Developing Computing pedagogy post-2014

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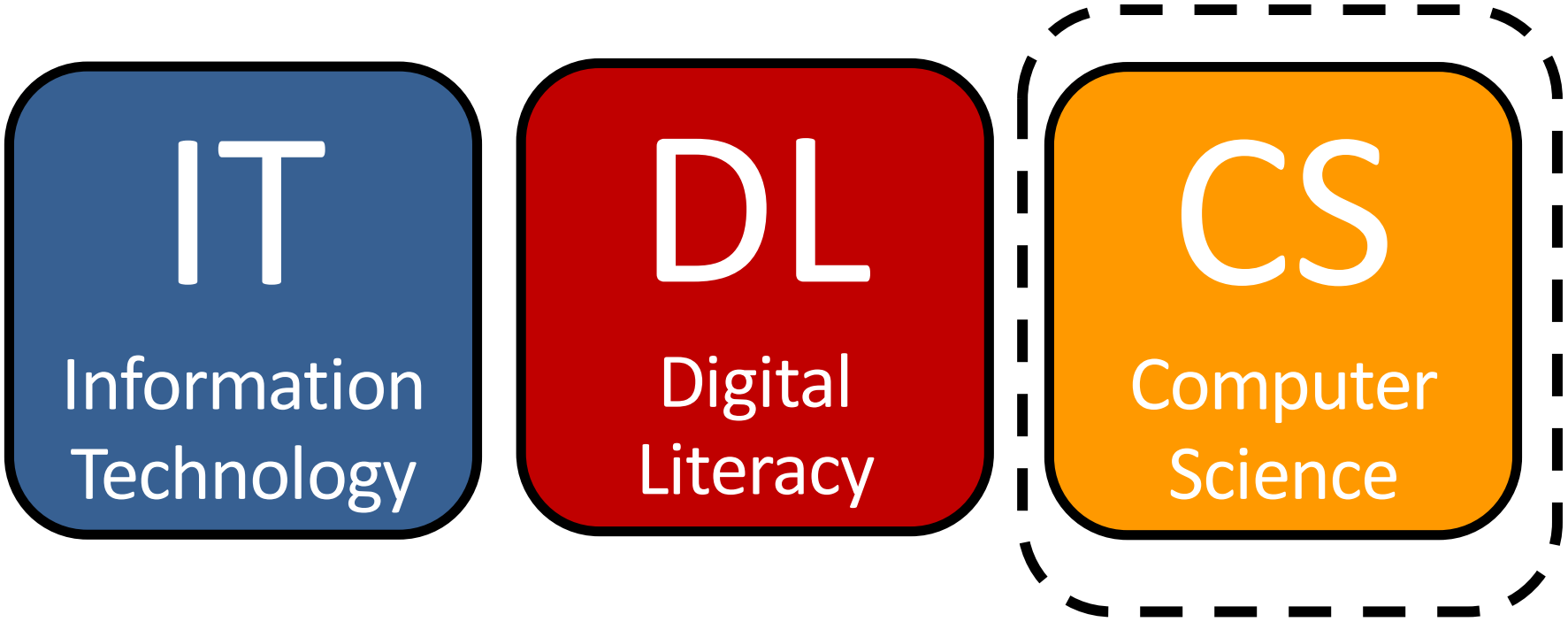
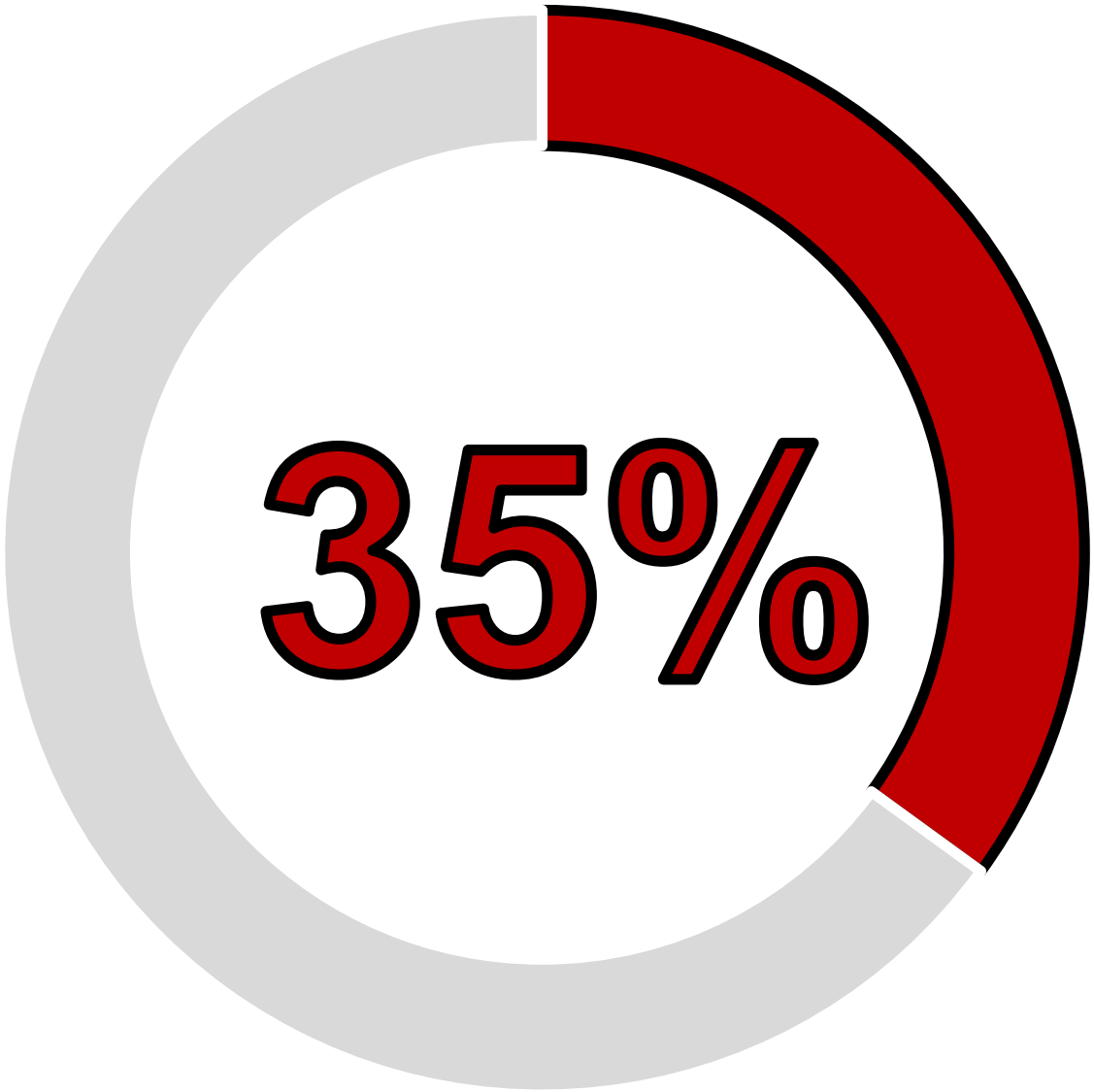
How do we know how to teach what we need to teach?

New
Curriculum


IT
Information Technology
DL
Digital Literacy
CS
Computer Science



Source: Royal Society 2012, p. 71-72

How do ICT teachers know how to teach

CS

Computer Science

Shulman (1986, 1987)

Photo credit: casje.org

Theoretical frameworks

1. Pedagogical reasoning
2. Pedagogical content knowledge
3. Teacher beliefs and values

content

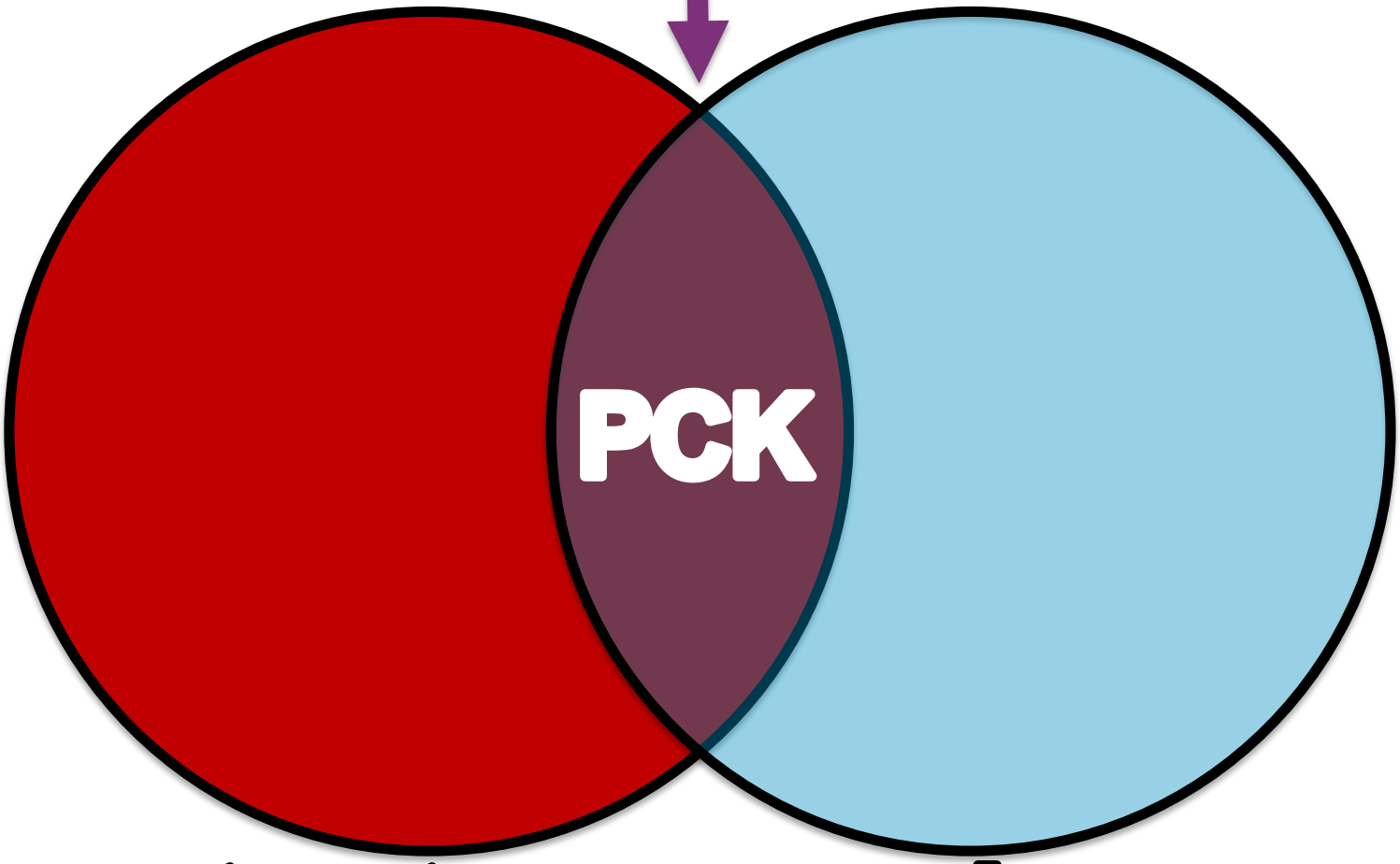
curriculum

assessment

knowledge of students

pedagogy

pedagogical content knowledge



How do ICT teachers know how to teach

CS

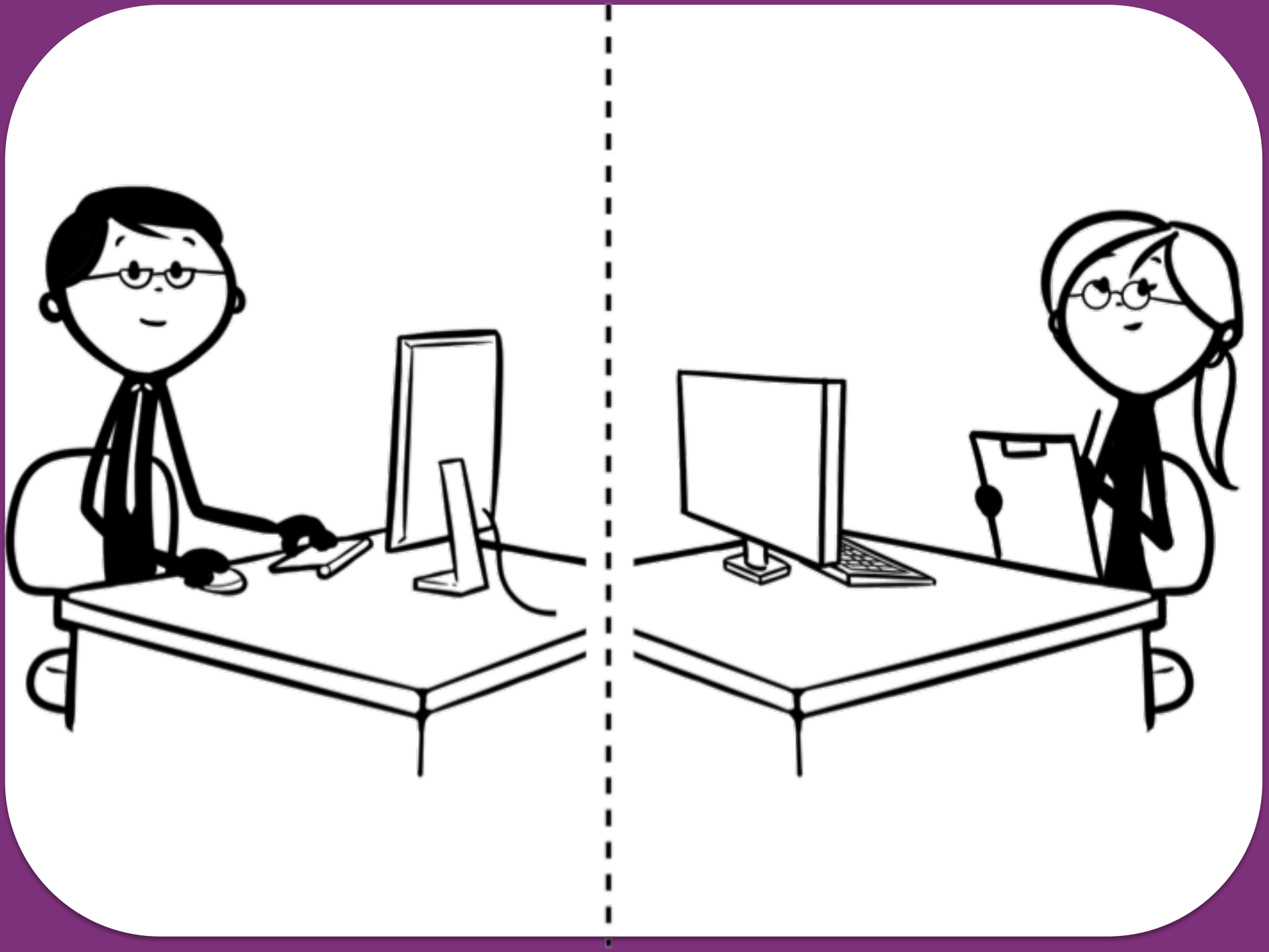
Computer Science

Research Questions

- How do teachers plan Computing lessons?
  - How is PCK enacted through pedagogical reasoning?
  - How is subject knowledge addressed?
  - How were resources used?

Methods and analysis

- Nine teachers – primary x2, secondary x6, FE x1
- Captured lesson planning on video or through Skype
- Thematic analysis using frameworks as a starting point
- Triangulated against schemes of work, other documentation



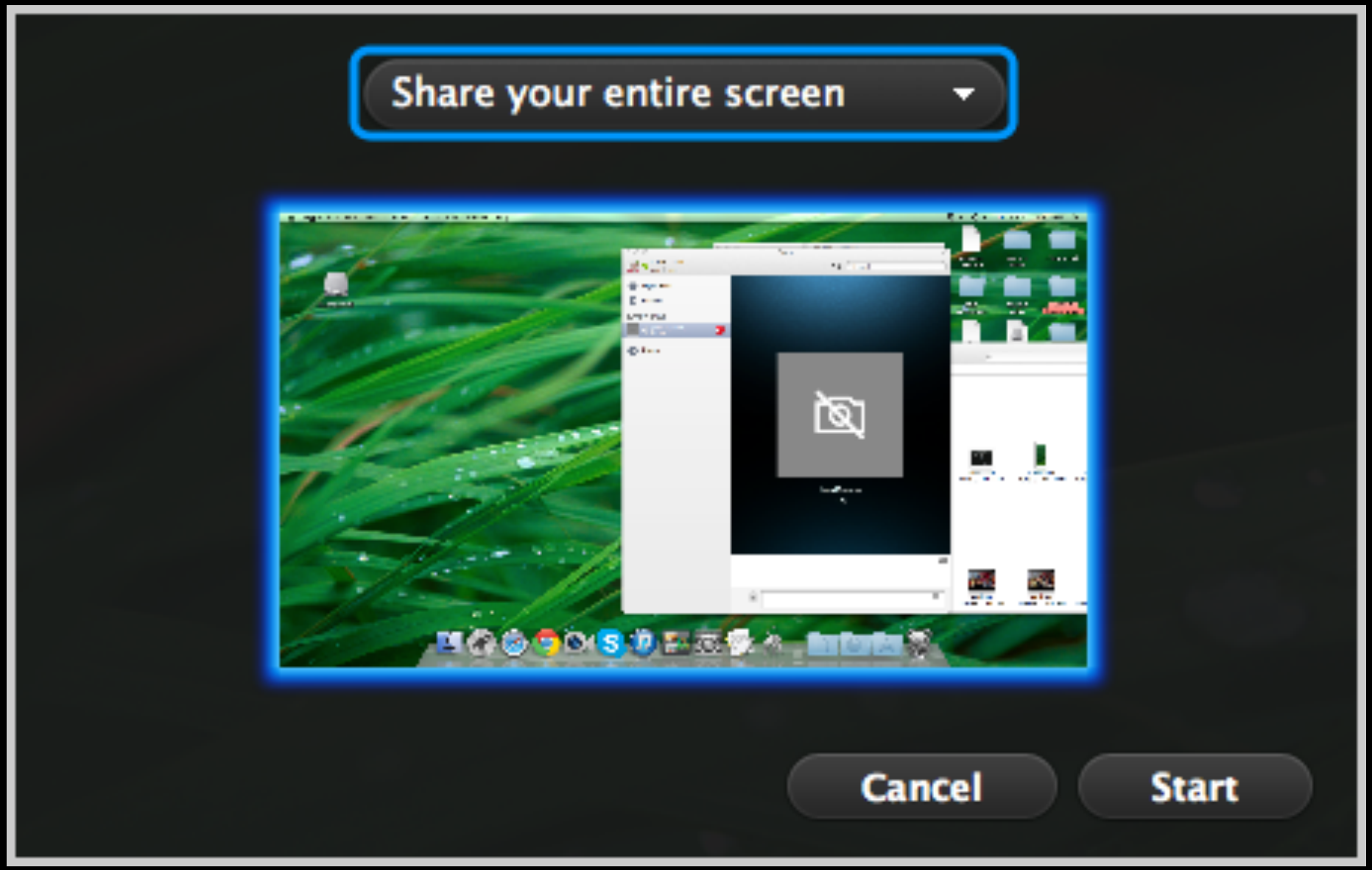


Photo Credit: support.skype.com

Findings

- Transitional pedagogical reasoning
- External knowledge validation – resources and support
- PCK by proxy – the educative role of resources

Conclusions – raising aspirations needs secure foundations

- The importance of time for professional development
- The value of frameworks for understanding teachers' knowledge and skills
- Recognising the educative role of resources – capturing and sharing pedagogical meta-data

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