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Teacher knowledge and subject-specific pedagogy in technical and vocational education



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Background

- Based on a literature review conducted as part of the project *Subject-Specific Pedagogy for Teachers in Vocational Science, Engineering and Technology in Further Education*
- Funded by the Gatsby Charitable Foundation 2015-18
- Literature review aims to provide an underpinning conceptual framework for designing an intervention for ITE in FE across four universities in England
- Intervention focuses on improving SET teachers' pedagogical decision making
- *We assumed* that developing pedagogical knowledge relevant to teaching SET in FE will help to achieve this

Subject*-specific pedagogy in English FE

- A contested notion, “one that sits in contradiction to strong intellectual and epistemological trends” (Fisher & Webb 2006, p.339)
- Identities and structures associated with subject-specific pedagogy can be seen as a barrier to progressive education (Warren Little 1992; Thornton 1998; Poulson 2001)
- Mistrust of ‘pedagogy’ (Simon 1981; CAVTL 2013) has been a push away from pedagogical knowledge and towards equating teaching with subject knowledge
- Inspection regimes have led to an intensive focus on ‘subject-specific pedagogy’ without an underlying theorisation

Subject*-specific pedagogy in English FE

- FE curriculum is diverse – some estimates claim around 200 different specialist areas for teaching
- Occupational areas may draw on and recontextualise a number of disciplines
- Knowledge is interdisciplinary and ‘regional’ rather than singular (Bernstein 2000)
- Professional support for teachers and their pedagogical knowledge highly variable
- Teachers’ professional learning is contextual, often tacit, reliant on local communities of practice rather than explicit bodies of knowledge

Pedagogy and the teacher

“Pedagogy is a sustained process whereby somebody(s) acquires new forms or develops existing forms of conduct, knowledge, practice and criteria from somebody(s) or something deemed to be an appropriate provider and evaluator” (Bernstein 2000, p.78)

- However, pedagogy cannot simply be process – need to bring in teacher agency and judgement

“For me a pedagogic act involves ... informed interpretations of learners, knowledge and environments in order to manipulate environments in ways that help learners make sense of the knowledge available to them” (Edwards 2001, p.163)

Pedagogy and the teacher

- Pedagogy is about *both* educational processes *and* teachers making and acting upon informed decisions

“Pedagogy is the act of teaching together with its attendant discourse. It is what one needs to know, and the skills one needs to command, in order to **make and justify the many different kinds of decisions of which teaching is constituted**” (Alexander 2004, p.11)

- Pedagogical decisions are situated and context-sensitive (Hodkinson & James 2003; Lucas 2007; Maxwell 2010)
- Pedagogy is a *duality*, enacted in specific institutional and disciplinary contexts, not a *dualism* (theory-practice or generic-specialist splits)

Pedagogy and teacher knowledge in SET

“Contemporary professions are about doing things, but doing complex things that cannot rely on experience alone” (Young & Muller 2014, p.13)

Drawing on Bernstein (2000), Young & Muller (2014, p.14) express the relationship between theory and practice in a profession by a three-fold distinction:

- Singulars – the knowledge structures defining a discipline
- Regions – combine disciplines and contextually derived knowledge for specific purposes in a field of practice
- Fields of practice – the specialised contexts in which professionals make and act on judgements

The dual nature of teaching adds a further complexity!

Pedagogical content knowledge (PCK)

- Can be seen as a specific realization of this dual complexity
- Part of an overall model of teacher knowledge (Shulman 1986, 1987; Shulman & Shulman 2004)
- Distinct from subject knowledge *per se*, which subject specialists who are not teachers also have
- Lies at the intersection of content and pedagogical knowledge

“that special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding ... the blending of content and pedagogy into an understanding of how particular topics, problems or issues are organised, represented and adapted to the diverse interests and abilities of learners” (Shulman 1987, p.8)

Pedagogical content knowledge (PCK)

- PCK is the subject of a thriving international research community, particularly in relation to science education
- Beginning to be used in vocational education (Kuhn et al. 2016)
- Research tools aimed at eliciting and developing PCK appear promising for improving vocational teachers' pedagogical decision making (Loughran et al. 2004; 2008; 2012)
- Has been criticised as inappropriate in the light of modern theories of teachers' professional learning (Kind 2009; Maxwell 2010)
- In our view, these criticisms can be ameliorated by a sensitive application to the FE SET context

Recontextualisation

The best vocational teaching and learning combines theoretical knowledge from the underpinning disciplines ... with the occupational knowledge of practice ... teachers, trainers and learners have to **recontextualise** theoretical and occupational knowledge to suit specific situations. (CAVTL 2013, p.15)

- Considerable attention being given in vocational education to the concept of recontextualisation
- See Hordern (2013); Griffiths & Guile (2004); Guile (2014; 2016)
- A rich and developing concept which integrates college and workplace, theory and practice

Recontextualisation and distribution

“Pedagogic discourse is constructed by a recontextualising principle which selectively appropriates, relocates, refocuses and relates other discourses to constitute its own order”
(Bernstein 2000, p.33)

- Teachers need to grapple with the recontextualising principles underlying a vocational curriculum
- Bernstein saw recontextualising principles as a site of struggle between teachers and the state
- Recontextualisation in this sense draws attention to the reproduction of inequalities of class, gender, ethnicity

Conclusion

- Subject-specific pedagogy as pedagogy enacted in specific disciplinary/regional and social contexts
- Pedagogy as informed decision-making drawing on a regional amalgam of content knowledge & pedagogical knowledge
- PCK and recontextualisation form part of a language and conceptual framework to support an intervention aimed at improving vocational SET pedagogy

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