NCSL National College for School Leadership

Research Associate Report

**Sean Heslop**, Headteacher, Tiffin Boys' School, Kingston upon Thames

# Hidden gold

Schools managing knowledge capital during periods of change

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## Introduction

One afternoon in early September 2003, I walked into the school hall to begin an induction session with our new teaching staff. The previous academic year had seen a particularly high staff turnover – nearly 20% – and as I began the process of introducing the staff to the routines, processes and rituals of a new school, I reflected both on the time and energy such induction takes and the possible impact this would have on school performance. Subsequent conversations with colleagues from other schools revealed a diverse and fascinating mixture of approaches in the ways that schools manage knowledge capital during periods of change.

The aim of this research was to try to understand how the individual and collective knowledge that schools possess can impact on managing and leading a school. This is brought into particular focus when that knowledge looks as if it will be changed or revised or even lost. When this happens, schools seem to react in different ways. The aim of this study is to provide a series of strategies for school leaders that can be used to help manage and lead schools in such circumstances.

### Defining knowledge capital

Let me begin by offering a definition of 'knowledge capital'. In *The Wealth of Knowledge: Intellectual Capital and the Twenty-first Century Organization*, Stewart (2001) offers a good starting point:

> Simply put, knowledge assets are talent, skills, know-how, know-what and relationships. (p 11)

Although Stewart was drawing on wealth-creating organisations, it is useful to consider how this definition applies to schools.

### Talent and skills

Many of the talents and skills of a school workforce will have been the reasons for employing the individuals in the first place. As well as academic and professional qualifications, the employee will bring experiential abilities, a track record of judgements and insight and a range of personal characteristics that have been developed elsewhere and, for many, have continued to develop. Davenport and Prusak (2000) offer a revealing and useful observation of this resource:

> … human minds are the most flexible asset a company has – and the most rigid. (p 64)

And there will be specific skills that are inherently part of the individual's daily practice in a school: the ability to deal with a range of competing needs in a people organisation; the constant handling of interactions with a variety of stakeholders; pedagogical expertise; understanding the setting of objectives; assessing an individual's learning; and suiting a particular task or activity to different contexts. The current skills basis of teachers has much in common with the teaching excellence of the past but it has also become increasingly specialised:

> Over the past three generations, people have been able to build up their knowledge and skills through a linear process, leading from basic education into more specialised training and then into work. Not only have the levels of knowledge required for work risen, but the *kinds* of knowledge required have also changed. (Seltzer and Bentley 1999)

## Know-how and know-what

The 'know-how and know-what' of a school are more than just the documented processes, published procedures and tangible routines of the organisation. They are inextricably linked to the culture of the school which, as Stoll (1999) further defines, 'describes how things are and acts as a screen or lens through which the world is viewed'. Stoll draws on other educational writers in developing this concept. Culture defines reality for those within a social organisation (Hargreaves 1995), gives them support and identity and 'forms a framework for occupational learning' (Hargreaves 1994: 165). Each school has a different reality or mindset of school life, often captured in the simple phrase 'the way we do things around here' (Deal and Kennedy 1983).

David Hargreaves explores this further in *Creative Professionalism: The Role of Teachers in the Knowledge Society* (1998). In looking at the role of teachers in the knowledge society, he draws on the Nonaka and Takeuchi (1995) model of knowledge creation to differentiate between explicit and implicit knowledge. This has particular relevance for school leaders. Some of the professional knowledge of school leaders is explicit: it is easily talked about or written down. For example, an existing curriculum model for a school can be seen in the form of a spreadsheet, with teacher names, numbers of periods and year group weightings allocated accordingly. Each part of this model can be explained in terms of personnel of curricula development or cost or the historical focus of the school. However, if that model were drastically changed, you would need the implicit or tacit knowledge of a school leader to ensure that the new model could be effectively delivered. For example, the leader would have to consider the appropriateness of the curriculum for each year group and class, who were the most effective teaching personnel and so on. Hargreaves observes:

> Teachers make clever decisions which are right in the circumstances, but often they cannot explain to an outsider exactly *how and why* they did what they did. (1994: 30)

## Relationships

So far, we have dealt with knowledge capital as an asset that is held by an individual. Schools, however, like any communities, exist through a network of relationships, both within the school and beyond. In many schools these relationships are based on teams – curriculum areas, year groups, leadership – yet Hargreaves observes that such networking for knowledge sharing is 'under-developed … schools are hierarchical or compartmentalised' (Hargreaves 1994: 49). When genuine sharing does occur, professional knowledge is transferred through a series of links based on trust, respect and informal and formal networks. This enables knowledge to be shared through conversations and dialogue, recorded information and existing school systems. However, the mere existence of a meeting, document or database does not ensure that the professional knowledge has been effectively and accurately transferred. Similarly, there may also be some external networking through local schools, federations, consortia or a looser, more informal group.

## Drawing on the world of commerce

As already noted, my definition of 'knowledge capital' has been drawn from the world of commerce. Since the mid-1990s there has been significant interest in exploring the relationship between knowledge capital and the creation of wealth in commercial organisations. A series of company-based studies and developing theories, from Sveiby and Lloyd's (1987) work in Sweden to Nonaka and Takeuchi (1991) in Japan and Stewart (1991) in the US, led to the conclusion that: 'Knowledge had become

such an important factor of production that a company that didn't manage it wasn't minding its business' (Stewart 2001: xv).

Although educational organisations have a different philosophical foundation and purpose, the understanding of knowledge is common to both. Knowledge as a standalone asset originates and resides in people's minds. The basis of learning and teaching involves that knowledge being expressed, considered, changed and reformed. In other words, for it to have value it is constantly being generated and re-generated. Davenport and Prusak (2000) identify five modes of knowledge generation:

- *acquisition:* this can be through new people, structures, routines and processes;
- *dedicated resources:* this considers the establishment of a group or unit or budget with the specific purpose of generating new knowledge;
- *fusion:* this is when innovation and risk taking are used to deal with complexity and conflict;
- *adaptation:* this is when known processes of generation do not function effectively and so the knowledge becomes reformed and changed, departing from its original intention or use;
- *networking:* this covers a wide variety of networks – formal and informal, planned and spontaneous, internal and external and one-offs and sustained.

Stewart's definition of knowledge capital and Davenport and Prusak's approach to knowledge generation offer us a starting point for trying to work out some of the complexity of knowledge capital, knowledge management and knowledge creation in schools.

## So why is the gold hidden?

In Mark Twain's *The Adventures of Huckleberry Finn* (reprinted 1991), Tom Sawyer tells Huck how to find gold by reading a treasure map:

> It's hid in mighty particular places, Huck – sometimes on islands, sometimes in rotten chests under the end of a limb of an old dead tree, just where the shadow falls at midnight; but mostly under the floor in ha'nted houses … it lays there a long time and gets rusty; and by and by somebody finds an old yellow paper that tells how to find [it] – a paper that's got to be ciphered over about a week because it's mostly signs hy'roglyphics. (p 159)

Through exploring the ways that different schools were managing their knowledge capital during periods of change, I became convinced that, rather than focusing on the negative impact of such upheaval, many schools were actually revealing 'hidden gold' in how they dealt with this impact. I believe that the findings and recommendations will have a resonance for all schools.

## Methodology

Face-to-face, semi-structured interviews were conducted with the headteacher or the senior leadership team (SLT) at five schools (four secondary and one primary) during the spring term, 2004. The interviews focused on exploring schools' approaches to managing knowledge capital during periods of change. Follow-up interviews were undertaken after two years to further explore these issues. The names of the schools and participants have been made anonymous in order to preserve confidentiality.

## Findings

The majority of the schools studied tended to approach the challenge of managing knowledge capital as an opportunity to confront existing orthodoxies, an aim towards new ways of thinking and to challenge received wisdom. At the same time, care was needed to ensure that the willingness to embrace new ideas did not result in the unnecessary loss of good practice and understanding.

The interviews revealed the following five creative strategies in managing knowledge capital:

- creating additional capacity
- promoting greater ownership of knowledge management
- promoting the culture of learning within a community
- accepting the inevitable
- the promise of the new technologies.

These strategies are explored further in the sections that follow.

## Creating additional capacity

Most schools recognise that it is becoming increasingly difficult to replace an outgoing member of the organisation with an exact equivalent. This is particularly marked in the challenge of school leader recruitment. The National College for School Leadership's (NCSL's) *Succession Planning: Formal Advice to the Secretary of State on Succession Planning* (2006) cited the following figures:

> … the numbers of school leader retirements is likely to rise from 2,250 in 2004 to a peak of nearly 3,500 in 2009 … over recent years only about a third of retirements have been at normal retirement age (60) or above, and a growing number have been early retirements after age 55 … we estimate from initial analysis that retirement pressures will require an increase, on 2004 figures, of 15-20 percent in the recruitment of school leaders by 2009. (p 3)

The authors go on to state:

> The projected shortfall in numbers coming forward for school leadership posts and headship cannot be absorbed by the system and certain areas will present acute problems in the next two to three years, if not addressed. (NCSL 2006: 3)

In other words, if the current system of replacing outgoing knowledge capital with incoming capital is no longer sustainable, then the system requires change.

## Two can be better than one

One way is to create additional capacity. The research found that, in most of the schools, leaders had created additional capacity rather than replacing like with like. In School C, the assistant headteacher commented on how difficult it had been to replace the head of department of a performing arts subject. He explained:

> "This subject had a special hold on students' lives, it touched them through power, control, relationships and personality, it had been so creative, but so individual that it had become impossible to replace … so we did something different."

The 'replacement' was actually two new people who had other responsibilities outside the department, who brought new knowledge into the school and were supported for several hours a week by an associate member of staff. Consequently, the department ended up doing new things as well as retaining its excellence.

## Formalise what you think

The headteacher of School A had found a succession of maternity leaves difficult to absorb. As a result she decided to change her approach to promoting new career opportunities:

> "This is a small school and, due to recent staff turnover, I now had a number of young, able teachers who were looking for career progression. Previously, people had to wait but I couldn't, so we changed things. It was a risk, but it worked."

She promoted one person to a senior role and paid them on the leadership spine for one year only. When the original postholder returned from maternity leave she opted to return part time as a classroom teacher without responsibility. The person on the one-year senior appointment was then made permanent. She is now a headteacher in another school. School A's headteacher commented:

> "After it worked the first time we did it again and again at different levels. The financial risk was outweighed by the continuity and improved performance we got. We only reacted to each case at the time but, looking at it now, I suppose it was accelerating career opportunities … and doing it quite aggressively."

## Under your nose

The headteacher of School B inherited a deficit budget on his arrival and therefore had no room for such financial manoeuvring. However, he felt that he needed to change existing structures in order to build new capacity in the school. So, at the beginning of the academic year, he adapted the traditional review system for subject departments, by pairing one successful department with one that was not quite so effective. The subject leaders were given a brief to meet, compare successes, share approaches to things that had worked and then honestly appraise what could be improved:

> "The idea was to create a genuine learning partnership between middle leaders, break up some traditional relationships that had only really existed between the 'good' departments, and create a non-threatening environment of challenge and support. The subject leaders ended up doing – and achieving – far more in those meetings than they had ever before, with clear but hands-off guidance from me. I was given far more time and energy to devote to our failing departments…. I wasn't spread so thinly."

## Not like us

School D believed that it had many resources locked within its people that were not being used, mainly its associate staff. One of the assistant heads takes up the story:

> "Like many schools, our number of associate staff has increased dramatically over the last few years. But we realised that they were not really contributing to the school and the trouble was that our whole PD [professional development] system is based upon preparing teachers for promotion."

This realisation led the school to reform its whole development approach in terms of time, delivery, resourcing and leadership. A whole-staff professional development group was formed with teaching and associate staff membership:

> "The leadership of the group was shared between representatives from all the staff and we realised that the development needs of support, technical and administrative staff is very different. Not everyone wants to become like us!"

A consequence of this has been the increasing involvement of associate staff in areas that had traditionally been the preserve of teaching staff: student voice, duties, pastoral care, contact with home and assessment. This has resulted in a refreshing diversity of approaches to these areas and has, in turn, led to giving more capacity to teaching staff for other activities.

## What's around the corner

Sometimes, external factors can be used to increase capacity. In School E the newly appointed headteacher inherited a SLT of one deputy headteacher and six assistant headteachers. At the same time, it was 'received wisdom' that the school had very few middle leaders who could aspire to senior leadership. During his first year of headship, through staff interview and audit, the head identified a lack of opportunities for middle leaders to gain experience in preparation for senior roles. The end of his first year coincided with the introduction of teaching and learning responsibility rewards (TLRs) to replace management points for responsibility. As a result, he used the TLR structure to introduce a heads of faculty system into the school:

> "I felt that we had the potential leaders in the school but we did not have opportunities to grow them. The Heads of Faculty level increased accountability and possibility whilst, from my point of view, distributing leadership. There was a cost implication but then, when one of the Assistant Heads got a deputy headship, he wasn't replaced so we've actually saved money."

The headteacher is now committed to a policy of 'never replacing like for like', planning in the near future that, when another assistant headteacher retires, the responsibilities will be able to be split between three very capable existing members of the associate staff. These will all gain increased responsibility, increased payment and be able to offer a whole new skills set to roles that had been the traditional preserve of senior school staff:

> "Everyone's role in a school is constantly changing. It's good for us to constantly ask, 'why are we doing this like this' and 'what would it look like done in a different way'. Best of all, the answers usually create new space for everyone involved so we end up doing it differently and more effectively."

## Summary

Personnel changes can provide schools with an opportunity to reflect on a new shape and opportunity for managing their knowledge capital. In many cases it can actually lead to an increase in knowledge and an increase in the ability to manage knowledge:

- Personnel changes frequently become bogged down by issues of the outgoing personality and characteristics of departing staff.
- All of these school leaders looked on change as an opportunity to move the school on to another stage; not one dwelt on the negative aspects of the loss.
- Imposed externally mandated reforms can provide an impetus and justification for new ways of doing things if the timing is right.
- Risk taking and going with instinct underlies a great deal of the success of some of these strategies.
- Newly appointed heads frequently succeeded by recognising something that was already there within the school and then acting on it.
- Human resources – both teaching and associate staff – within a school are frequently immense yet schools need to audit these and find out what they have if they are to be utilised.
- The core business of a school is obviously learning and teaching but sometimes a focus on this precludes other significant purposes and so disenfranchises a number of staff and students.

# Promoting greater ownership of knowledge management

Considering the promise and challenge of owning knowledge management, Davenport and Prusak (2000) claim:

> If we want knowledge to move and be utilised more effectively, we need to better understand the forces that drive it. (p 25)

In order for this process of understanding to begin, Hargreaves (1998) attempts to offer a set of questions for schools to investigate their knowledge capital:

- How many years of professional experience are there among the teaching staff of your school?
- How much of this professional knowledge is:
  – shared by all teachers?
  – shared by some teachers?
  – locked in the heads of individual teachers? (p 27)

The answer to the first question will be relatively simple to get, although perhaps not much more can then be established from that answer. In contrast, the second question gets to the heart of where this knowledge is and how it is shared but, as a school leader, consider how easy is it to answer. When this question was used in my interviews, the respondents found it difficult not to resort to anecdote. Instead, a number of practical approaches emerged that begin to address Hargreaves' second question.

## Sleeping with the enemy

The headteacher of School B felt that his senior leadership – a stable, experienced and well-established group – were the key knowledge holders in the school but they were so used to working with each other in fairly set ways that knowledge was locked within individuals and not really owned collectively by the team. Through his professional friendship with another secondary school in the neighbouring borough that was also one of his competitors, they agreed a senior leadership partnership programme. It began with an informal meeting and has now developed into a regular, formal system for sharing knowledge. There are three to four joint leadership team meetings, a joint bursars' meeting, a timetablers' meeting, shared observation programmes, a 14–19 curriculum group, specific projects where the schools have worked together, such as changing the length of the school day and post-16 redeployment of teacher expertise where a Religious Studies teacher at one school now offers a Moral Philosophy course at the other school. This process has so disturbed the older patterns of working among School B's leadership team that responsibilities have been changed and the headteacher believes the team is far more effective:

> "It is now beginning to open up new areas of learning … we do it because it works and it is creating an interesting model. Indeed we are working in partnership with our local primary school on governance and the local independent school [another potential competitor] on sixth form issues."

## Through the school gates

It must be emphasised that the opportunity to work in a partnership, or be part of a network, does not automatically ensure greater ownership of knowledge management. The headteacher of School A complained that many local authority meetings – that she believed could be used to start answering Hargreaves' question about where knowledge sits – were mere briefings, aimed at troubleshooting and short-term reactions to issues. The school had also been part of an Education Action Zone (EAZ) which, through a professional board meeting, did offer a chance to share

knowledge but it was then difficult to get the knowledge back into school because only heads could attend the board meetings. Much more effective, she believed, was using what was already around you to share knowledge:

> "Knowledge capital is derived from the whole contextual community in which the school works and, if you ignore it, you ignore it at your peril. It is the lifeblood of the school and builds the school's capacity to change."

The school is situated in the middle of a housing estate serving an area of high socio-economic deprivation. The headteacher employs a person from the local community to stand on the gate at the beginning and end of the school day. This person greets everyone, checks minor details and picks up any problems through talking and listening. Initially, there was some surprise in the school at her appointment because these duties were seen as teacher based. Now she is seen as a crucial member of the school staff:

> "Previously we had no way of bridging the gap between 'school' and 'home' and, with some of these families that was a huge gap. This person knows the school and acts as our representative and will become aware of things that we would only have picked up much later when I had become a massive issue. We can now manage it."

## Outdated

School C cites the case of how it approached education administration as a good example in sharing knowledge. For many years a group had existed in the school that looked after every detail of the school's administration, including: timetable, examinations, cover, school records, health and safety, finance, school diary, school calendar, communication with parents and school visits. The group comprised a deputy headteacher, assistant headteacher and all of the heads of section of the school's support services. The forthcoming retirement of the assistant headteacher was used as a reason by the deputy headteacher to disband the group:

> "If anything, there was too much knowledge in that group and it wasn't going anywhere. Look at the list of responsibilities the group had. It was an impossible job and, to be fair, everyone was trying to do their best and were petrified of not fulfilling these duties. When I said that the group would cease I was told that the school would collapse, we'd miss exam entries, everything would be double-booked and nothing would happen. In the event the thing disappeared overnight and no one noticed."

The deputy headteacher believed that the enormity of the knowledge in the group, held by a small number of key individuals, prevented innovative thinking from taking place. The group had been established 15 years ago when schools were taking on an increasing autonomous role and, at the time, it had been necessary. It was now outdated and the school was able to deal with these responsibilities in a much more effective way. For example, the structure of the calendar and day were changed to increase students' learning.

## Outdated, again

The headteacher of School E makes a similar observation about structures and processes:

> "When I arrived there were a number of systems that should have promoted a greater ownership of knowledge management: termly staff meetings, monthly leadership meetings, half-termly heads of department meetings. But there was little or no sharing. If anything the meetings were so ineffective that any receptiveness to ownership was crushed."

The particular example of the school's leadership meetings illustrates this well. The leadership committee was made up of the school's SLT and three governors. The committee met after school once a month and discussed and agreed whole-school

action as well as regular department reviews. In 2002 Ofsted had actually praised its effectiveness and contribution to the school direction. The new headteacher was unhappy with its work, however:

> "It just wasn't effective, no matter what Ofsted said! The department reviews were anecdotal, rarely had any evidence base and didn't point to any areas for development. There was a cyclical agenda of items – school planning, budget, contracts – but these required little discussion and were really there to be put on the agenda and minuted. Also, with a small number of governors there, the communication processes were flawed – both to governors and staff."

The frequency of committee meetings was reduced over the next two years until the group was finally closed down. Meanwhile the school has introduced a curriculum and personnel committee structure for governors, it now has a more rigorous subject and year group review process and has twice weekly meetings for its SLT, a pre-school operational meeting and an after-school strategic meeting.

## Catching up with time

The headteacher of School D made some interesting observations about sharing knowledge through different structures. He has an ambition to remove the SLT and move to a flat, non-hierarchical structure, but this has not yet happened:

> "Every time we have a vacancy in SLT I spend a lot of time thinking that this is the time to start moving to the flat structure. Yet, after a great deal of consideration, I always end up appointing a replacement. My role as head of this school has changed enormously in the last twelve years but we have kept the same leadership structure."

Ultimately, this particular headteacher, who spends a number of days a week working outside the school, is struggling to maintain his traditional role of headteacher in an organisation that is, after all, hierarchically structured and compartmentalised. Abandonment of such a role is also caught up in issues of power, ego and influence.

## Summary

Many of the school leaders interviewed as part of this study had developed strategies to increase the sharing of knowledge and so ensure greater ownership. To return to Hargreaves' question quoted at the beginning of this section, rather than ask 'How much' in terms of knowledge capital, it may be better to ask, 'Where is it?' and then 'How do I know?'.

- Trying to identify where knowledge resides is notoriously difficult.
- As in the previous section, however, following instinct usually results in success.
- Partnerships and networks are usually offered an opportunity to distribute knowledge among a wider group within the school.
- Partnerships and networks that were created by the participants were far more effective at increasing the capacity to own knowledge than those that were imposed.
- Systems for promoting greater ownership of knowledge seemed particularly prone to date quickly and lose some of their effectiveness.
- The actual knowledge holders are sometimes either unable or unwilling to share the very knowledge that needed to be shared.
- Some structures and systems need to be closed down completely while others can be adapted.

# Promoting the culture of learning within a community

In *Supporting Effective Learning* (2002), Carnell and Lodge draw an important distinction between a learning community and a learning organisation:

> We use the term *learning community* because there is a very real sense in which all members of the school community need to learn together. In a learning community, the important ends are the growth and development of the people. The means are the ways in which community members work and learn together. This is in contrast to a learning organization where the ends are organizational growth, productivity, efficiency and effectiveness. The people and the learning they do in support of organizational goals are the means in organizational learning (Mitchell and Sankey, 2000). In a school it is the growth and development of its members which are important. (pp 136–7)

This distinction is important in relation to our understanding of knowledge capital within schools. While the literature that has been drawn on is often based on studies of commercial foundations, schools do of course have very different purposes. However, schools as organisations should also be committed to the increase of efficiency and effectiveness in their own growth. The promotion of learning within schools is vital to this growth. Munro (1999) offers a useful set of frames for building effective learning for teachers that can be adapted slightly for this report's purpose:

- learning through active constructive processes
- valuing existing implicit knowledge
- framing goals or challenges for learning
- engaging in collegiate collaborative activities
- engaging in self-direction and systematic reflection of their practice
- exploring and demonstrating new knowledge.

This balance between recognising and celebrating what is already there *and* enabling the creation of new knowledge is a key to the successful promotion of a learning culture within schools.

## Get active

Many of the schools created opportunities for active learning to take place between teachers. School A drew on its membership of an EAZ to bring another headteacher in for a day's training for the whole staff. This was followed up with a series of twilight sessions. The headteacher explained:

> "The Learning Journeys project grew out of our membership of the zone … and it was the zone that sowed the seeds of this active learning through issuing all staff with laptops, organising a primary conference, involving all staff and celebrating what was happening."

She underlined the importance of whole-staff, active involvement and believed that the school would have found it very difficult to achieve this on its own. Both School C and School E used professional development sessions for staff to teach other staff key skills: preparation for promotion, time management, ICT (information and communication technologies) competence and sharing pedagogical success stories. School E in particular wanted to move away from the 'telling' delivery of professional development to the 'showing then doing':

> "We arranged a two-day residential conference in October and used it to launch a new approach to independent learning. All curriculum leaders were requested to bring one scheme of work and then, after the morning's introductory session, collaborate with their department in adapting the scheme. After presenting this back to the whole staff they then suggested their own time line for introducing it back at school. That summer all staff were invited to see students presenting their

independent learning projects at several evening sessions. Some of the outcomes were good … some were outstanding … it was, I felt, learning for our whole community."

School B was in the process of applying for specialist school status in the performing arts and used this as a way of engaging with its local community. It used a neighbourhood meeting to introduce its intention and then wrote over 1,800 letters inviting residents to visit the school and see what it was already doing in the performing arts. These visits ended up identifying areas of expertise that the school could build onto its already sound provision. The result was a clearly defined plan to create new facilities for both school and community. As the headteacher says:

"… the school is now regularly opened up to the local community so that people can understand what is going on in the school and understand that the school is part of their community even though two-thirds of our students do not come from the immediate area."

## Valuing what we cannot always see

Many school leaders were quite forthright in valuing the knowledge in their community even if it was not possible to audit it. The headteacher of School B said:

"A school at the end of the day is about the people who work and study in it … you work that out and you recognise it."

School A's headteacher added:

"I am proud of my team, I trust and support them and we try to lighten the load through help and assurance … that support is very tangible and is, I think, as important as a set of skills or a list of knowledge."

The assistant headteacher at School C believed that action planning and target setting could be used more effectively to 'capture' some of the enormous knowledge that exists within schools whereas the assistant headteacher at School D offered another view:

"I don't think our processes of planning, target setting and so on catch teachers doing the right things. They are organised around what we can measure but how can you measure the rich diversity of what happens here every day?"

The headteacher of School E seemed to agree:

"Perhaps we need to worry less about what already exists and concentrate on what doesn't. Aren't we haven't having exactly the same debate with all this testing kids have to put up with? I'm not concerned with weighing the pig…. I just want to keep fattening him up!"

## Giving direction

All schools indicated that they would only be interested in generating new knowledge if it was part of the school's context, vision and objectives. The headteacher of School E commented on avoiding the 'hothouse' school of continuous innovation that leads to weariness, apathy and resentment. In School C the question of 'Why are we considering doing this?' was regularly asked at leadership meetings and School B's headteacher said that the financial constraints of the school gave tremendous focus to anything that they were considering:

"We only have the money to draw upon our own expertise so we only do what's important."

The headteacher of School C illustrated how working with other schools had forced his school to emphasise its core qualities and so agree on clear actions:

"A couple of years ago we began a project – now recognised by London Challenge – in which we invited in a number of leaders from schools in challenging circumstances for an immersion course. Basically we told our own story of school improvement and offered these leaders models that could be adapted to suit their contexts. It was useful for me and my team to remind us about where we had been and where we are now. More importantly, many of the schools had a real 'can do' attitude and that was good for us. If you want to do something, and it's right for the school even if there will be difficulties, get on and do it."

## Working together

All schools were not only engaged in some form of collaborative activity with external partners, they also demonstrated a collegiate approach to learning within their own communities. School A and School C were part of the same EAZ. School E has three key partnerships and Schools D and B have recently created significant new partnerships. Within the schools, all leaders made clear that collegiality was not just about the obvious but a commitment to deeper forms of sustainable learning within the whole community. The more obvious forms of collegial work, developed from Little (1990) and described by Carnell and Lodge (2002) as 'weaker', could be:

- storytelling
- providing help and assistance
- sharing resources and ideas (p 133)

whereas stronger forms of collegial work are characterised by: team teaching; observation, feedback and dialogue; action research; mentoring; and joint planning, design and evaluation of teaching materials.

All of the schools had some involvement and development in these areas. School A and School B had particularly well-developed approaches to team teaching. Schools B, C and E had excellent observation processes that involved the observer and observed in a continuous and reflective dialogue about their own learning; School D used action research to introduce, implement and evaluate new ideas coming into school and all schools used mentoring with their staff and students and had a similar approach to bringing teaching materials into school. Interestingly, even the vocabulary of these characteristics was a common theme between the five schools. For example, 'mentoring' was a term that was used by all interviewees, even if the practice and approach varied between the schools.

## Looking in the mirror

A commitment to continuous reflection was another characteristic shared by all schools. The school's leaders made frequent references to these traits in the interviews. The headteacher of School C saw this as an integral part of the school and extended it to his recruitment of teaching staff:

"When I appoint staff I am looking for who has the ability to become outstanding. Outstanding teachers have an enthusiasm for their subject that extends beyond the syllabus. They give of their time without question. They are restless in their desire to improve their craft. This is just what our school aims to be: we always ask ourselves 'How well are we doing?' and 'What can we do to make it even better?'."

The headteacher of School B, when asked to describe his school's predominant culture, replied:

"… forward thinking, energetic, enthusiastic, warm, involved and a willingness to look at ourselves."

And the headteacher of School E developed a similar theme:

"I talk about this to everyone. As a school we are good, perhaps even very good, in places. But we are not yet great. When we are we will know that every single member of our community has had an outstanding opportunity to learn and achieve, everyone has enjoyed being part of our community, been challenged and celebrated, and leaves us with an even greater love for learning. We are not there yet and, until we are, we will keep on striving to do better."

## In with the new

All of the schools believed that they were receptive to new ideas. However, that receptiveness was always qualified. In School C the headteacher said:

"I'm interested in new ideas and people bring them but the ideas have to enhance our model. We have a very clear model of school improvement here and that needs to be continuously grown but new ideas and fresh thinking must have practical meaning to that model. I would want to avoid cherry picking … that's a lazy approach, is often unsustainable and, whenever you take these ideas out of context, they often add very little anyway."

School E's headteacher saw it slightly differently:

"Of course I find new knowledge exciting but I think it will only remain an idea if it stays with one person. It has got to be demonstrated within the context of the school but it also needs to be owned by everyone. How often have we heard of one person's idea being introduced into a school and, even with the best will in the world, sinking without trace. Look at how often that even happens with a head's ideas. Some of the people might do it some of the time but that's it. It doesn't really make a difference to classroom practice or school leadership or school performance."

He believed that the introduction of new knowledge was a complex change process that involved turning implicit knowledge into explicit knowledge. In other words, it was not just about the new knowledge per se but the existing knowledge held within the school. The process of creation changed all it touched and was rarely understood by school leaders.

## Summary

In trying to unpick just what we mean by 'a culture of learning' this section revealed marked common characteristics between the schools:

- The terms 'teacher' and 'learner' were virtually interchangeable.
- There was genuine and committed involvement in a variety of partnerships.
- Partnerships were reciprocal with all partners learning and growing from the process.
- Strong collegial learning is underpinned by continuous reflection.
- The context of a school had a strong influence in determining its shape and effectiveness as a learning community.
- 'New' knowledge and 'old' knowledge had an inextricable relationship and should not be seen as two separate entities.
- The process of knowledge creation was incredibly complex and, not only do we not seem to know much about it, but also we should not pretend that we do.

## Accepting the inevitable

Schools will always face the issue of staff turnover and this will, to some extent, mean that schools will always suffer from a loss of knowledge capital. As was quoted in the introduction, a great deal of knowledge resides within individuals' minds and is taken with them when they leave the organisation. Fullan, in *The New Meaning of Educational Change* (1991), summarises some of the reasons for this by citing the influential work of Lortie (1975): the nature of teacher training; the cellular organisation of schools; the physical isolation of teachers' working conditions; the piecemeal nature of support and development; differing and varied attempts to measure the effectiveness of teaching; and daily uncertainty in work and practice. However, the schools featured in this study tended to be characterised by accepting that such loss was inevitable and, rather than dwell on the disappearance of something that could *not* be captured, it was better to focus energies on *what could* be caught and used. As Davenport and Prusak (2000) comment:

> Knowledge abounds in our organisations, but its existence does not guarantee its use. (p 89)

These schools were committed to understanding and transferring the use of knowledge capital.

### Write it down

Following three years of significant staff turnover, the headteacher of School E, working with one governor who had a human resources background, decided to introduce exit interviews for all departing staff. It was agreed that these interviews would have an intention of capturing departing knowledge. The process followed an agreed procedure: in the six weeks before the member of staff was due to leave, an interview time was arranged with a governor from the personnel committee. A room was booked and one hour allowed for the interview. The interview itself followed a structured series of questions and responses were noted at the time. These questions – all generic – had been agreed at a previous personnel committee meeting. At the end of the interview the notes were agreed, signed and the governor retained the original and ensured that the interviewee received a copy. It was also understood that the notes could be used as feedback to the headteacher, SLT and governors. The headteacher explained the point of the process:

> "In a one-hour interview you are not going to capture that one person's knowledge … that would be absurd. However, you can start to identify pointers that could help reveal knowledge. Imagine an English teacher starts to talk about their job, then focuses upon particular success with a particular class. The questions were structured so that the interviewer moved quickly from general observations (important to ask but probably not very useful) to specifics. So, for example, this English teacher can discuss how and why a particular coursework worked well with this class. If the right follow up is in place then the head of department needs to tap into this and ensure that the knowledge is expressed and shared with the rest of the department."

The headteacher said that the interview questions were structured to focus on what had gone well in the person's time at the school and why it had gone well. This obviously required much skill and understanding from the governor. The exit interview looked at reasons for departure and any further reflections on the school but it was not there as an opportunity to complain.

When this study first began to look at differing school approaches, School C was just beginning to use exit interviews. Two years later the process had been introduced and, although it had collected much information, the school was not entirely sure how to use it. As School E observed above, the focus tended to be on reasons for departure and what could have been done to stop the individual from leaving.

Inevitably it then became a listing of unresolved issues, sometimes descending into complaint. The school did not believe that it was capturing any outgoing knowledge.

## Many hands

When a departing member of staff with responsibility was being replaced by an internal appointment, some schools attempted a teaming up of the two staff before departure. In many instances this was achieved through some meetings, a session together or the opportunity to go off-site for half a day. School D was, however, committed to a highly structured programme of induction through team working. The headteacher explained:

> "The departing person's knowledge is so valuable, we as a school have invested so much in it, that we ensure we get back as much as possible. We've made a number of internal promotions and I wanted to ensure continuity and give my new person a headstart. The days of learning on the job are long gone and, when you've got the ideal mentor working in the same building as you, it would be foolish to miss the chance."

The school drew up a structured programme of team working that involved: shadowing the member of staff for several days doing a variety of tasks; at least one off-site meeting for a whole day; getting the new appointment involved in all decision making and attendance at key events; creating opportunities to work with the person's team; and sessions with the team's line manager. The number of internal promotions over three years had been such that the school soon decided to organise generic sessions: the headteacher running one on school priorities, one with several governors and a course for middle leaders that was seen as preparation for the Leading from the Middle course. The headteacher does, however, offer a caveat:

> "It was getting to the point when it became easier to make internal appointments over external ones because the continuity was guaranteed. That is not necessarily right and we have now stepped back from that a little."

## Working in your shadow

An element of School D's approach that School A used effectively was shadowing for a day. With limited resources, time and capacity, it was felt that highly focused shadowing was the best way to transfer knowledge. The headteacher explained that, previously, they had simply arranged meetings between the person leaving and the person arriving. But, she goes on:

> "These were just information sharing with occasional commentary, most of which could be done by e-mail or a quick half-hour meeting. However, if the person leaving has got that little bit of something special, then you want your new person to observe it in action. So our shadowing was built upon observing that person for a whole day. And the observer is not just passive, they have to come up with a list of questions: Why did you do that? Why did you make that choice? What were you trying to achieve? We had a subject coordinator who was observed for a whole day teaching, no discussion about paper work or admin or anything like that. It was the best hand over of roles we ever achieved."

The headteacher made it clear that the shadowing needed to be highly structured and the aims made explicitly clear to the observer. When asked about the differences between implicit and explicit knowledge she believed that it was one of the few things that the school had done that actually began to capture some of this implicit knowledge.

## Summary

Many of the headteachers interviewed no longer treated each forthcoming departure as an occasion of loss but rather a challenge that had to be accepted and managed. Key characteristics emerged in their management strategies:

- To capture particular examples of good or outstanding practice use both verbal and written processes.
- Recognise that not everything can be captured and, even if this was possible, such information would probably have limited application.
- Recognise that the simple transfer of paperwork has limited value.
- Understand the huge value of personal interaction in sharing knowledge.
- Do not just hope that people will share knowledge through talk; often it requires a highly structured, focused and insightful set of questions.
- Be as explicit as possible about intentions; do not just leave people to it.
- Confront people's fears about how induction happens and recognise that risk taking often leads to a creative, genuine dialogue rather than an ineffectual briefing.

## The promise of the new technologies

In the course of this study many of the schools made reference to the role of new technology in helping schools to manage knowledge capital. Discussions about auditing, mapping and codifying knowledge frequently led to suggestions that information technology (IT) had a key role in fulfilling this task. However, the rhetoric was rarely matched by practice. Davenport and Prusak (2000) make a similar observation:

> Information technology can provide an infrastructure for moving knowledge and information about knowledge as well as building a virtual knowledge market place … but it has limitations and pitfalls because you are trying to force fluid knowledge into rigid data structures. (p 45)

So, the technology really only offers a faster, better organised and more accessible form of the paper folder, handbook and bundle of documents. In other words, new technologies might only have a very limited impact on our management of existing knowledge structures. However, if we accept that new knowledge structures, some of which have not even been generated, will have an impact on schools, then the promise of new technology begins to fulfil itself. Hargreaves (2003), commenting on how the lateral use of ICT has the potential to transform learning communities, states:

> This demands that we change the emphasis on ICT from simple communication to the development of creative communities. (p 66)

The schools in this study were just beginning to realise where and how new knowledge was being created in their immediate and wider community.

## Virtual help

As part of a virtual EAZ, School A was able to build a new ICT infrastructure. As welcome as this was, the headteacher realised that use of this infrastructure was severely limited. Some staff had little confidence using it in a classroom situation; staff already had effective schemes of work that did not require obvious and new ICT input; the growing use of ICT by one or two more confident teachers only seemed to further isolate the majority of non-ICT-using staff; and some of the staff felt that the infrastructure was imposed, there had not been a previous need for it and its presence now only served to emphasise its peripheral significance. Through discussion with a colleague from a secondary school that was also in the EAZ, School A's headteacher voiced her concerns, frustrations and disappointments. After a series of meetings the secondary school offered School A the support of a 'virtual technician'. This was a combination of an ICT technician who would work at the school for one day per week complemented by a software package that was able to identify any problems that might arise in the school's infrastructure and then suggest solutions. Some of these solutions required actual visits but, as time went on, the school began to carry out its own maintenance and problem solving, referring back to the virtual technician software and human support where necessary. Commenting on the impact of technology on knowledge management, the headteacher said:

> "It hasn't really changed what we have always been doing but that's not the point. Instead it has given us a far greater capacity to do new things. It has been incredible to see some staff, who previously would never have gone near a computer, now using whiteboard technology in a lesson. Their confidence has grown because it offers something new, something extra, and they now understand how it can be used and why … when that happens it shows us what every primary school could be like."

**Seeing something new**

In an attempt to reduce School E's use of paper, the headteacher bought in a software package that enabled the school to run its performance management review system. The performance management system itself has not changed; indeed the use of the software was a simple transfer from paper to on-screen. However, now that the outcomes of the reviews can be seen in one single place, it has revealed the inconsistency in the school in reviewing previous targets, setting new targets, interim reviews and the quality of the interview itself. Moreover, the software package allows the person being performance managed to evaluate the process through comments. These comments reveal that many line managers are struggling with the process. The headteacher comments:

> "Over a third of all our staff has roles as performance managers. Perhaps we shouldn't be surprised at the inconsistency although things were even worse than I had expected. However the feedback comments, when read in the light of the targets and reviews, are like gold dust. They tell us exactly where it's going wrong, why it's going wrong and, more importantly, what we need to do to start putting it right."

**Webs of knowledge**

All five schools were involved in networks that had new technology infrastructure underpinning the links between schools. Two of the schools were part of a virtual EAZ, one school was part of a local authority-based project that had a shared intranet focused on 14–19 curriculum issues, one school made extensive use of video-conferencing to build and sustain an international partnership and a fifth was considering building a new facility to enable the transfer of curriculum resources between high-achieving schools. As was noted in the introduction to this section, participants often referred to all that these technology-based networks still had to do rather than what they had already achieved. However, there was a sense that, where knowledge sometimes could not be replaced, a good alternative was to simply go and create new knowledge instead. The headteacher of School B described one project:

> "Yes it's blue sky thinking, unashamedly so, and I think that all schools should be doing that. It takes us out of ourselves, we leave some of the day-to-day things behind and that's at the heart of this school's learning. It's about how we can move forward and focus our thinking upon what's possible."

**Summary**

The schools where there was a significant impact created by new technology recorded varying and diverse experiences in how it could be used to manage knowledge capital. However, all agreed that a key contribution could be made when some of the following factors were considered:

- New technologies should not simply be seen as a replacement for paper and books.
- The impact of new technologies are often most effective when they are needs-driven.
- New technologies are the tool that serve the mystery, complexity and 'stickiness' of the knowledge capital residing in people's mind.
- New technologies are key to driving the generation of new knowledge.
- At its root, knowledge transfer requires people to find effective ways to talk and listen to each other; new technologies can make finding those ways a little easier.

# References

Carnell, E and Lodge, C, 2002, *Supporting Effective Learning*, London, Chapman

Davenport, T H and Prusak, L, 2000, *Working Knowledge: How Organizations Manage What They Know*, Cambridge, MA, Harvard University Press

Deal, T E and Kennedy, A, 1983, 'Culture and school performance', *Educational Leadership*, **40**(5): 140–1

Fullan, M, 1991, *The New Meaning of Educational Change*, London, Cassell

Hargreaves, A, 1994, *Changing Teachers, Changing Times: Teachers' Work and Culture in the Postmodern Age*, London, Cassell

Hargreaves, D H, 1995, 'School culture, school effectiveness and school improvement', *School Effectiveness and School Improvement*, **6**(1): 23–46

Hargreaves, D H, 1998, *Creative Professionalism: The Role of Teachers in the Knowledge Society*, London, Demos

Hargreaves, D H, 2003, *Education Epidemic: Transforming Secondary Schools through Innovation Networks*, London, Demos

Lortie, D, 1975, *School Teacher: A Sociological Study*, Chicago, IL, University of Chicago Press

Mitchell, C and Sankey, L, 2000, *Profound Improvement: Building Capacity for a Learning Community*, Lisse, Swets and Zeitlinger

Munro, J, 1999, 'Learning more about learning improves teacher effectiveness', *School Effectiveness and School Improvement*, **10**(2): 151–71

NCSL (National College for School Leadership), 2006, *Succession Planning: Formal Advice to the Secretary of State*, Nottingham, NCSL

Nonaka, I and Takeuchi, H, 1991, 'The knowledge creating company', *Harvard Business Review*, **69**, Nov/Dec: 96–104

Nonaka, I and Takeuchi, H, 1995, *The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation*, New York, NY, Oxford University Press

Seltzer, K and Bentley, T, 1999, *The Creative Age: Knowledge and Skills for the New Economy*, London, Demos

Stewart, T A, 1991, 'Brainpower: how intellectual capital is becoming America's most important asset', *Fortune*, June, 44ff

Stewart, T A, 1998, *Intellectual Capital: The New Wealth of Organizations*, London, Nicholas Brealey

Stewart, T A, 2001, *The Wealth of Knowledge: Intellectual Capital and the Twenty-first Century Organization*, New York, NY, Doubleday

Stoll, L, 1999, 'School culture: black hole or fertile garden for school improvement', in J Prosser, ed, *School Culture*, London, Chapman

Sveiby, E and Lloyd, T, 1987, *Managing Knowhow: Add Value … By Valuing Creativity*, London, Bloomsbury

Twain, M, reprinted 1991, *The Adventures of Tom Sawyer*, London, Random House

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