment.