National College for School Leadership

The Knowledge-creating School

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In this paper, Hargreaves explores the concept of 'knowledge-creating schools' by examining the four key elements which, he argues, are core to this concept:

- auditing professional knowledge
- managing the process of creating new knowledge
- validating the professional knowledge created
- disseminating the created professional knowledge

The paper goes on to explore ways in which research that is problem-focused and embedded in schools can best be promoted

Key findings

- School leaders need to know their schools' overall intellectual capital, not only on an individual level, but with regard to whole school structure and culture. It should be possible to map *who* is expert in *what*.

- Characteristics of knowledge-creating schools include a high volume of internal debate and professional networking, regular opportunities for reflection, enquiry and dialogue, and a culture of 'no blame' experimentation and challenge.

- Given the general view that educational research provides too little practical support to teachers and policy-makers, one alternative is to make practitioners the major source of knowledge creation.

- Knowledge creation may stem from school involvement in initial teacher training.

- Knowledge creation may also stem from teachers engaging in research. School-based research consortia are particularly effective, because they are collective rather than isolated enterprises.

- Terms such as 'best practice' currently used to infer validation are unhelpfully loose. Knowledge validation can consist of personal judgement by the practitioner, judgement from a professional group or outside agency or scientific evidence.

What are knowledge-creating schools and why do we need them?

Expectations of schools and teachers continue to rise. At the same time, what is demanded of them is changing, as the communities which they service are rapidly moving into the knowledge society. In particular, the changing world of work demands different capacities from school leavers.

Hargreaves argues that recent educational reform overemphasises the value of spreading best practice, because existing practice is rapidly becoming out of date. What is needed is the capacity in schools to generate new professional knowledge. We need knowledge-creating schools. An ideal knowledge-creating school:

- **audits** its professional working knowledge
- **manages the process** of creating new professional knowledge
- **validates** the professional knowledge created
- **disseminates** the created professional knowledge

Auditing a school's professional working knowledge

Hargreaves argues that teachers often do not know what they know, and are ignorant of what they don't know. This is exacerbated by the isolation among teachers in schools. In a collaborative school culture, it is possible to map who is expert in what. School leaders need to understand their schools' overall intellectual capital, not only as it exists in the brains of individual members of staff, but also as it is embedded in the school's structure and culture.

Managing the process of creating new professional knowledge

Given the general view that educational research provides too little practical support to teachers and policy-makers, one alternative is to make practitioners the major source of knowledge creation. Hargreaves suggests that the characteristics of knowledge-creating schools include:

- enthusiasm for continuous improvement
- awareness of external environment
- sensitivity to students', parents' and governors' preferences
- coherent, flexible institutional planning
- flat hierarchies and devolved power
- recognition for teachers' expertise
- informal staff relationships, with the accent on expertise not status
- high volume of internal debate and professional networking
- professional knowledge-creation seen explicitly as a whole-school, regularised process
- regular opportunities for reflection, enquiry and dialogue
- "internal hybridisation" (job-rotation, cross-functional teams)
- use of temporary developmental groups
- culture of 'no blame' experimentation and challenge
- encouragement of diversity and deviance
- partnerships
- positive tension between control and liberty, freedom and responsibility

Hargreaves notes that this list of characteristics does not closely parallel the established orthodoxy about effective schools. He also draws on Nonaka and Takeuchi's 'The Knowledge Creating Company' (1995) to identify four types of knowledge-creation:

1. socialisation: shared experience through apprenticeship, mentoring

2. externalisation: tacit knowledge becomes articulated into explicit knowledge through dialogue and collective reflection

3. internalisation: learning by doing, where explicit knowledge becomes implicit (skill acquisition)

4. combination: people with different bodies of knowledge come together in networks

Validation of knowledge – is this the same as sharing 'best practice'?

Hargreaves argues that the current use of terms like 'best practice' is unhelpfully loose. Knowledge validation can consist of:

- personal judgement by the practitioner
- judgement from a professional group
- independent assessment by consumers or government agency
- judicial views (not prevalent in education yet)
- scientific evidence

He suggests that knowledge-creating schools will use these in prudent combinations.

How is research disseminated within and between schools?

Research and development leaders in universities are frustrated by low levels of impact of their research in schools. Hargreaves recommends replacing the HE-to-school model (distanced, non-interactive, written) with processes of disseminating ***within*** and ***between*** schools. (He notes the tendency for separate R&D units in industry to have been closed down and integrated into the workforce.) He distinguishes between transferability between persons, and transposability between places (schools).

Some of the ways in which research is transferred and transposed:

1. Teachers are always keen to "tinker" – haphazard trial and error – in their classroom. When such tinkering becomes more systematic, more collective *and explicitly managed*, it is transformed into knowledge creation. But transfer is difficult, because it is the *process* of tinkering which has generated the learning.

2. School involvement in initial teacher training. Having to mentor novices inevitably results in reflection and internalisation, as well as socialisation and externalisation. Besides, the trainee usually brings in fresh ideas.

3. Teachers engaging in research ("a more systematic form of tinkering"). School based research consortia are particularly effective, due to the collective rather than isolated enterprise.

4. Middle managers serving as the 'strategic knot' between senior management (too far from the front-line) and classroom teachers (too focused on immediate demands). The

middle managers in secondary schools can be the critical ‘knowledge engineers’.

Looking to the future: fostering demand led, problem-focused and accountability-tested research

Hargreaves suggests that teachers must be at the heart of knowledge creation about effective teaching and learning and researchers must get closer to them. The old model of university research is expert-led, chosen by the supplier (researcher), peer-reviewed and then disseminated top-down. Hargreaves suggests that the new model must be demand-led (coming into being only when the need is identified by practitioners), problem-focused, accountability-tested and embedded in networks.

Hargreaves suggests promoting more of the new-type research by:

- training and supporting teachers in research skills
- seeking opportunities for the externalisation and combination modes of learning by school staff
- establishing ‘tinkering networks’ to extend and regularise what is otherwise an isolated and fragmented practice
- encouraging networks and webs for educational research and experimentation supported by universities
- making the study of networking, validation and dissemination of professional knowledge a topic in itself for university research

He concludes that all this can be directly and explicitly promoted by DfES and other agencies.

Implications for leaders: what have we learnt about knowledge-creating schools?

Knowledge is created in four ways according to Hargreaves; through socialisation, externalisation, internalisation or a combination of methods. Leaders might wish to consider whether opportunities are provided to:

- share experience through apprenticeship models or mentoring
- develop tacit knowledge into explicit knowledge through collaborative reflection
- develop ‘learning by doing’ where explicit knowledge becomes implicit
- network with people from different organisations

Hargreaves suggests that knowledge-creating schools will validate knowledge in terms of prudent combinations of personal judgement, views of professional groups, independent assessments or scientific evidence. This has implications for listening to teacher and pupil voice as well as examining research evidence.

The process of ‘tinkering’ – haphazard trial and error – by teachers in their classrooms, when managed, can add to the knowledge of the school. How might such informal, integral aspects of teaching become part of a school’s collective knowledge?

Having to mentor novices inevitably results in reflection and internalisation, as well as socialisation and externalisation. An added benefit is that the trainee usually brings in fresh ideas. Leaders might be encouraged to explore whether school involvement in initial teacher training could bring new knowledge and encourage innovation.

Knowledge can result from teachers engaging in research ("a more systematic form of tinkering"). School-based research consortia are regarded as particularly effective. Leaders might reflect on the benefits of developing cross-school research consortia.

Middle managers in secondary schools can act as the 'strategic knot' between senior management and classroom teachers. Are these key personnel aware of, and equipped, to develop their role in encouraging and supporting teachers in knowledge acquisition? Would the creation of research support roles in schools help in knowledge creation?

References

Nonaka, I and Takeuchi, H, 1995, *The knowledge-creating company*, New York, Oxford University Press

