Current Implementation of Computational Thinking in Welsh Primary Schools

Research Questions

- To evaluate how schools are implementing computational thinking in the classroom.
- What classroom tools do practitioners use to develop computer coding.
- Evaluate any differences in provision that might exist between different schools, such as internet speed, device allocation etc.
- To evaluate any socio-economic factors that might exist between different demographics and settings, such as special schools, pioneer schools etc.
- To report back the findings to Welsh Government.

Aim

The aims of this research are to :

- Gain insight's into the current provision of computational thinking in Welsh schools.
- Analyse current data to better inform stakeholders of best practice through a research formed method.

Background

How the DCF evolves over the coming years, and in particular how it is applied in schools to best effect, raises important questions for both classroom practice and research. These questions relate to how best to integrate digital competencies into classroom, and what impact this has on developing highly competent individuals capable of contributing to a rapidly developing digital economy.

One area of particular interest is the development of competent computer coding skills. Furthermore, the Welsh government has launched it's Cracking the code strategy, aimed at extending the level of coding tuition and knowledge and skills of coding; this is especially the case with girls in Wales, and as part of an overarching STEAM strategy.

As teachers use the framework and the TPACK model to plan engaging lessons, there is an opportunity to research what impact these strategies have on learner outcomes and build an evidence base around the teaching and impact of coding in the classroom to inform future directions.
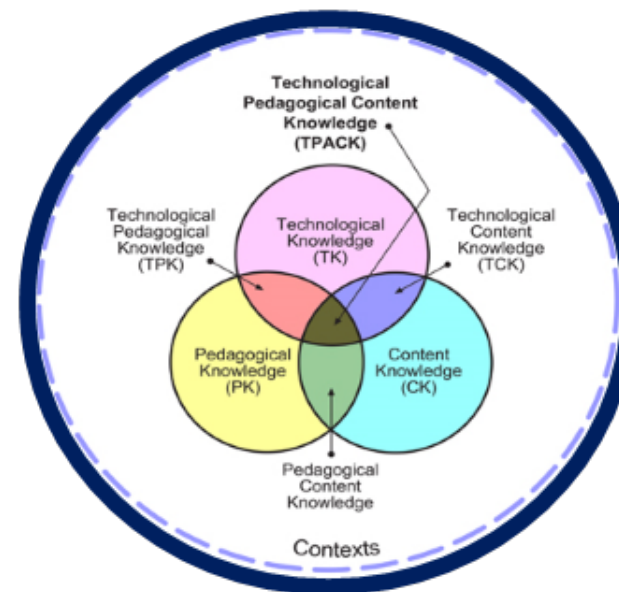

Figure 1: Technological Pedagogical Content Knowledge model for teachers.

Method & Sample

Individual semi-structured interviews will be carried out over the next two months. An interview schedule has been drawn up which addresses participant roles in the development of the curriculum, and their views and experiences of Computational Thinking. Participants will also be asked about their views on alignment between curriculum reform and the impact of funding and infrastructure. Interviews will be fully transcribed and analysed thematically using NVivo.

Personnel (N=8) involved in curriculum development and/or ALN reform, including policy leads, inclusion leads and lead practitioners, will be invited to participate in the project. In addition, participant will be sought from the "Cracking the code" initiative which is focusing on pupil progression in relation to computational thinking and coding.

Progress Notes(May 2018)

Ethical approval has been given and participants are currently being recruited and interview dates arranged.

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