

## Models, motivators and methods

*A think piece by author and learning expert Dr Bill Lucas for The Innovation Unit on how schools might share knowledge more effectively*

### Introduction

Every school wants to improve. The vast majority of teachers want to do a good job. Parents want their children to do better and better. Governments are elected and rejected on electoral impressions of whether schools are adequately preparing pupils for life.

Over the last seven years the DfES has introduced a number of policies and strategies which have contributed to improvements in a number of areas in school effectiveness. But to many observers, progress seems to have stalled. This short paper offers some personal thoughts on how schools might share their knowledge more effectively, and, acting on this, might continue to transform themselves.

But first a personal note. I started my teaching career in a comprehensive school on the Blackbird Leys estate in Oxford in the 1980s. Three factors come to mind as why, from an early stage in my professional development, I was determined to get better and better at my craft. All had to do with being

given local development opportunities.

So, for example, in my first five years, I was seconded twice, to help to develop the English component of the Oxford Certificate of Educational Achievement and, later, to develop approaches to school based teacher-training.

The second factor was a piece of luck. A chance meeting with a publisher at Oxford University Press led to me being commissioned to write a book about teaching English to year 7 pupils with special educational needs.

And then a young headteacher called Bob Moon – now Professor of Education at the Open University – gave me a break. “Bill, I’ve noticed your enthusiasm for the arts and the fact that we have poor relationships with our feeder schools. How about opening up the school on a Saturday morning and inviting them in.” So I found myself running the Peers Saturday Arts Centre for a year. Naturally I learned much from the experience which I took with me to subsequent teaching posts.

In short, I worked in a culture – both school and local authority – where innovation and risk-taking were encouraged and supported. And consequently I can trace my passion for sharing new thinking very clearly to the early years of my working life.

## 1. Models

“The potential danger for schools lies in the privacy of the classroom.” Charles Handy

How to get knowledge and best practice around the system and beyond the individual classroom is the current concern of public service policy makers.

When it comes to education and schools there are a number of initiatives clearly aimed at doing just this, of which the Networked Learning Communities and the National Teacher Research Panel are just two. Yet the evidence for what really works when it comes to collaborative teacher learning and knowledge sharing is, as yet, scant.

There are really only two basic models of how this currently happens. Either the DfES tells teachers what knowledge to transfer – as in the literacy strategy – or teachers get together to decide for themselves what they want to share (often with support from groups like the NCSL.) One is top-down, the other bottom-up.

In all of the discussions about knowledge transfer there is an implicit sense that there is a clear model of the kind of knowledge which is to be transferred and the ways in which this is to happen. But actually this is often not the case. In the first part of this paper I want to see what

happens if you take different models of knowledge and knowledge transfer and apply them to schools. But before I do this consider these thoughts:

### *Tacit knowledge matters most*

It is widely accepted that there is a real distinction between explicit knowledge – that which can easily be written down and tacit knowledge – the complex embedded insights and techniques we acquire over time. Most of the knowledge that matters in schools is tacit – how to deal with a difficult pupil; how to read the mood of a parent etc – and, as such is not easily written down. Tacit knowledge is best shared person to person. Yet any system of this kind of dissemination is bound to be unreliable.

There are at least four kinds of knowledge transfer which need to take place in schools.

*Tacit to tacit* - You watch me do something in the classroom and then do it yourself

*Explicit to explicit* - I tell you what I do with my class and you write it down

*Tacit to explicit* - You write down what you see me doing in the classroom

*Explicit to tacit* - You try out something you have read that I wrote describing what I do in my classroom.

Often there is a progression from tacit to explicit to tacit to explicit as teachers observe, practice, record and share.

*The hierarchy of words*

There are many different kinds of knowledge:

Data, information, knowledge, experience, intuition, judgement, values and wisdom.

Such words have an implied hierarchy, ie some are more valued than others in terms of school improvement.

*Ownership matters*

Perhaps most interestingly for schools it is the affective relationship between teacher and knowledge that is likely to influence teaching behaviour. Take the idea of starting a lesson well:

Know what	It involves sharing learning outcomes.
Know how	You tell the class what they are going to learn.
Know why	How you start matters. Unless you engage with learners the learning does not stick.
Care why	It is a matter of professional pride that you explain how things fit in and at the same time pick up emotional signals from pupils.

Behaviours change and standards rise when a teacher

not only knows that something is important and has an idea how to do it in practice, but cares sufficiently to ensure that it is a priority.

Clearly in sharing knowledge it is necessary to have a range of strategies for ensuring that good ideas ultimately travel across the whole school sector:

- Good idea in a classroom
- Good practice in a school
- Local good practice
- Sector good practice



There are many other ways in which you can analyse knowledge as well as the distinction between tacit and explicit. It can be complex or simple, teachable or not, observable or not observable, for example.

Back to the two most common ways in which knowledge is shared, either top-down or bottom-up, government driven or locally initiated. In both of these, knowledge is essentially transmitted through a range of means in the certain hope that it will gradually get through.

In both cases it can seem frustratingly slow.

Would it help if we were clearer about the different types of knowledge we are trying to transfer across the school system, developing different methods for different types?

What happens if you look at different models of knowledge and knowledge transfer? Let's consider these models and see if they stimulate any new thinking.

### 1.1 Doing it the blue tit way

What if we thought of schools as living entities and put aside all thoughts of them being – however we might deny it – machines for turning out well qualified young people?

In 1997, Business guru Arie de Geus started a revolution in his book *The Living Company*<sup>1</sup> by suggesting that the organisations which last longest are those which see themselves as a living identity.

In exploring the notion of the ecology of evolution, De Geus tells a story about blue-tits and robins which he encountered while seeking to turn Shell into a learning organisation. Drawing on the work of the biologist Professor Allan Wilson, he became interested in understanding why blue-tits have evolved so successfully and quickly by comparison to other species. Wilson suggested that it might be because they could evolve within a generation.

At the start of the century in the UK, milk bottles had no tops and both blue tits and robins drank the milk almost at will. Then, when aluminium seals were introduced, one species learned

how to siphon off the cream at will – the blue tit. Indeed by the 1950s the whole species had learned. The robin never did.

Why was this? Because blue tits flock and are mobile, whereas robins are territorial loners. So, in some mysterious way – Richard Hawkins<sup>2</sup> would call it a “meme” – the innovator blue tits communicated their insights to others in the flock and the species, as a consequence, learned how to access its nutritious free breakfast.

How can we ensure that teacher innovators flock and are mobile?

### 1.2 Finding the tipping point

What if sharing knowledge was more like the way that an epidemic works? Every epidemic has a tipping point after which there is no going back. What was local becomes national or global, as with the SARS virus. At some stage it becomes unstoppable; change is dramatic not incremental.

Malcolm Gladwell<sup>3</sup> has identified three key elements of tipping points in epidemics and explored them with regard to other kinds of epidemics:

- the law of the few
- the stickiness factor, and
- the power of context.

Why can one person or a small number of people make a

dramatic difference? Heard of the concept of six degrees of separation? (That we are all connected to each other through no more than six different connections – “know you who knows her who used to work with him etc”.) That’s the law of the few. In educational terms I can think of an example of this. He is called Tim Brighouse, and in Oxfordshire, Birmingham and now London he has an effect that has some of the qualities of a benign epidemic. Interestingly, this was also true of the early days of the first Harry Potter book. One group of children told another and another in rapid sequence so that JK Rowling found herself part of an epidemic in selling books to people who previously did not see themselves as readers.

To see what Gladwell means by the stickiness factor, consider the example of Sesame Street. This programme became a sensation in the USA, the first educational programme to be a “must-watch” for young Americans. Why? Because its blend of songs and puppet characters like Big Bird were so “sticky” that children would not miss it. Web site developers are also seeking this effect.

Or for the power of context think of the transformation made to New York during the 1990s. Criminologists James Q Wilson and George Kelling proved the theory that minor acts of neglect – graffiti on trains,

broken seats in the park etc – suggest a context in which the common belief is that no one cares. Many head-teachers have proved this truth to themselves, too.

Knowing about tipping points requires us to reframe the way we see the world and start to believe that a certain combination of circumstances .

How can we use our knowledge about tipping points to ensure that certain innovative methods become dramatic epidemics rather than gradual shifts in emphasis across our school system?

### 1.3 Thinking like innovative software developers

In his recent paper, *Working laterally: how innovation networks make an education epidemic*<sup>3</sup>, David Hargreaves takes the example of the open source software movement as one from which networks of teachers could learn. With the spirit of open exchange of ideas, Linus Torvalds created Linux, software that has even now begun to threaten the primacy of Microsoft’s position. One of the key premises in the revolution that Torvalds started is that the more minds you can get working on a problem, the quicker it will be solved. The Linus world-view sees the skills hackers have as being potentially positive.

So what would happen if education adopted a similar approach?

As well as Linux, we might look at Amazon and e-Bay. On-line book-buyers can search the data-base of world books. Authors can check their popularity ratings. Purchasers can see what like-minded people are buying and create their own virtual libraries. And with virtual auction houses, anything goes when it comes to exchanging wares.

How can we inspire the Linux spirit among teachers? How can we engage the hacker tendency that exists among some teachers? What can we learn from knowledge-sharing software on popular web sites that works?

#### 1.4 The sporting life

What if we saw schools as sports clubs or associations? If we were football companies we would employ talent scouts to find the next generation of Beckhams and create contracts to tie them in to our club.

Why has British Olympic rowing been so successful in the last few years? Partly because of ex-headteacher David Tanner's determination to create the best possible environment for young rowers. This led to a Lottery initiative which has provided resources of time and money which were not

previously available to young rowers.

And coaching – that key relationship in sports – works. Learning mentors and an impressive array of other adults working in schools have begun to help young people on a one to one basis. What about teachers? In 2001 I suggested that every adult needed an LP (Learning Practitioner) for their mind just as they need a GP for their body<sup>4</sup>.

Would talent or "idea" scouts work in the school environment? How can we create a better environment for high performance in young teachers? How can we ensure that every teacher who wants one has some kind of critical friend to explore ideas with?

#### 1.5 The idea of organisations which learn

"Bad times have a scientific value. These are the occasions a good learner would not miss."  
Ralph Waldo Emerson

Of course the most obvious knowledge sharing movement from which schools might learn is the concept of the learning organisation. Initiated by Peter Senge in the 1990s hot on the heels of the TQM (Total Quality Management) movement, the idea of the learning organisation has taken root in many business organisations.

Oddly enough, as we have found to our cost, schools in the environment of the last twenty years have not been notably successful or willing learning organisations.

The Senge model involves *personal mastery* (a clear sense of vision), *shared vision* (the ability to create a collective set of goals), *mental models* (continuous reflection on current reality and possible improvement), team learning (the use of tools such as dialogue to develop a group's intelligence into more than the sum of the parts) and *systems thinking* (finding levers which when pulled will really produce change).

Perhaps the learning organisation idea is a victim of its own success and has become simply a meaningless mantra. Or maybe it is like a prophet in its own land unloved by teachers and preferred by business people?

*Schools that learn*<sup>5</sup>, Peter Senge's deliberate foray into education is full of practical wisdom which goes a long way to rehabilitating the idea.

How can we go beyond the mantra of "the learning organisation", especially in finding levers and sustainable systems that really produce positive change in schools?

## 1.6 Knowing what you know

"It is very difficult to become knowledgeable in a passive way. Actively experiencing something is considerably more valuable than having it described." Roger Schank

The other major initiative in the corporate domain to rival the idea of the learning organisation has been the emerging science of knowledge management. In the opening thoughts of section 1 we have already explored some of the curiosities of knowledge and begun to tease out the different ways in which it can be labelled and served up.

Like the learning organisation, knowledge management has also provoked allergic reactions in sensible people who feel that it is more psycho-babble than common sense. Chief Knowledge Officers are all very well, these people might say, but what do they actually *do*?

The best definition of knowledge to my mind has been written by Thomas Davenport and Laurence Prusak<sup>6</sup>:

"Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information."

Neither neat nor simple, knowledge, as defined here,

depends as much on beliefs as it does on information.

In our quest to focus on standards in a few key areas, is it possible that we have reached a plateau in terms of knowledge in action because we have not engaged teachers' belief sets as much as we have their intellects?

### 1.7 The creative mindset

To ensure that teachers are self-motivated, they need to *care* about which method they choose, as well as *know* about it, as we saw in the early thoughts of this section. A teacher might, for example, know brainstorming was a way of generating ideas, but not truly believe in its effectiveness. As a consequence he or she might either not use it or use it ineffectively.

But in what kind of mind-set is it possible to be most innovative and most creative? In recent research I have undertaken with Guy Claxton<sup>7</sup>, we have looked at the literature of creativity and concluded that there are two key areas of interest – habits of mind and mind set.

Incidentally, to pursue the example in an earlier paragraph on this page, it turns out that brainstorming as a tool is *not* particularly effective for many people.

The most important creative habits to cultivate include the following:

- being able to tolerate uncertainty
- being able to live with complexity and ambiguity
- asking good questions
- daring to wait when answers do not come easily
- deferring evaluation, and
- being resilient.

And as for mind set, there are three dimensions which particularly influence your state of mind.

The first is *focus*. Is it sharp or soft and playful. The tendency is to be focussed when it may be the more diffused state which is more productive.

The second is *orientation*. Is your attention turned inwards or outwards? Sometimes we look too eagerly at things when we need to search for meaning within ourselves.

The third is *sociability*. We love kicking ideas around when sometimes we need to be more solitary and puzzle them out for ourselves.

In the busy world of schools, how can we encourage and value the key habits of innovation and creativity? How can we coach teachers to think more softly, get better at looking inwards and resist the over-simplifying of ideas that groups and networks can lead to?

## 2. Motivators

I started this piece by arguing that the vast majority of teachers want to improve. I believe this strongly. But it is surely possible to go further in building motivation for sharing knowledge about school improvement.

### *The tendency for satisficing*

Back in the 1950s Herbert Simon coined the term “satisficing” to describe the general sense that, in the workplace, it is all right just to get by and put up with what is just about good enough. Schools are no exception to this. It is what psychologist Robert Zajonc calls the “mere exposure effect”<sup>8</sup>. After a while we all, including teachers, get used to things and even begin to like them more.

### 2.1 The market for ideas

The most important thing to understand is that there is a market for knowledge just as there is a market for houses or washing machines or music or, for that matter, schools themselves.

The difficult thing in any knowledge market is establishing what the currency is. With a Dyson new patent, a hit record or the latest publishing sensation, the currency is money. But with ideas it is different. Thomas Davenport and Laurence Prusak argue that there are three key kinds of

knowledge “currency”<sup>9</sup>. These are *reciprocity* (mutual self-help), *reputation* (people want to be thought of as talented and well-informed) and *altruism* (we like to help.) The key influence on the state of health of the knowledge stock exchange is trust.

As in any market there are some key roles: buyers, sellers and brokers.

Teachers “buy” through taking part in local networks n-service development, by studying DfES videos etc. Teachers also sell their ideas by running sessions locally or nationally, by writing books and contributing to debate. And teachers are themselves brokers, often at the most fundamental level over a cup of coffee in the staff-room when they ask a colleague if they know about another’s work.

Buyers	Teachers Head-teachers Policy makers Local authorities Think tanks
Sellers	Teachers Head-teachers Policy-makers Local authorities Universities Publishers Think tanks
Brokers	Teachers Head-teachers Librarians Policy makers Local authorities Think tanks

Interestingly in the school sector the main players play all of the roles, which may partly explain why it is a confused situation for many people.

The interest of all of the buyers is easy to see. But the motivation of the teacher sellers and the teacher brokers is more complex. For much of the last decade, notwithstanding the current interest in “earned autonomy” and its concomitant local freedom, much of the brokerage has been enforced brokerage by central government. At the same time, with the fuller impact of reducing roles for local government being felt, there have been some parts of the country where government’s local “brokers” – advisers and inspectors – have been either discredited or absent.

How can we improve the market for school improvement ideas? In particular, how can we develop the role of teacher sellers and broker?

## 2.2 Barriers to a free market

Of course there are many impediments to the smooth running of the market. These include:

- lack of trust
- not-invented-here syndrome
- lack of motivation
- ignorance on the part of potential sellers (not realising that what they have is useful)

- lack of recognition for the sellers
- lack of energy or time on the part of the buyers
- different cultures (school and government, for example)
- different languages
- blame culture
- competitive environment preventing exchange of knowledge.

One of the particular challenges here will be for government to be honest about the degree to which some of the pressures it has introduced into the market for ideas – league tables and central strategy making, for example – have actually begun to create barriers.

It was clearly necessary to move away from a comparatively unregulated market and to drive certain initiatives from the centre, but teachers, like any professional group have good memories.

How can we do more to overcome the barriers to the transfer of good practice among schools? How can we be more creative in the way we reward individuals and organisations to ensure better knowledge sharing?

### 3. Methods

Models, motivators and now methods. In this section I want to suggest some possible practical approaches which might flow from my earlier assertions and questions. They are intended to be prompts only.

#### 3.1 Techniques

##### *a) Daily bulletin*

Produce guidance for head-teachers and department heads to use at morning briefings. These would be informed by classification of knowledge into tacit and explicit. They could also be available on-line.

##### *b) Team briefings and meetings*

Develop, publish and share tools for critical reflection and knowledge sharing and which suggest that every meeting might begin with a "what have we learned in the last week" section

##### *c) Left hand columns*

Harvard professor, Chris Argyris suggests that many professional jump to conclusions too quickly<sup>10</sup>. He developed a tool which could easily be adapted for many aspects of school life. On a two column page, you take a problem or issue of incident that you have been wrestling with and describe what happened in the right hand column. In the left hand

one you write down your thoughts and feelings. With an LP you then reflect on this.

##### *d) Critical incident review*

Train every teacher in the basic techniques of this kind of review, with a specific intention of building confidence in descriptive vocabulary

##### *e) Action learning*

Help every teacher to learn the basics of the action learning approach invented by Reg Revans<sup>11</sup>. This would help to ensure continuous improvement by equipping teachers with enquiry and problem-solving techniques which can be enjoyable and profitably applied to real-world school problems.

##### *f) Double loop thinking*

Professionals are very good at single-loop thinking (the photocopier breaks down and you fix it) but much less good at double-loop thinking (the copier breaks down and you rethink the system of duplicating materials throughout the school, outsourcing some of the work and doing away with many hard-copy activities).

Introduce all head-teachers to the concept of double loop thinking as invented by Chris Argyris<sup>12</sup>. This would inject sustainable improvements into the system as a whole.

*g] Facilitation*

Train at least one teacher per primary school and three per secondary in the skills of facilitation to ensure better knowledge exchange at a school and local level.

*h] Learning history tool*

Adapt the learning history tool developed for business by Art Kleiner and George Roth<sup>13</sup> September-October 1997. This enables organisational histories to be co-written in such a way that it becomes easier to extract the insights, see the themes and raise issues and questions.

**3.2 New roles**

*a] Teachers*

Consider ways in which teachers in their first five years will be required to or have opportunities to develop more quickly and more imaginatively than now. You could, for example, create contractual and DfES grant arrangements which enable some teachers to act as paid "blue-tits" in defined areas of interest.

*b] Teaching assistants*

Train teaching assistants so that they acquire a range of observation and knowledge-sharing techniques.

*c] Line managers*

Especially in secondary schools, provide training in facilitation and knowledge-sharing for those who lead teams of teachers.

*d] Head-teachers*

Create an incentive scheme for head-teachers to share good practice.

*e] Local authorities*

Create an incentive scheme for local authorities to share good practice.

*f] Trade unions and professional associations*

Create an incentive scheme for trade unions and professional associations to share good practice.

*g] Pupils*

Produce materials for bold schools to use with their pupils which help pupils to give constructive feedback to teachers on the effectiveness of the learning opportunities offered to them.

**3.3 School management strategies**

*a] NQTs*

Introduce new opportunities for NQTs to learn how to reflect on experience and share knowledge.

*b] Strategic rotation*

Create pathfinder projects in schools to explore the benefits of job rotation in schools.

*c] Overlapping responsibilities*

Create pathfinder projects in schools to explore the benefits of deliberately creating overlapping responsibilities in schools (just as when there is a job-share). This practice is already used in business as a method of encouraging knowledge transfer across organisations.

*d] Secondment*

Reintroduce secondment as a live concept, but tie it to specific improvement activities rather than general "re-charging of batteries".

### **3.4 Information sources**

*a] Yellow pages for ideas*

Create an on-line equivalent to Yellow pages classifying school improvement approaches more accessibly.

*b] Good food guide for ideas*

Create the equivalent of reader/diner reports on different approaches to school improvement.

*c] Teacher TV channel*

Get the subject of knowledge management on the agenda of programme makers early on.

*d] National and regional visit programme*

Create a termly or annual school visit programme to encourage more structured dissemination of ideas between teachers, (like some of those funded by the DTI.)

*e] Opinion poll*

Commission an annual pupil poll to determine which activities are most prevalent in classrooms, as per the initiative of the Campaign for Learning and MORI<sup>14</sup>. This could be used as a spur to activity.

*f] Day 20*

Create a Day 20 network (like the First Monday approaches of the dotcom era) encouraging schools to organise structured networking opportunities and visits on the Wednesday of each term-time month closest to the 20th of the month.

*g] New models*

Orchestrate a national debate to explore what could be learned from the different kinds of knowledge sharing models described in 1.1-1.7.

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