

# Science Education for Sustainable Development through Socioscientific Issues: Teacher Competences

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# Science Education for Sustainable Development through Socioscientific Issues: Teacher Competences

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## Main Research Question

Which teacher competences are necessary, and, considering these, what are the training needs of science teachers to successfully implement the Sustainable Development Goals (SDGs) in Dutch secondary science education through socioscientific issues (SSI)?

### Study 1

#### Research questions

What resources pre-service teachers (PSTs) use to design SSI lesson to teach the SDGs?

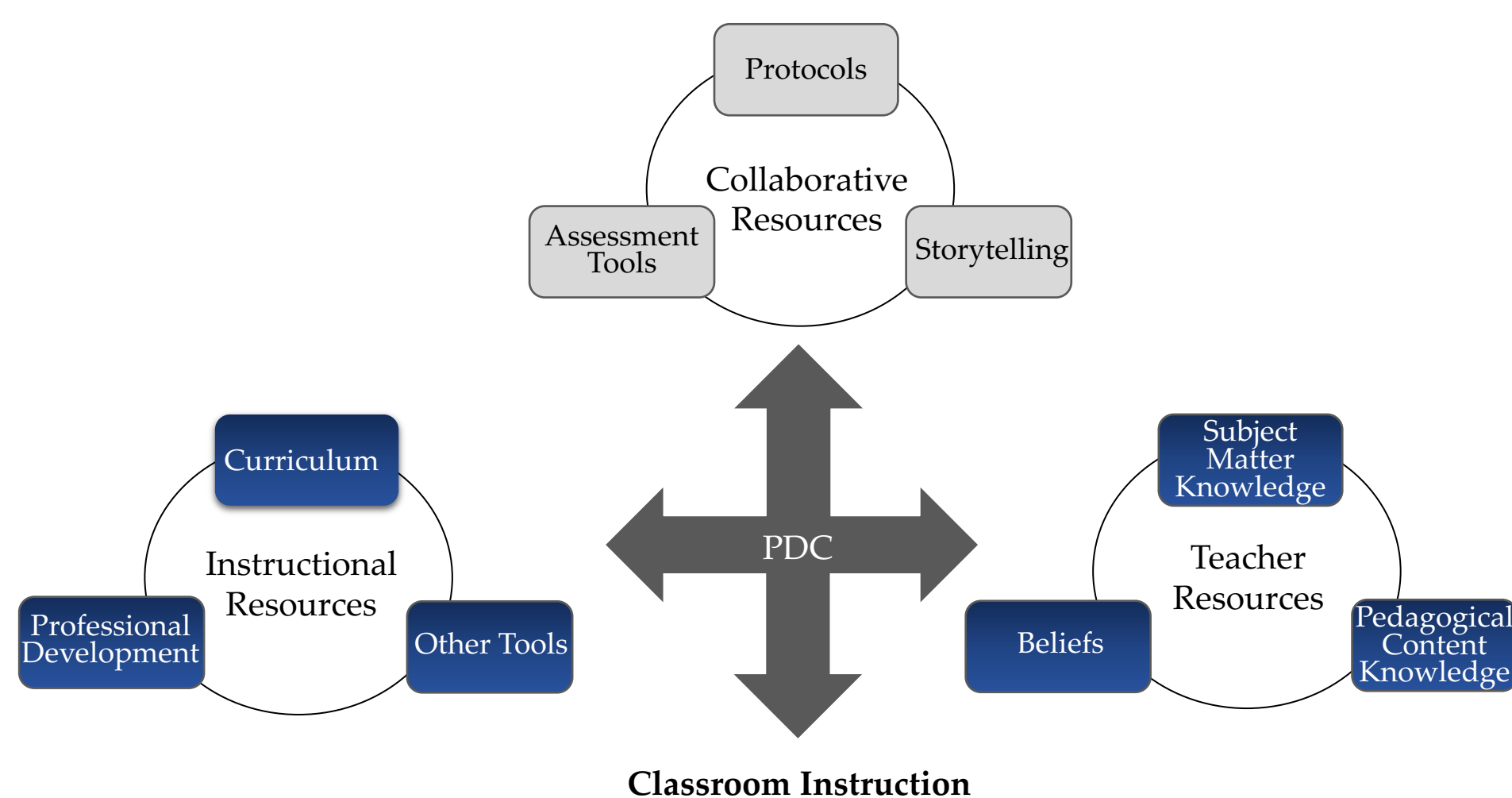
How does the use of the resources impact PSTs' lesson design for teaching the SDGs through SSI?

#### Participants and Data Collection

5 PSTs form a Professional Learning Community (PLC) together with two researchers

#### Data Collection and Data Analysis

Qualitative data is collected via field notes of the PLC meetings, reflection reports and semi-structured interviews. Deductive and inductive qualitative data analysis (Boeije, 2009) via Pedagogical Design Capacity (PDC) Framework (Ellingson, 2018; Knight-Bardsley & McNeill, 2016)

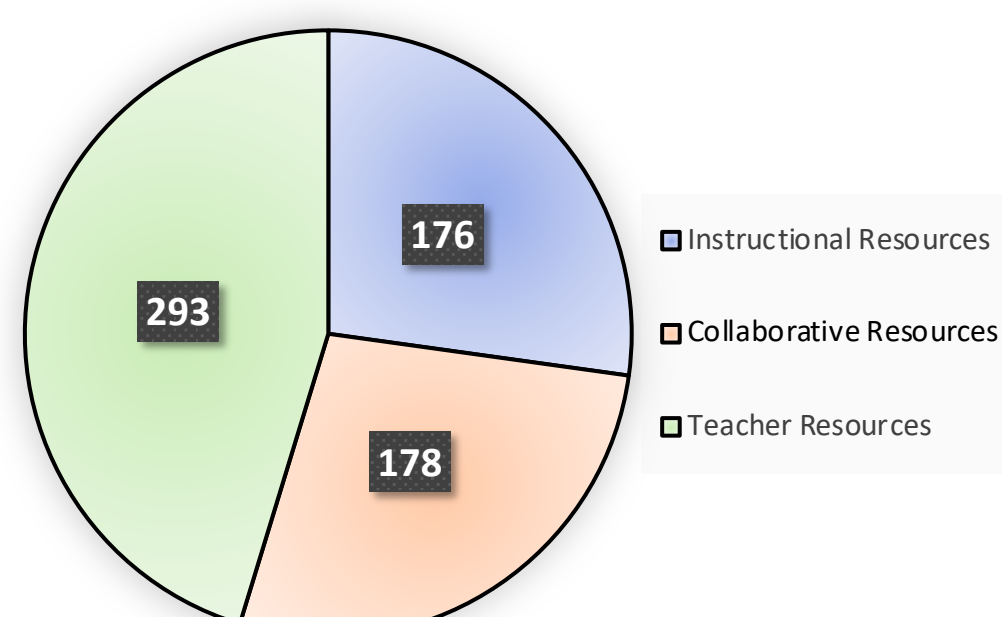


### Preliminary Findings

"... problems are open ended. SSI is finding the problem and the way to the solution, not really about the solution. It is about working towards the solution."

"Students find SSI really, really hard because they find it hard that they do not have like very clear goals, they have to set it themselves and they are used to from other courses just like getting a lot of content sent to them."

Pedagogical Design Capacity (PDC)



### Study 2

#### Research questions

What do science teachers perceive to be the key competences to teach the SDGs through SSI?

How do science teachers differ in terms of their perceptions of the key competences?

#### Participants and Data Collection



#### Data Analysis

Qualitative data will be analysed via ATLAS.ti, a qualitative data analysis software  
Quantitative data will be analyzed via KADE, a desktop application for the analysis of Q methodology data

#### Works cited

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