

How can teachers plan and deliver digital accessibility awareness education in the primary school classroom at Key Stage 2?

Helen Wilson

Presentation objectives

- Frame the background and context of the research
- Outline the philosophical position and assumptions
- Describe the intended:
 - Methodological framework
 - Data collection and analysis methods
 - Conceptual framework of the research

Overview of background and context

- Framed by the social model of disability and legal backdrop
- Significant amount of content in our digital world is inaccessible
- Lack of mainstream awareness about the basics that prevent barriers
- Digital accessibility awareness education is not formally on the curriculum (pockets of specialists who bring it)
- Challenging to teach due to technical assumptions and multidisciplinary in nature
- Young people lack basic awareness prior to college or university
- Calls for the subject to be taught and established earlier in schools

There are challenges and gaps to address

- Literature identifies teachers' lack subject knowledge, confidence and pedagogical resources to be able to teach the subject - Pedagogical content knowledge (PCK)
- Most studies are not in depth to inform teaching
- Most studies are in HE, PG or workplace (technical disciplines)
- The basics of awareness and skills not established
- No community or peer support established for the teaching of this topic
- One study found in a high school
- There are no studies teaching this topic within primary education

Establishing the primary school context...

What teachers and what level for the study?

What is the earliest point to explore this topic in the school curriculum?

- Other digital knowledge and skills KS1/2 (Online safety/Data protection)
- Current computing curriculum covers assistive technology from the accessibility perspective (input and output devices) but not about 'making accessible content' for it to work on assistive technology (KS2)
- Citizenship curriculum KS1 refers to own and other's needs and rights, and KS2 expands on that to develop a sense of social justice and moral responsibilities
- Age 7-11 KS2 children no longer over generalise about disabilities and are more capable of empathising
- Age 9 - 10 showed the highest level of positive attitudes to social inclusion (Upper KS2 – Year 5 or 6)

The question is...

- **How can teachers develop and deliver digital accessibility awareness in the primary school context at Key Stage 2?**

Sub-questions

1. What prior subject knowledge of digital accessibility awareness do teachers of Key Stage 2 have?
2. How do teachers as a peer group develop resources and knowledge for digital accessibility awareness education?
3. What scaffolding helps teacher's individual development of PCK to deliver digital accessibility awareness education?

Philosophical position

- Educational classroom - multiple realities - interpretive paradigm
- **Socially constructed knowledge**
 - Combine teacher pedagogical expertise and the researcher's accessibility subject knowledge for the context of classroom practice
- In-depth qualitative study
 - Through the lens of the teachers (planning, delivering, observing their students)
 - Through the full process of pedagogy (planned, enacted and experienced)

Methodology to support the **social construction of knowledge**

Advantages of a **combined approach** using design-based research and lesson study (**HANDOUT**)

Design-based research

- Facilitates a collaborative approach **between researcher and participants** to co-construct knowledge and lesson outputs
- Acknowledges researcher as active in the research
- Develops an **intervention** and tangible outputs
- Iterative design that facilitates phases to explore in depth

Design-based research will act as the methodological framework to develop the intervention.

Lesson study ([Dudley, 2014](#)) will facilitate the process

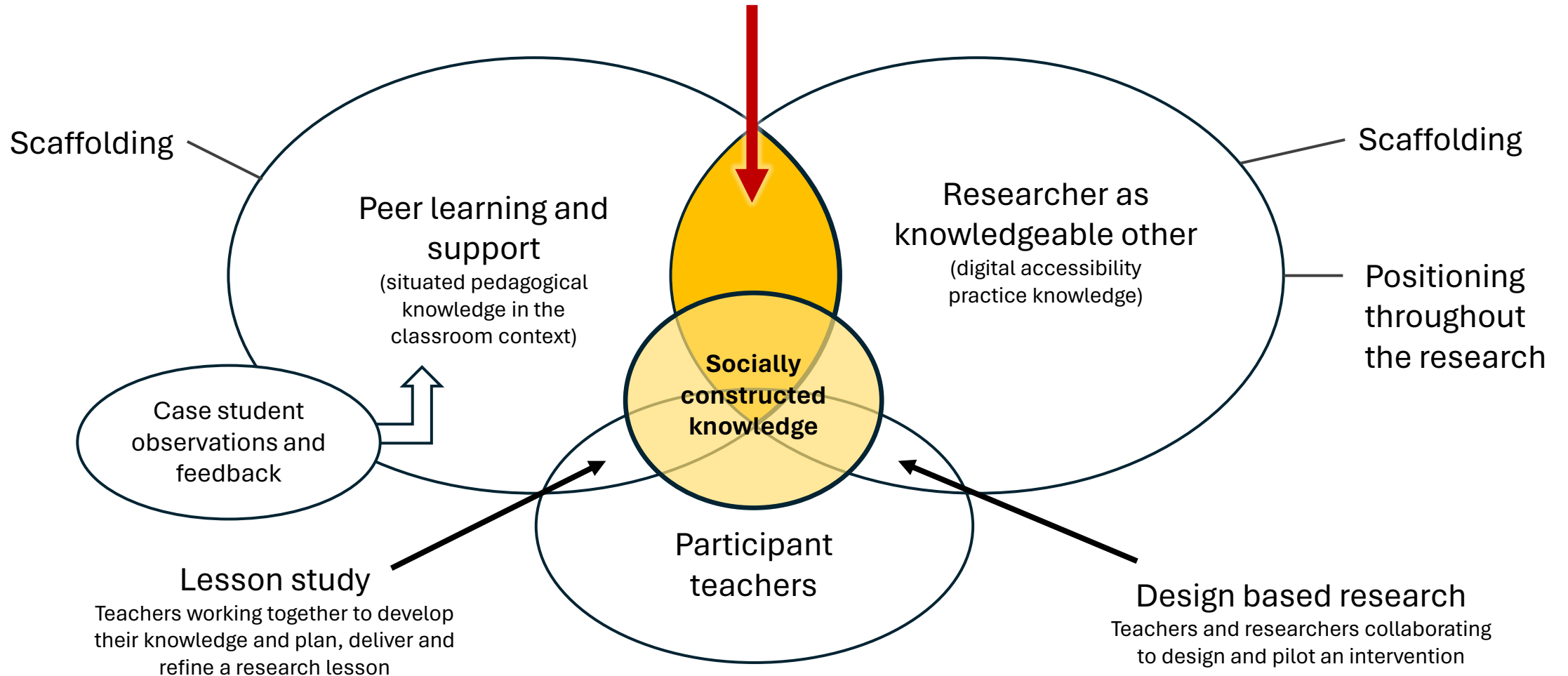


Lesson study

- Facilitate the experience of teaching the new topic
- Peer learning to experience the teaching
- Teachers can take multiple roles (teacher, teaching assistant, observer)
- **Case student** observations and feedback
- Focus on teachers' **professional development** to refine pedagogical content knowledge (PCK)
 - Subject knowledge development
 - Knowledge of teaching of that subject
 - Knowledge of how students learn the subject

Handout: Conceptual diagram of research methodology to support socially constructed knowledge

Developing pedagogical content knowledge to teach digital accessibility awareness in the primary school classroom



Data collection methods to support the methodology

Focus groups

- Facilitates lesson study planning and debriefing
- Collaborative and captures group thinking (the social construction of knowledge)
- Individual contributions, group consensus and interactions that help to develop classroom practice and resources

Interviews

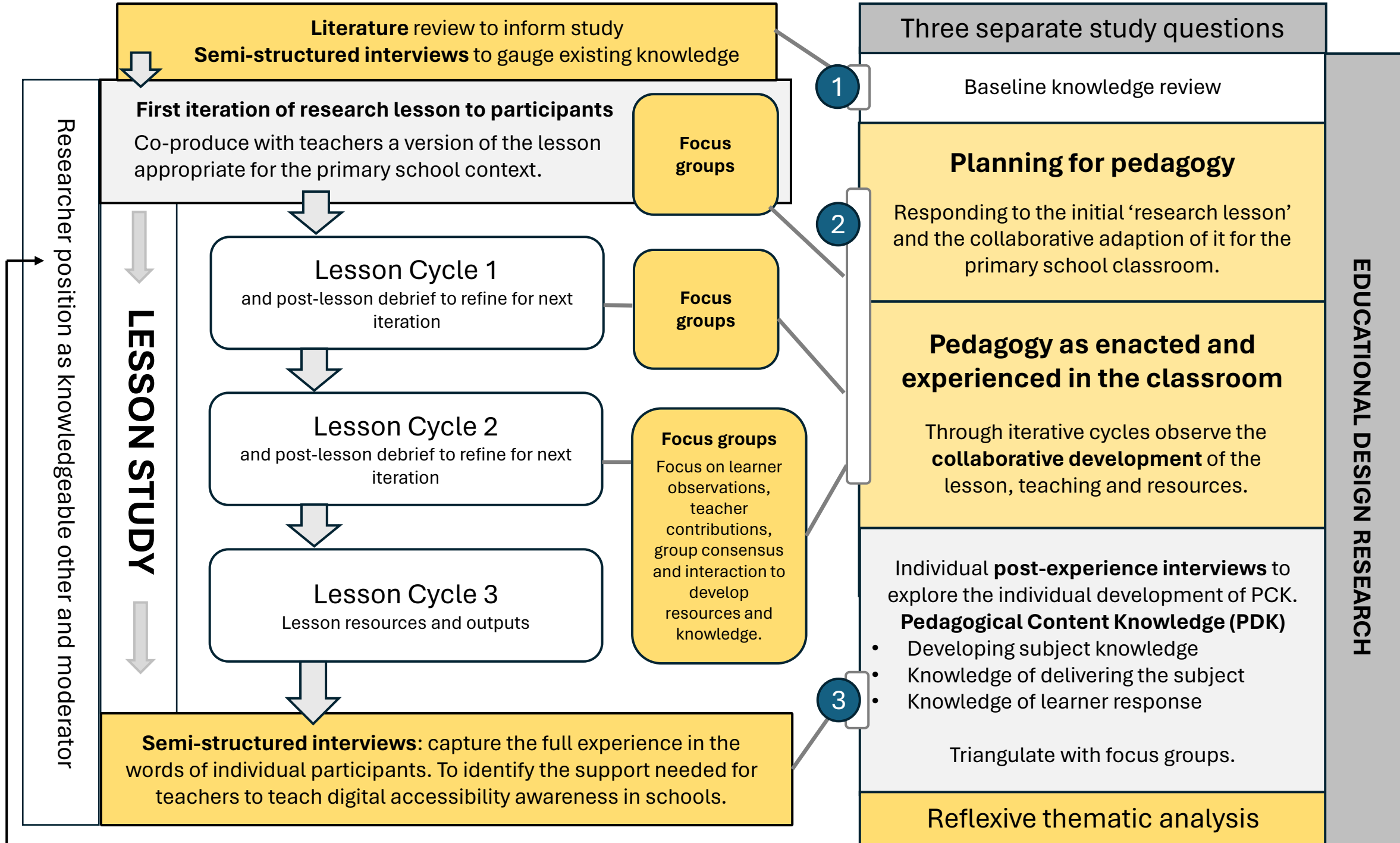
- **Pre-assessment** of subject knowledge prior to designing intervention
- **Post-assessment** of scaffolding that helps to develop PCK
 - Triangulate with focus group findings

Thematic analysis

- Provides a structured framework for analysis (Braun and Clarke, 2006)
- Reflexive thematic analysis acknowledges the researcher's active role and position in the research (Braun and Clarke, 2019)
- Data extracts in the voice of participants
- Triangulate findings

Researcher position

- Initial lead teacher
- Moderator and observer
- Knowledgeable other for subject expertise
- Data analysis and interpretation



Thank you

I look forward to your questions