Teachers’ collective work: theory and research in France and the UK


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Introduction

The majority of the literature on teaching and teacher education focuses either on teachers as autonomous individuals (e.g. Lortie 1975), on abstract concepts related to topic areas or pedagogical techniques, or on teacher identities. Little is known about the everyday interactions of teachers within work situations, and yet the collective aspects of teachers work are becoming increasingly important to concepts of professionalism, in areas such as interagency working, co-teaching and work across topic areas. This paper synthesises French and British research in order to produce a coherent account of teachers’ collective work (TCW), as a basis for developing teachers’ competences in ways which recognise the situated and collective aspects of competence.

The empirical data used in the paper are drawn from two sources. Firstly we refer to the EPL project (University of Stirling & Manchester Metropolitan University1),

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in which a team of teacher-researchers interviewed over 100 new teachers (NTs). This data was supplemented with surveys on job satisfaction and pupil opinion, measures of interaction and expert observations of NTs in the classroom. Additionally, we draw on data from the project O2cpe\(^2\) involving interviews with teachers at various career stages working in zones of educational priority (ZEP) in the Grenoble area of France.

**What do we mean by collective work?**

Teachers usually work in organisations such as schools which are inherently collective. Within these collective situations, however, teachers have patterns of interaction which depend upon (amongst other things) the geography and politics of the school, their individual characteristics, the changing needs of pupils and even the weather. Work is specifically collective when interactions result in shared representations of action, usually some common goal or an agreed set of practices. Entrenched patterns of interaction or isolation often prevent collective work from developing in an optimal manner.

In practice, teachers’ collective work consists of a wide range of interactions involving:

- **Curricular structure**: teachers have specific roles within the horizontal (topic) and vertical (sequence) organization of the curriculum.

- **Student trajectories**: teachers build on students’ prior learning, and steer students through the curriculum.

- **Everyday events in school**: teachers respond to the actions and expectations of students and colleagues within the school.

\(^2\) *Observatoire des Compétences Professionnelles des Enseignants dans les activités de Coopération et de Partenariat Éducatifs* (O2cpe) at Université Pierre Mendes-France /IUFM
Co-operation with other professionals: teachers collaborate directly with colleagues, and other professionals e.g. health/social workers, student teachers, teacher educators, or researchers.

School organisation: teachers contribute to formal or informal meetings as part of school life.

The concept of collective work does not presuppose any specific organizational setting or form of communication, merely that multiple actors are required to accomplish work goals efficiently and that the relations amongst them are explicitly established (Leplat, 1994; Schmidt, 1991). Whilst this clearly applies within schools as organisations, the existing literature mainly approaches the topic from a perspective in which particular interaction patterns are specified by managers or leaders. The actual interactions which take place between teachers and others are somewhat mysterious, since access to schools and especially to individual teachers is restricted by timetable and workload issues and by the perception of such research as intrusive.

Literature on teachers’ collective work

In order to confirm some of the assumptions to which we refer above, a search was conducted in the ERIC database. This search uses the descriptor “teacher collaboration”, and takes into account only texts published by peer-reviewed journals and concerned with primary or secondary in-service school teachers (i.e. it excludes further/higher education and teacher education). From January 2004 to September 2006, 89 articles were found.

These articles focus on three main topics:
- the effects of collective work on teachers’ professional identity
- Aspects of cooperation amongst teachers
- Systems which aim to help teachers collectively to improve their practices

Thus, there is a substantial literature concerned with investigating teaching as collective work. The use of models from other professional fields (Boreham,
2004a; Grangeat, 2004; Hodkinson & Hodkinson, 2004; Rogalski, 2003) is, however, justified because the issue of how teachers work, as compared to how they teach, has been under-researched. We feel that convergence between research in teaching and research in workplace learning is increasingly essential. The boundaries between teaching, learning and the world of work are breaking down due to the ubiquity of ICT, the rise of student-centred pedagogies and portfolio careers, and the need for effective transitions between education and employment.

Consequently, our goal is to use theories of collective work in general to understand the processes which underpin teachers’ collective work in particular. The article refers firstly to the didactique professionnelle (DP) model (Pastré, Mayen & Vergnaud, 2006), intended to create more effective continuing professional development (CPD) programmes. This approach is characterised by careful dissection of activities, considering them as the result of actors following rules within systems. The DP model is used to describe professional competences and their development through regulatory loops. One type of loop enables the actors to carry out their task, and the other enables them to improve their understandings about work. This model can be used to analyse individual or collective activities (Leplat, 1994; Rogalski, 2003). In figure 1 (below), the lower loop – productive activity – consists in carrying out the task by accomplishing the goals assigned to the actors; in return, this work modifies the situation. The upper loop – constructive activity – creates work process knowledge which is shared amongst the actors; in turn, this affects the professional competences of the actors. The efficiency of the action and of the regulation loops depends on the relationship between the actors and the work situation.
Secondly, we employ the work process knowledge (WPK) model (Boreham, Samurçay & Fischer, 2002). This approach was developed collaboratively by a group of European researchers in vocational education and training, and leads to the concept of ‘collective competences’ (Reeves & Boreham, 2006; Robert & Rogalski, 2005). This framework aims to analyse the relationship between work experience, learning and knowledge within a collective approach to professional activity. (Boreham, 2002; Boreham, Fischer & Samurcay, 2002; Fischer, Boreham & Nyhan, 2004). The links between these approaches are explored in Grangeat & Gray (2007), but the central idea is that effective collective work requires a coherent combination of theoretical, local and system-level knowledge which is operationalised through interaction in the workplace. Using concepts from the work-process knowledge literature, we explore ways of analysing the interactions of teachers in order to generate system-level understandings of their collective work. This is important because it reflects an emerging shift in the understanding of education itself, from an objectives-led to a situation-based approach (Jonnaert et al, 2006). The essence of this shift is that traditional curricular approaches are failing to provide learners at all levels with suitable skills for the dynamic and complex situations encountered in 21st century workplaces and indeed in life generally. Consequently, the need is to equip
learners to deal with situations, rather than to teach and assess a fixed set of
skills which will undoubtedly date very quickly. This need has been recognised in
Scotland through the initiative *A Curriculum for Excellence* (LTS 2007) although
its implications have not yet been felt throughout the system. As Jonnaert et al
(2006) point out, situations do not organise themselves along artificial disciplinary
lines. As entities within the world, they are necessarily interdisciplinary, requiring
knowledge-sharing across boundaries. They are also necessarily social,
involving collective understanding, or possibly misunderstanding. This approach
reflects current trends in UK education policy, where the isolation of individual
teachers from the collective process is seen as undesirable in relation to the
achievement of school-level goals and national priorities (HMIE, 2005).

The process through which constructive changes occur in teachers' and learners'
practices is the creation of shared operative models. These are different from
"collective visions", which are future-oriented (Dierkes, Marz & Teele, 2001) and
which affect activity only indirectly. Shared operative models are integral to
collective activity, and combine individuals' prior knowledge with new knowledge
generated from exchanges within the group. In this paper we describe their
characteristics and suggest how their development might be enhanced, focusing
on the experience of new or 'novice' teachers.

**Shared operative models and work process knowledge**

The WPK model (Boreham, Samurçay & Fischer, 2002) suggests that collective
competence requires agents to create, share and record meanings in their work
practices. Professional knowledge is thus embedded in the collective memory of
professional groups through the artefacts and technologies which support their
collective activities e.g. operating procedures, manuals or information systems.
Efficient practice requires the explicit development of these shared operative
models, which according to Gibouin (2004) have five characteristic features:
1. They are dynamic. Shared operative models link the situation with the collective activities performed within it. According to Leplat (1994), agents, individually and collectively, continually redefine the task at hand, and thus make new sense of this task as they perform it. Understanding collective work therefore requires:

- Descriptions of the prescribed tasks (i.e. what the agents have to do, individually and collectively),

- Perceptions of these activities from the agents’ point of view (i.e. what the agents think they have to do)

- Reconstruction of the resulting operative models.

This of course poses an epistemological problem since any task description or specification itself involves understandings which may not be held in common by researchers and those who normally perform the task in question. Thus, research becomes a process which itself potentially alters the shared representation or operative model (Leplat, 1997). In the EPL project, it proved impossible to isolate a task (the induction of new teachers) from the knowledge which was generated by researching or specifying its parameters (Gray, 2005). Whilst this is a well-known problem within ethnographic research (Goldbart & Hustler, 2005), it is particularly significant here since collective activity, as a dynamic system, cannot be studied purely by observation but requires discursive, participatory research methods which are difficult to implement in the busy world of teaching.

2. They include doubts and uncertainties. Agents rarely hold identical representations, and compatible models are usually sufficient, especially in cases of co-action or integration. However, agents can never be totally sure that they share all relevant information and knowledge. Moreover, Rogalski (2004) points out that over-confidence (i.e. lack of doubt) may be dangerous in that it minimises mutual control of procedures. Teacher education research needs to
identify how teachers cope with the uncertainties embedded within their common systems of representation. New teachers are particularly vulnerable to problems caused by doubt and uncertainty, whether about procedures or about their own ability in the classroom. From the EPL data, we know that constructive, positive feedback to NTs is essential if they are to gain adequate self-confidence.

3. **They include both internal and external representations.** When agents exchange information about their common activities, they make explicit their own internal operative models, which then become external objects that may be used and modified by the team as a whole. Moreover, the team may use artefacts (e.g. work plans, management software) to clarify the task of each agent, to allow individual agents to influence each other’s activity or for mutual assistance. A possible research question thus concerns the use of these artefacts by teachers and their impact on the coordination of activities. In connection with new teachers in Scotland, the Standard for Full Registration (SFR)(GTCS, 2005) with its associated profile documents is such an artefact. We found that there were few NTs who used the SFR as a procedural manual. It had two distinct roles, firstly as a guide to categories of activity for insertion into the interim and final profile documents required for registration, and secondly as a basis for discussion of teaching issues with mentors and others. It was thus a node in a network, in which discussion and profile completion acted as channels for flows of information about operative models as they were being constructed by new teachers.

4. **They are based on multiple information sources.** Three main sources of information or understanding are integrated by agents to produce an operative model (Boreham, Samurçay & Fischer, 2002; Pastré, 2005; Vidal-Gomel & Rogalski, 2007). The first source consists of *indicators* which trigger or inhibit actions; these indicators are read either directly from the situation (e.g. noise increasing) or indirectly from artefacts (e.g. a lesson plan, the clock).
The second source is reference knowledge generated from experience: this allows agents to attribute meanings to these indicators and other everyday events in their professional situation. An experienced teacher can recognise when a class is becoming restless or when a child requires assistance, using representations of previous situations which follow a similar pattern.

The third source consists of activity organizers or ‘pragmatic concepts’ which combine scientific knowledge learned within a formal curriculum with pragmatic knowledge shared by agents within the workplace. This is the basis of work process knowledge, which allows agents to act efficiently, often by simplifying complex procedures or by combining tasks.

Shared operative models are thus complex and fragile entities which require conscious nurturing by teams, individual agents and managers. The key term here is ‘conscious’, since to ignore the need for specific action to develop them is to ignore their potential as metacognitive tools, as we will now discuss.

The role of metacognitive processes

These operative models represent a metacognitive aspect of task awareness. In fact, metacognitive regulation is crucial when the professionals act within complex and dynamic situations which involve many sources of information and several actors, such as teaching (Rogalski, 2003). Consequently, the role of metacognition in dynamic situations is critical to TCW in three distinct ways:

- **Anticipatory awareness.** Within dynamic contexts, teachers, especially novices, cannot easily predict the effectiveness of possible actions. Thus, they must develop awareness of their own learning processes and their anticipatory capabilities (Butz, 2004). These metacognitive operations enable them to control their doubts and uncertainties in order to be more effective, but can only develop properly if space, time and support are available.

- **Increasing the spatial field of activity.** In the classroom, teachers make independent judgements, but draw on extended networks for information and support, e.g. by bringing in colleagues to deal with contingencies such as
disruption by challenging pupils. Knowing and being known in the school are crucial for NTs, who are generally best able to cope spatially when provided with their own classrooms.

- **Making time to cope with unexpected events.** Within the horizon of anticipation, experienced teachers adjust the timescale within their operative model, to prevent disruptions and to pace actions effectively. Awareness of these temporal aspects appears to improve when novices and experts collaborate.

These metacognitive processes are enhanced by discussions and reflection amongst agents, such as a group of teachers sharing the same learning objectives (Puchner & Taylor, 2006); a cross-disciplinary group (Shank, 2006); a multi-agency group where teachers collaborate with teacher educators (Hoban & Hastings, 2006) or researchers (Parchmann et al., 2006). In fact, from the O2cpe project, Grangeat and Besson (2006) argue that this metacognitive regulation improves with experience, and with teachers’ involvement in professional networks. This leads us to suggest that metacognitive self-regulation is a process which can only develop optimally in collective work situations.

**Conclusions, Research findings and contribution to knowledge.**

Involvement in collective work is thus an integral part of being a teacher, and yet, due to its heterogeneous nature, collective work has not been the focus of discourses of performativity and management in the same way as individual teaching. For example, in Scotland, the Standard for Full Registration (GTCS 2005) is primarily directed at the individual teacher, enabling him or her to demonstrate a range of qualities considered essential to professional participation. The Standard for Chartered Teacher (SCT)(SEED 2002), whilst also directed at individuals, acknowledges that teachers:
...will be committed to influencing the development of teaching and learning, and to strengthening partnerships with other professional groups, parents and other agencies.

Even this does not go very far in placing collective work as central to teaching, rather than being a peripheral activity. We consider TCW as central not only because this fits the work-process knowledge and didactique professionnelle models, but because there is empirical evidence of its importance within schools, in relation to the experience of new teachers and elsewhere. Within the EPL project, we have found strong evidence that the formation of effective working relationships between new teachers and colleagues or pupils is more important than prior subject knowledge or ongoing CPD in effective completion of the induction year. Forming such relationships is about establishing conditions for effective collective work. In other words, NTs experience a process of engagement with the collective situation in which they learn:

- How to **augment** their individual competences by consulting or co-operating with others.
- How to **integrate** their individual functions into the functioning of the collective situation
- How to **debate** with others, in order to establish a professional identity within the collective situation

This process is necessarily open-ended within the dynamic and complex world of teaching, and the experienced teacher, as described in SCT, might develop additional forms of engagement viz:

- How to **co-ordinate** the competences of a group or team in order to perform a collective task.
- How to **enquire** into situations in order to achieve improvements in collective practice
- How to **challenge** collective situations in order to initiate change

Our view is that, whilst these are important skills for individual teachers to possess, their implementation requires a climate responsive to the collective
nature of teachers' work. It is therefore possible that the low take-up of *Scottish Chartered Teacher* (SP, 2007) is due in part to a perceived gap between individual skills and the processes of collective work which we have described.

The framework and theoretical approaches outlined above, combined with the practical methods developed in the EPL & O2cpe projects make it possible to study aspects of teachers’ work and interactions previously regarded as incidental to core competences of pedagogical technique and subject knowledge. By using the concepts of work process knowledge and *didactique professionnelle*, the fine detail of teachers’ work can be brought into focus, using data gathered from teachers themselves, expert observers, teacher-researchers and pupils.

Several points emerge from both the French and British studies. Firstly, the creation of spaces for interactions relating to collective work appears to be left largely to chance, or at least to the discretion of senior management. There is a widespread but unfounded belief that conversations are not intrinsically necessary to the functioning of organisations and that so long as ‘structures’ are in place for prescribed types of information flow, there is no need for additional provision. Whilst our evidence is that NTs are generally capable of seeking out the information and knowledge necessary for their individual task performance, it also suggests that knowledge sharing is not as strongly promoted as it might be.

Secondly, and following from the first point, it is important that schools and their external ‘partners’ or ‘communities’, including parents and other professionals, recognise that the effectiveness of collective activity can be enhanced by tapping into the full range of information and knowledge sources represented by these communities. These are not communities of practice but communities of purpose.
Thirdly, we stress the importance of shared collective representations, or operative models, of teaching in specific contexts and situations. Although it seems obvious that groups of professionals working in the same building(s) and sharing curricular structures, students and resources would have similar ideas about what they are doing, our research suggests that this is far from being the case. Furthermore, the development of such models is not a trivial matter, given the widely differing experiences, biographies and pedagogical approaches to be found within any given group of teachers. The study of TCW suggests that there is a need for a revaluation of collective activities which represent the difference between competence and excellence in teachers' work. We also argue that the flow of information in schools is never unidirectional and that new teachers make a necessary contribution to the ongoing development of the profession. The findings of the study indicate that there are significant differences between France and Scotland in the nature of teachers' interactions and collective work, which we hope to investigate further.

References


GTCS (General Teaching Council Scotland) (2005) Standard for Full Registration Edinburgh, GTCS.


