Reframing Teacher Knowledge: A model for professional knowledge development VICKY RANDALL,

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In January 2012, 14 Expert Subject Advisory Groups (ESAG) were established in England, funded by the Department for Education. These groups became sector led, with a remit to provide guidance and practical support for teachers, schools and teacher educators when implementing the 2013 National Curriculum. As a member of the Physical Education ESAG, I was concerned with how new teachers entering the primary education profession would become equipped with the knowledge required to teach the physical education programme of study. With unquestionable belief that a teacher is the critical factor in the education of young people, I developed a Professional Knowledge Model (PKM) for physical education with an explicit focus on teacher knowledge.

In this article, I present a non-subject- specific version of the PKM to highlight two points. The first is that the development of a teacher's knowledge is an iterative process — complex, ongoing and not simply determined by number of years teaching. The second is that anyone involved in the education of young people must be mindful that knowledge needs reviewing, i.e. an experienced teacher may need to return to learning from an earlier phase of their career. The PKM is a tool intended to help practitioners to reflect upon the breadth and depth of their knowledge and help signpost future professional learning needs.

WHAT IS PROFESSIONAL KNOWLEDGE?

College of Teaching.

A specialist body of knowledge is common to any definition of a professional, with the application of this knowledge often being unpredictable and requiring a level of judgement and decision-making (Furlong et al., 2000). What sets education and teaching apart from other professional contexts is that the knowledge required must be geared towards the learning and the knowledge creation of others (Hegarty, 2000). Determining what knowledge teachers need, however, is not straightforward, as epistemological viewpoints may vary from one professional to another.

The early stages of developing the PKM required an extensive review of the literature across teacher education and physical education, to determine what knowledge was already of value to that professional community. From this, I synthesised 37 knowledge statements and presented them to the Physical Education ESAG, a sample of teacher educators and preservice teachers from 16 initial teacher education (ITE) providers across England (Randall, 2016). The knowledge statements were critically debated and organised into categories of emerging, secure and aspirational stages. From the knowledge statements, four knowledge domains emerged: content knowledge, subject pedagogy, case knowledge and reflective and academic engagement.

The culmination of this research was the PKM (please see **Figure 1** for a non-subject- specific version of this model). The study concluded that teacher educators and pre-service teachers believed that the four knowledge domains in the PKM had shared importance within their professional role (Randall, 2016). The same study also revealed that variations of confidence This is an accepted manuscript of an article published by The Chartered College of Teaching in Impact, available online at https://impact.chartered.college/article/twiselton-developing-effective-teachers-perspectives-approaches/. It is not the copy of record. Copyright © 2018, Chartered

occurred across the four professional knowledge domains, with pre-service teachers saying that in some instances they had been taught 'secure' and 'aspirational' forms of knowledge on their ITE programme ahead of knowledge at a more 'emerging' stage. These findings have implications for both ITE and professional development programme design.

FIGURE 1: PROFESSIONAL KNOWLEDGE MODEL (NON-SUBJECT-SPECIFIC)



REFLECTIVE AND ACADEMIC ENGAGEMENT			CASE KNOWLEDGE		
Instigates subject through research and enquiry	Engages in academic reading, writing and reflection	Has knowledge of current issues and policy in subject discipline(s)	Works with other adults in and out of curriculum contexts	Develops subject through action, planning and evaluation	Produces and implements curriculum planning and policy
Sets professional targets linked to pupil and national priorities	Knowledge of education theory, history and context	Articulates subject(s) aims and purpose	Teaches and evaluates learning across age phases and settings	Leads feedback on pupil learning to parents and colleagues	Collaborates with external bodies and community partners
Achieves higher accreditation of knowledge and practice	Understands the characteristics of an educated child	Identifies professional development needs	Observes practice across age phases and settings	Receives feedback to improve professional practice	Actively supports transition across year and key stages

ASPIRATIONAL	SECURE	EMERGING	SECURE	ASPIRATIONAL

Promotes health and wellbeing within their subject(s) and age phase teaching	Knows key developmental milestone and expectations	Has knowledge of subject content	Plans individual and a series of lessons within subject disciplines	Sets appropriate challenge within acceptable risk	Utilises technology and media to enhance learning
Improves attainment and understanding using cross-curricular approaches	Knows the statutory frameworks across subject(s) and age phase(s)	Responds to social, emotional, health, cognitive and physical development needs	Develops strategies to promote positive behaviour for learning	Adopts inclusive approaches to include all learners	Mentors and coaches others to improve pupil outcomes
Leads learning beyond the curriculum, including: cultural, moral, sport, health, pastoral, spiritual, community and extended schools		Adopts a broad subject-specific vocabulary for the appropriate age of learner	Assesses formatively and summatively	Develops original resources to support pupil learning	Creates innovative pedagogical practices and disseminates locally/nationally
CONTENT KNOWLEDGE			SUBJECT PEDAGOGY		

USING THE PKM TO SUPPORT PROFESSIONAL LEARNING

At the centre of the PKM lies knowledge that underpins the 'emerging' phase. Teacher knowledge then moves progressively outwards until it becomes aspirational and expert in nature.

Teachers at any point in their career could use the PKM in the following ways:

- To identify their current stage of teacher learning as they aim to progress from an emergent, secure or aspirational level of professional knowledge
- o A reflective tool to identify areas of strength and areas in need of further development
- o A curricular outline for professional development programmes
- A map of career progression
- A reviewing tool for institutional programmes, ensuring a breadth of opportunity for knowledge development.

For colleagues working within ITE, the PKM could also prompt the following questions:

- Are opportunities made available for development across all four knowledge areas on each programme route?
- o (if applicable) Does progression through subject specialist routes ensure students reach an aspirational level of professional knowledge?
- What aspects of the programme are strengths that could be shared with other providers or disseminated out of the local context?
- o What aspects of the programme require further development?

Although not intended to present teacher knowledge as a set of knowledge facts, the PKM aims to engage teachers and teacher educators in a process of critical reflection about professional knowledge development.