

# Exploring Information Sharing in Schools and FE

Draft Final Report

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## **Executive Summary**

This is the report of 'Exploring Information Sharing in Schools and FE' project. The project was funded by the Information Systems Services department at Newcastle University.

### **Methods**

The project focussed its work on a small number of schools and FE organisations in the NE of England. It was a pilot project exploring information sharing within and between educational organisations.

### **Results**

Over the last 10 years government has positively encouraged schools to diversify in terms of their aims and objectives, their specialist interests and their capacities. Our work suggests that as a sector, diversity has been achieved. This leads schools and FE colleges to strategise, present and represent themselves accordingly.

In parallel, innovation has created new possibilities which have affected the level of control an individual organisation possess or those with different roles have over information within the education information network. These innovations have led to an increasingly information savvy education environment where individual schools/organisations are becoming more aware of the value of information.

Statutory requirements to share information for various purposes have increased including for inspection and performance management (including financial control), social care, behavioural issues and the engagement of parents (e.g. CRM (Customer Relationship Management)). However, their diversity has also significant effects on the ways that schools use information and share information. Our study shows the different ways in which information is thought about within the organisation, from different perspectives (different roles and responsibilities), the ways that information sharing is conducted between organisations and the ways in which information systems are configured and used to support these tasks.

### **Conclusion**

These findings show the challenge that an educational organisation faces when shaping and designing their information systems. The capacity of individual organisations in the sector to deliver within this complexity is limited. It seems that a range of sharing of resources is possible and desirable in this context. Further work exploring these areas is indicated.

## **Introduction**

This document aims to highlight findings that have been collected from various stakeholders in the education sector (schools and FE) during this pilot study. Whilst this is work in progress, at this stage in the project there are a number of issues emerging in relation to information sharing which highlight the vital need for continued research. This document is intended to provide a summary of the progress so far and to stimulate discussion among the relevant interest groups in order to inform the direction of the next stage of the investigation.

### **Significance and intent of study**

A project of this nature responds to a number of contemporary policy imperatives - primarily information sharing and shared services in education - that are fundamental issues in the agenda surrounding Every Child Matters. Schools' information is increasingly linked to student opportunities via the increasing emphasis on school census data to the allocation of funding. It is also clear that information security is a major concern in both the public and political domain. Evidence from research in schools clearly points to a situation where developments in technology and information management systems are in parallel both a cause and an effect of changes in education.

Against this complex social and political background the study has so far suggested a need to provide a window into education and the developments taking place in the region for those responsible for the implementation of effective and efficient services. It has also become apparent that benefit could be derived from reflecting back to educational establishments some of the wider architectural, infrastructural and governance issues that are presented by the information technology they are employing.

### **Development of the study**

The development of this project has essentially been organic. The initial remit of the study was 'an exploration of information sharing in education'. The frames that we perceived would be significant in most institutions were identity management/governance and student personal development planning particularly when represented in the emerging use of e-portfolios of various kinds.

As befits the explorative nature of this study the focus has been fluid and malleable as new information and understanding has come to light. As the scoping exercise has progressed our attention has been drawn to an expanding range of concerns and issues which seem significant in education.

## **Stages of the Research**

There have been three distinct but overlapping stages to the project.

Stage one: Exploration

- involving a desk and field work component.

Stage two: Representation and reflection

- involving validation of the findings and an attempt to build shared understanding with regional practitioners.

Stage three: Report writing and documentation

## **Structure and approach**

The first or exploratory phase of the project has been a process of iteration which has tried to successively develop as rich a picture as possible of the various issues that surround information flows in schools.

We began with extensive literature searches which focussed on local, regional and national policy as well as other forms of grey literature. Our primary data has been collected from intensive case studies in three secondary schools in three neighbouring local authorities in the North East. (See appendix I for background to the case study schools). We have followed an ethnographically informed methodology, which has involved semi-structured interviews with a broad range of academic, managerial and support staff as well as regular contact with and observations in the sites. Initial work has also begun in several FE centres which these schools partially feed; although the findings presented here are mainly informed by our experiences in secondary sites.

This stage in the project is intended to provide an opportunity to take a step back and refocus the direction of the research on the basis of the findings to date and with the input of a variety of stakeholders with interests in the sector. We therefore took the opportunity to run a pilot workshop with a small but diverse range of stakeholders working at a strategic level within education (see appendix II for participant list).

This exercise provided an initial opportunity to present a variety of projections about the reality of information flows in education based on our case study and desk research to a group of critical and knowledgeable practitioners (see appendix III for diagrams created from case study findings of information flows in school which were presented to the workshop group). This was a very productive process in terms of validating and developing some of the concepts which are beginning to emerge and the output from the workshop is incorporated here into the rest of the results.

## Findings

### **Schools in the information age - the permeability of organisational boundaries**

The research so far has suggested that we are witnessing an apparent step change in the paradigm of 'a school' in the information age. One head teacher suggested that traditional concepts of what a school is are changing and that "*technology is starting to blur the boundaries*". This was something confirmed by the case study findings.

This transition is viewed by many of our respondents as being chaotic and full of potential risk as well as opportunity. The information permeability at the edges of a school is not only being created by new, often mobile technologies but also by the policy context in which schools are operating. We have noted a feeling among many education practitioners that schools are almost besieged by the statutory requirements placed on institutions by new information related policy. For example when asked about how Every Child Matters has impacted on practices in schools head teacher A indicated that it was just one of a raft of dynamic policy considerations that schools have to respond to currently. His perception was that as a school you've always got "*things coming at you*".

He also gave the opinion that there is and has always been a lack of understanding between people who work in schools and those who don't. It was also evident from both the workshop and case study feedback that the mission and approach of schools is changing in response to the threats and opportunities presented by developments in ICT.

A deputy head teacher at school C spoke of her concerns that as soon as there's a disciplinary issue in schools the students are on to their mobile telephones to tell their parents. Speculation about the consequences of this clearly caused some disquiet and was not the only example of traditionally external actors being brought into the daily operation of the school by new technologies. Head teacher A continued that his primary school created a policy four years ago that student internet access would only be allowed on a supervised basis. Since that time the school has been forced into the realisation that this policy is unenforceable partly he explained because, "*now... you've got you're wireless network going to the fence and they've got all their hand held stuff*".

Governance and boundary control is certainly something that is perceived as being a challenge in the current climate. A primary school head teacher said that whilst his school is trying to respond to the pace of technological change it is difficult because a six or seven year old is now very technologically savvy as are their parents by comparison to previous generations.

## **Towards building a model of the new reality in Schools**

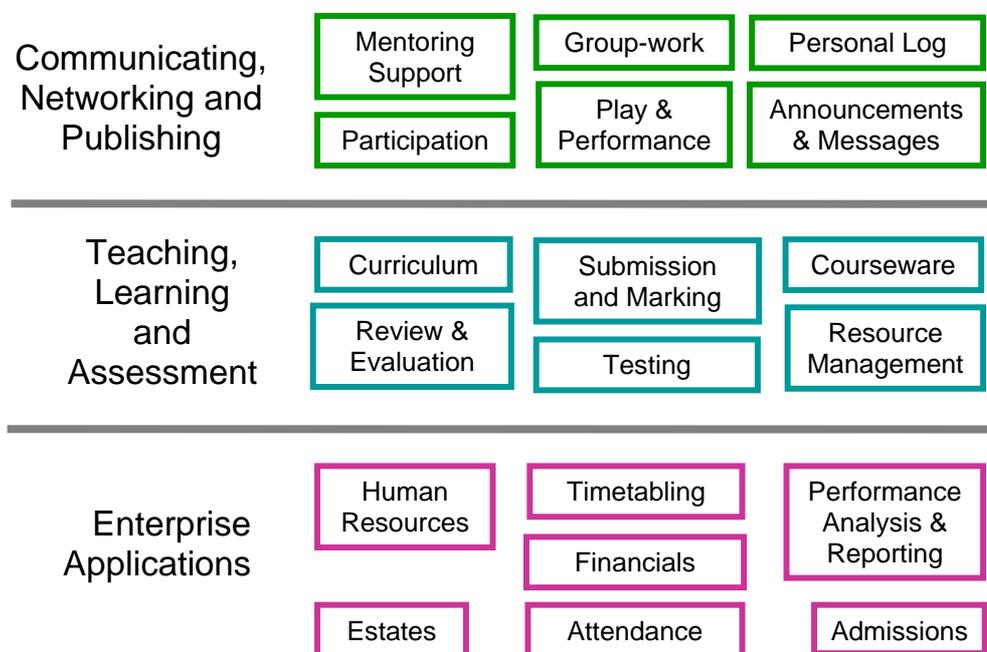
In light of the dynamic education environment being described by practitioners it seemed that some realistic and tangible conceptions of 'the school' and its information flows from the various perspectives were required. As the ongoing synthesis of findings from case studies progressed we began to see a number of plausible models of information structures developing in education (See Appendix III). There seems to be stratification within institutions in terms of the type of information transaction activities that are taking place. The strata we have identified are not necessarily explicit concepts that were expressed by practitioners in the organisations but have been labelled by the research team on the basis of the observations and narratives that have been collected. It was therefore important to test these imposed categories during the workshop.

### **Strata of information flows in educational institutions**

In reality these strata are actually a spectrum since each stratum bleeds into the others. The bottom or 'bedrock' stratum was labelled as the 'Enterprise Applications' level. As can be seen on the diagram below, which shows all three levels that have been identified, this includes activities such as HR administration, financial management, student record collection, analysis and diffusion, etc. On top of this are the pedagogic activities. The information stored, created and transacted at the enterprise level feeds and informs the teaching, learning and assessment strategies of the school. In the top stratum are the activities that involve projecting information in various media. In some ways the publishing and communication stratum is currently perceived to be the most dynamic level and our research suggests that the majority of stakeholders believe the greatest opportunities and threats for the future of education to exist.

One could track a particular area of information across these three strata, for example when joining the school, information about a student's previous achievements/activities is input into the schools information systems. This information is developed, tested and analysed throughout his/her school life and then perhaps input into an individual teaching and learning plan that may then develop into a constituent of a development portfolio transmitted internally and/or externally to a variety of stakeholders. For the output at this level to fulfil its potential all the stake holders have to understand how the process is governed and they will naturally ask questions such as how to identify the individuals in the different organisational spheres that are crossed? How and by whom is the veracity of the information validated? To achieve either of these there has to be an element of shared or standardised services.

**Figure 1. Stratification Model**



Whenever interviewing a new respondent in a school an overview of the project had to be given in order to orientate the discussion. For continuity this presentation was always essentially the same. It was also sufficiently loose so as not to inadvertently narrow the scope of the conversation. Additionally, by necessity owing to the exploratory approach of the study, the description of what was being investigated could not be very closely defined. It became apparent over a number of interactions with individuals in various school roles that the majority of people primarily associate the 'schools information' with the IT system. This is why it can be considered the bedrock stratum because the information culture and practices of the school are significantly if unwittingly affected by and based upon the information management system being used. The ethos and even pedagogical approach of the school can potentially be significantly intertwined with decisions about the system that is in use.

### **Architecture of school information systems**

This representation of a school sits on top of an architecture which has to project information across internal systems and out to an increasing number of external stakeholders. In simple terms, in the case study schools we have observed information management systems (IMS) which operate alongside virtual learning environments (VLE) and other online publishing spaces and information repositories. The IMS links to the external national online education communication network such as the common transfer file system

(CTF) which is used for transferring information about students between institutions - for example when they change schools. Reports from administrators and data managers in schools suggest that whilst this process is supposed to be highly automated through the IMS the information arriving about students entering secondary schools is of varying consistency. This basic information is important because it underpins the early assessment of an individual student's pastoral and academic requirements. An administrator at school A explained that chasing up and updating information was a substantial task. The data manager at school B said that the attitude of their school was almost to start from square one and generate their own assessment information for new students. Either approach clearly has potential implications for the welfare and progress of students. Whilst the requirement to deliver timely accurate information about an outgoing student is a legal obligation and although apparently the infrastructure is in place, the process is evidently not operating entirely effectively.

The IMS in schools is usually also linked to the VLE and school's website which are two major loci of information published to staff, students, parents and the wider community. We have found a variety of levels of involvement of schools in relation to their use of online publishing. For some, a VLE is intrinsic to the provision of education, to others it can act as little more than a repository of teaching materials. The website at school A holds a great deal of general information about the school and so supplements the organisation's administration, school B is even further developed having recently developed a 'family portal'. Having issued every family with secure IDs parents are now able to access real time reports about their children. It is a recurrent theme that different schools are at different stages of development and are focussed on different things due to their strategy or context. This was illustrated during the workshop by head teacher A's comment that "*some primary schools could put real time reporting in place tomorrow but for others it would take years*".

### **School information management systems**

This varied landscape is seemingly affected or perhaps reflected by the IMS the school employs. There are a number of packages that can potentially be used by UK schools but we discovered that there are two market leaders. We will refer to the market leader as the 'big supplier' and the other as the 'small supplier'. An IT respondent at School B estimated that 85% to 90% of UK schools use the big supplier. Despite being very much the minority provider, by happenstance both school B and C use the small supplier whilst School A uses the big supplier. Both schools B and C have in the last 4 years opted to change from the big supplier to the small supplier. This provided a valuable insight into the benefits and proficiencies of either solution as well as some of the schools' attitudes to IT and information management in general.

Anecdotally it appears there are pockets of preference for the small supplier in some localities throughout the country. School C reported for example that out of 15 secondary schools in their local authority 8 used the small supplier with the remainder using the big supplier.

## **Local authority efforts to standardise school information systems**

School B is the only school in the local authority area to be using the small supplier in preference to the big supplier. Their preference for the small supplier's product seems so significant that they have resisted various concerted and explicit attempts by the local authority to induce them to conform to the universal application in the locality. For example financial inducement was apparently proffered. Also because IT support services for schools have been centralised by the local authority the school reports some difficulty in relations between the school and support services with whom they sometimes have to interact. Due to its size and relative financial autonomy, school B has been able to resist and keep their system of choice; however it is easy to imagine that in a different instance another school with less independent capacity would have the decision taken away from them. The first school visited, School A gave the impression that they weren't necessarily aware of an alternative to the big supplier. The IT manager suggested that the big supplier *"is the information management system used by schools"*.

An overall impression developed during the case studies is that there is some impetus within education towards introducing uniform IT applications and information services on both a national and local level. This was very explicit in the experiences described by school B and it seems that some local authorities are more autocratic than others. Reports from school C suggest that their authority is seeking to procure a common VLE which will be recommended for all their schools but they are seemingly either less prescriptive or less advanced in the process of deciding upon common standards than school B's local authority for example. There was a sense that some local authorities have struggled to formulate a clear strategy in terms of systems and infrastructure; this situation is seemingly exacerbated by the dynamic nature of the technology and political/statutory context. The IT Manager at School C said that three to four years ago when they made the change from the big supplier to the small supplier a number of other schools in the locality wanted to make the change and *"the council didn't really know what to do"*. The authority has ended up with their schools split practically 50/50 between the two suppliers.

Nationally the picture that has emerged is that the big supplier's market share could be being maintained partly by the biased effect of operational considerations in national statutory reporting requirements. For example as the school census is developed it seems that as the big supplier has been in a position to develop their system to very closely fit with the new requirements. Despite the fact that the small supplier doesn't necessarily provide functionality which automates the reporting processes to the degree that the big supplier has achieved some schools still chose to accept some inconveniences caused by using an alternative to the standard system because they clearly perceive other advantages.

## **BIG SUPPLIER versus The small supplier: Intuitive design versus flexibility?**

The IT manager at school B said the big supplier's system "*is written by people who know how, for people who don't*". The implication was that the big supplier's interface and operation is less complicated however according to the IT manager at school C the small supplier's system "*is so much more flexible*". The question that should perhaps be posed is whether the standard system is necessarily the one that produces the best outcomes for the school and its students. It is clear why a council would want to formalise the IT provision for schools in their area in terms of efficiency and continuity of standards; however it is also obvious from our investigation that schools are reasonably protective of their independence and right to control most aspects of their operation. Difficulties caused by culture change relating to the expanding possibilities presented by technology have been a regular feature of all three case studies which will be expanded upon later.

A story told by School B to illustrate a tangible difference between the big supplier and the small supplier's levels of flexibility relates to timetabling. Owing to the open plan nature of the school building and the large number of students attending School B they have implemented a system whereby they run independent timetables for each year group. The result is a notably tranquil school since no more than one year group moves between lessons at the same time. According to the IT manager at the school this kind of flexibility would not be achievable if the school were still using the big supplier's product. As he implied with his previous statement this is only achievable because the school has the IT staff capacity to maintain a more complex system.

When this story was related to the IT manager at school C who also use the small supplier he seemed to balk at the idea of running multiple timetables. He had given the view that the major challenge in their school was maintaining and updating the huge amount of data they already dealt with. He referred to the school as being very "*data rich*" and that they are "*among the most proactive schools in terms of monitoring and interventions*". The IT manager felt this approach was borne out by the fact that between 1997 and 2007 the school has raised the percentage of students achieving A-C grades at GCSE from 54% to 80%. It was clear from this and other meetings in the school for example with the deputy head that the small suppliers system was a central part of the monitoring process and there was a general impression that the small supplier gave far greater opportunities to tailor student monitoring activities so that they focussed on the schools performance objectives.

### **Standardisation of the applications landscape**

There is a history in schools of building or adapting bespoke applications; particularly VLEs. In one of the case study sites for example they have

modified Share Point for their own purposes. As commercial suppliers develop their provision and local authorities endeavour to become more organised by developing a consistent approach within their locality it seems the 'applications landscape' is slowly becoming more standardised. How far this homogenisation will progress is dependant partly on how closely schools guard their autonomy and indications from this study are that schools are generally quite independently minded entities. This is not by any means to say that schools consider themselves to be islands. A Deputy Head teacher at School B said *"We're not in such a competitive environment that we're threatened by working collaboratively"*. Of the education sector more broadly he said *"normally it's funding that brings people together"*. He also viewed the contrasting cultures of schools and colleges as being significant. *"Schools are reactive not proactive, if they don't have to change they won't"*. He continued to explain that in FE survival depends on competing with each other for funding and students so the ethos is different, *"they are more likely to innovate if they think it will give them an edge"*.

### **Traditional and low tech information systems**

Whilst the IMS providers seem motivated to provide systems that manage almost every aspect of information flow within a school, for various reasons schools are supplementing these with other systems. All three schools seemingly keep some information on spreadsheets. School A for example doesn't really seem to use any commendations functionality available on the big suppliers system; they have opted for a paper based system whereby 'reward cards' are handed out for numerous different commendable behaviours. Students can trade in the points on these cards for prizes; the points are kept manually updated in the spreadsheet. Certificates relating to accumulated rewards and also attendance are then posted out to students. These systems are an important part of the effort to maintain standards. It seems that the school partially believes the benefits of the tangible nature of this information system could not profitably be replicated with the introduction of more technology to the process.

The case studies provided a number of examples of this type, where traditional information systems are maintained in preference to high tech options. Another example would be the importance of the paper register in School A for sending messages from the central administration hub out into the school. This it appears is partly a cultural consideration. School A like school B for example has a computer in every classroom and like school B could implement an electronic registration process. However from time spent with an administrator in school A and as a general observation from all three case studies it seems that culture change when trying to introduce new technological business processes is a significant hurdle with teachers. The administrator gave the example of attendance sheets provided by the big supplier which can be filled in and scanned with the data being automatically uploaded to the IMS. Having purchased the reader the school abandoned its use after a period of time because teachers persistently failed to fill in the sheet in a way that could be properly read by the machine. The hard copy

register is clearly a valued and logistically complicated communication channel to replace in some instances.

### **Statutory school reporting**

The IMS is a requisite tool when dealing with the major statutory information flows that all schools are required to project to the DCSF via their local authority. There was no disagreement between respondents that the burden of these types of information flows is following an upwards trend. Without the IMS systems it is hard to imagine how schools would cope with the logistics of these increasing responsibilities. Since funding is mainly decided on the basis of the school census and the census is based on information transmitted via the IMS there was an implicit recognition that the system has to be functioning effectively and the information properly maintained. Largely, information maintenance is achieved in all the schools studied with the use of a traditional letter home for parents to confirm that information is current and correct. The question that arises is whether increasing obligations on schools to communicate performance information has real benefits for children and young people.

### **Politically measurable performance: Efficiency versus effectiveness**

The workshop discussion explicitly highlighted an implicit finding from the case studies, namely that Government is, for obvious reasons, focussed on measurable outputs which they can use to judge schools effectiveness. Participants expressed concern that what they perceive as excessive emphasise on very tangible performance metrics does not necessarily put child welfare at the centre of the Governments message to schools about where to concentrate their efforts. Views expressed at the workshop suggested recognition that this kind of conflict is an unfortunate but perennial reality of politics. Similarly many of the case study participants seemed philosophical about this dichotomy but there was also significant angst that the requisite information flows relating to school performance assessment could easily become an impediment to child welfare in those schools which were under pressure to raise standards.

The school Governor said at the workshop that the government thinks they run schools via performance targets and tick boxes but in many ways what they've done is actually "*created a whole industry*" in education which responds to invented requirements. He stressed that there is a difference between efficiency and effectiveness, saying that efficiency is the concept which drives an idea like having a single point of contact system for government interactions but that effectiveness is about practice. The implication that can be drawn from this is that in order to respond to their duty of student welfare in the context of a school the way things are done is equally if not more important than implementing practices which are mainly based on efficiency. This reflects the conflict School B has encountered with the local authority over all their schools using the same IMS.

## **Strategic skill mix**

The assistant head teacher from school B cautioned that the current political environment could mean *“there will come a point in time when I will have to turn people away.....because (certain courses that people want to under take don't) meet the strategic skills mix desired by One North East”*.

## **The Commoditisation of Education**

During the workshop the representative from North East Connects described the political impetus towards a more transparent mobile information culture in schools as the *“commoditisation of education”*. He linked this to the DCSF requirement that by 2010 secondary schools will be required to provide parents with real time access to information about their children. In the case study schools we have found a range of responses to this and other information obligations being imposed on schools by policy which will be discussed more fully below.

## **Communicating with Parents**

Communication to parents about their children's wellbeing, progress and attainment is something which appears to be a focus for innovation in all three schools. There seems to be a distinct movement away from the traditional yearly reports interspersed with occasional parent's evenings. Technology is a major part of this change in both the richness of data that is becoming available about students and also opportunities to communicate information to parents. The requirement to provide parents with real time reporting by 2010 demonstrates the desire to involve parents more substantially with the monitoring of their children. The schools in the study are all responding differently to this requirement (only School B has an operational portal for real time reporting) but all three schools demonstrated the recognition that involving parents throughout the year is far more productive than providing an end of year report highlighting difficulties their child may be experiencing.

Whilst traditional letters home are still a major element of the home-school relationship emails, web based information repositories and even text messaging to alert parents to unauthorised absence are being implemented in these schools. There is also some indication that the type of information being shared is developing. The deputy head teacher of School C reported that endeavours to provide parents with more of the social sort of information about their child than is traditionally supplied in the academic focussed end of year reports. She contends that often this is what parents are most interested in.

A recurrent theme in the workshop which was mainly suggested by head teacher B was how extremely important family and the environment which children grow up in is to developing a student aspirations and ultimately their achievement at school. The argument could be made that increasing parental involvement in the education process by making information about their children more accessible will help improve this situation.

## Personal development planning

Whilst we have witnessed the provision of some forms of personal development planning in every school encountered, the technological aspect of this is in some ways much less well developed than anticipated. All three case study schools go through a process of producing individual learning plans (ILP) with their students. At school A for example at the start of each year students attend “*one to one consultations*” with teachers to produce the plans which are developed throughout the year and used as one means of judging progress at the end of the year. There is a general acknowledgement that using this material in a more longitudinal manner outside the confines of the school would be something that would benefit students and meet the expectations of government.

Participants in the study are aware of E-portfolios but they are not something that seems to be being widely implemented. The deputy head teacher at school C gave the impression that like real time reporting to parents it is something that schools such as her own feel they should be doing but something which they are not in a position to implement yet. Some of the reasons for this could be speculated about on the basis of the findings here. For example, as already mentioned an e-portfolio is only of significant worth if it is portable and if its value can be assessed. For this, standards and governance are required but given what has been said about many LA’s struggling to organise their strategies over things like VLE, IMS, online portals it seems unlikely that the type of wider regional or even national arrangements and partnerships that e-portfolios will require will be created yet. The likelihood may be that some of the schools with greatest capacity will lead the way and others will have to catch up.

An interesting example from the primary sector was presented at the workshop by head teacher B. He reported that through using their VLE and other IT resources a substantial amount of information charting a child’s progress is produced. The school wanted to publish this information to parents. Ideally he said this sort of information should be provided as part of some kind of electronic portfolio service that could be developed over time. The school themselves faced with the challenges of defining ownership of the material and the other problems above opted instead to provide parents with what he referred to as a “*digital scrapbook*” burned onto CD. There was a sense that even at primary level, schools would like to provide electronic development portfolios but that the challenges are at this stage too significant.

## APPENDICIES

### Appendix I

#### Case Study Context

School A is a community high school. The school population is approximately 1000 with a student age from 13 to 18 years. The percentage of pupils on the roll with special educational needs (SEN) statement or on the School Action Plus is approximately 5.5%.

School B is a secondary comprehensive school. The school population is approximately 1900 with a student age range from 11 to 18 years. The percentage of pupils on the roll with SEN statement or on the School Action Plus is nearly 3.5%.

School C is a secondary arts and technology specialist school. The school population is approximately 1400 with a student age range from 13 to 18 years of age. The percentage of pupils on the roll with SEN statement or on the School Action Plus is nearly 4% .

(Source: DCSF Secondary School (GCSE and equivalent) Achievement and Attainment Tables 2006)

The Ofsted report carried out in 2004 described School A as serving “*some areas of considerable social and economic deprivation*”.

The most recent Ofsted report for school B carried out in 2007 does not provide details of socio-economic characteristics’ for the schools suburban catchment. It does mention that the school is increasingly over subscribed and attracting students from outside their immediate surroundings. The previous Ofsted report, carried out in 2004, states that the numbers of students eligible for free school meals is below the national average.

The Ofsted report carried out in school C in 2005 stated that “*students’ social and economic backgrounds are neither advantaged nor disadvantaged overall but a substantial minority of students come from areas of considerable social and economic deprivation.*” The school is situated in a market town.

## **Appendix II**

### **Workshop Background**

Attendees at the workshop included:

- 2 Head Teachers from primary schools adjacent to the research area - head teachers A & B
- A representative from North East Connects
- A school governor from one of the case study schools
- The director of information systems at a local university.
- A manager from the regional support centre
- Mike Martin SBI, Newcastle University
- Rob Wilson, SBI, Newcastle University
- Ben Whiston, SBI, Newcastle University

## Appendix III

### Three perspectives on information flows in schools

Whilst the above stratification model of information flows presents one view, from speaking to a variety of actors in schools it has become clear that any picture of information flows is affected by the point of view from which the observer begins. The stratification model essentially describes data flows that are about students, staff or the organisations and how these are used and projected within and out of the organisation. To take the example of personal development planning (PDP) the perceptions of the artefact, processes and activities which take place as part of PDP can be very different from a user, pedagogic and employer perspectives. The research has suggested that there are at least three possible ways to categorise most of the information transactions that are taking place in the case study schools. These pictures were presented to the workshop group in order to stimulate discussion.

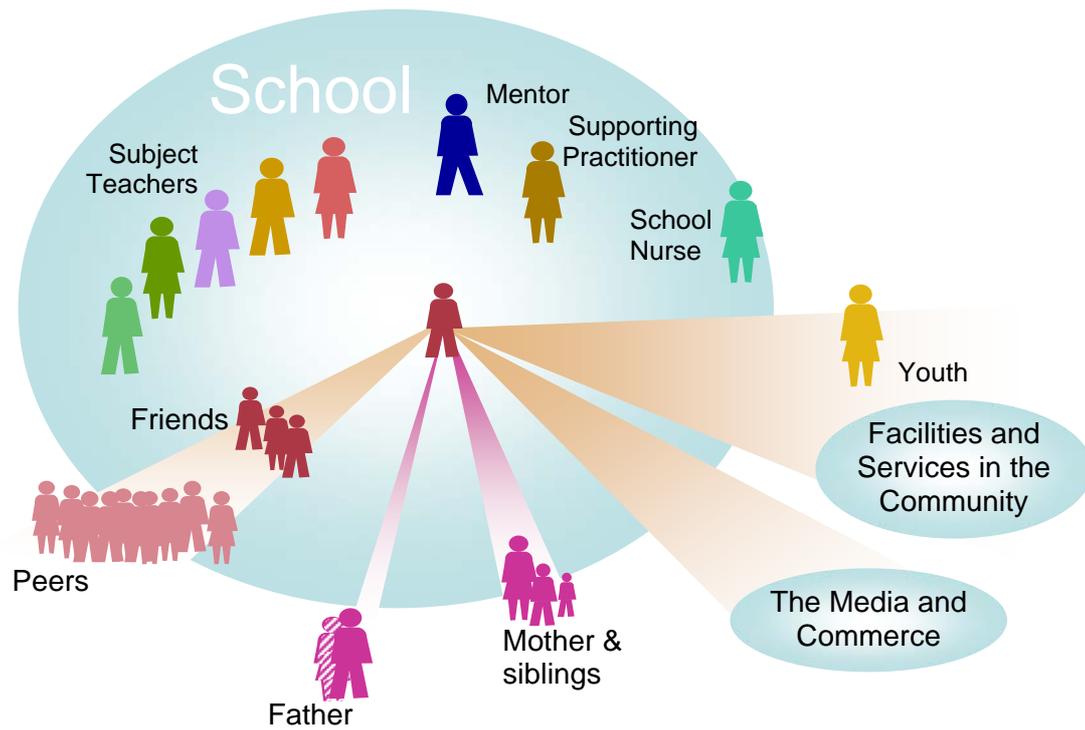
#### The student centred view of information flows

The diagram below conceptualises the student as the hub of information flows. It depicts 'The Media' as being one of the significant communication channels. This stimulated a response from the head teachers in particular that social networking is perceived as a risk but it was widely agreed that it is a reality that it is an important component of the picture and an issue that needs to be addressed. It was also clear that this picture is incomplete and that further actors could be added. However the process proved to be very subjective; for example head teacher B felt that an image of an educational psychologist should be added whilst the governor perceived this as very much external to the school. Head teacher A felt the picture could be expanded even further saying "lots of people are coming into school" "sports professional, musicians".

From the perspective of the VCS representative the diagram is about "the language of recording and reporting" and "all about content not where the children start".

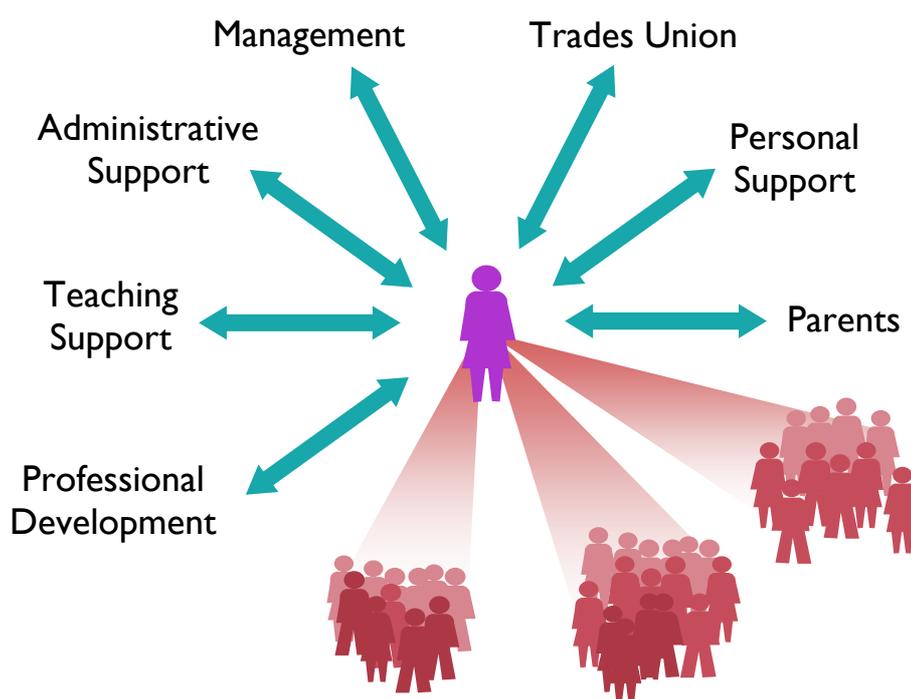
The Governor also said that he wanted to see 'student voice' and 'student participation' included in the diagram. He said for example at his school they have student subject leaders. He said there are various advocates for students. When asked if student council should be included as an example of student voice that the student council is only a very small part of what it encompasses.

Head teacher B said that "*community ethos- where they grow up has a huge impact on the child's development*". He would like to see this reflected in the SCV diagram.



Whilst incomplete this diagram proved to be a very effective tool at stimulating discussion about the student's position and ability to effect the management of their own information flows.

## The teacher centred view of information flows



This diagram shows the range of entities that the research suggested a teacher might be communicating with. One of the main criticisms of this view of the world was that in reality a teacher is not all on his own in the middle. Head teacher B commented that they are actually a “*part of collaborative teams of provision these days*”. There was a general consensus that teachers have to communicate with and manage the consideration of a wide range of interest groups. Head teacher B commented that he felt “*very sorry for the teacher with all those arrows coming in!*”

## The management centred view of information flows

There was some sense that the management centred view depicted below was describing a hierarchy rather than a co-productive team working environment. Head teacher A said “*a head teacher is a strategic leader*”, and that some schools have quite informal management structures.

The interpretation of the community also stimulated a significant amount of discussion. The representative from the VCS suggested that in reality there is no such single thing as ‘community’ in reality you’re actually dealing with a number of influential groups and individuals. The representative from North East Connects commented “*your community looks a lot like local strategic partnership*” to which the governor responded “*yeah, self appointed people with no resources*”.

It was also interesting to note the perception of participants of how the local authorities add value to the process of interactions that take place around

schools. The Governor gave the opinion that local authorities “are desperately trying to have a role”.

