



**Evaluation of the Pilot Implementation
of the [Student@Centre](#) Ultranet
in Victorian Schools**

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Executive Summary

Six hundred and twenty seven teachers from 22 schools provided data on the progress of the pilot implementation of the [Student@Centre](#) Ultranet in government schools. Twelve schools (six primary, five secondary and one Special Education) piloted the Ultranet in 2006. Ten schools were matched to the pilot schools on the basis of characteristics such as the number of students and teachers, and the proportions of students from a non English-speaking background or receiving Education Maintenance Allowance¹. In secondary schools, some of the matched schools also had an intranet system.

The impact of the Ultranet was particularly noticeable in primary schools. There was less impact in secondary schools. The reasons appear to be related to the matching of secondary schools including the existence of the school intranet.

Clear changes were evident in access to technology for pilot primary schools, and in ideas and attitudes to the technology in all pilot schools. General conclusions about the impact of the Ultranet are shown below:

Functions of the Ultranet teachers perceived as particularly useful in different school contexts

Primary Schools	Secondary Schools	Special Education Schools
Curriculum planning that is shared and agreed across the school	A vehicle for the delivery of a unified and equitable curriculum, so that all students have similar access to quality teaching and resources	Being able to share resources, ideas and materials with other teachers within the school, in other Special schools, and in mainstream schools. Teachers hope that the information they post will be useful to teachers working with integrated students in mainstream classrooms.
Easy access to Victorian Essential Learning Standards (VELS) and learning materials when planning tasks and activities:	A shift away from end of semester reporting towards a constant and ongoing feedback model. Teachers are pleased about the possibility of allowing parents to get a clear indication of student progress, and track whether or not students are handing work in on time and to a satisfactory standard.	Teachers would like to have a facility to upload each student's Individual Learning Plan (ILP), and be able to assess, record and report against that ILP.
'It's particularly useful for teachers to look into the Ultranet, find what they need, when planning a new unit of work'. "There's a really good buzz about the Learning Federation materials". ²	Attendance marking to monitor absenteeism and habitual lateness, but linked to a timetabling package.	Potential for the future in terms of cutting down paper work, time spent checking back over resources, and modifying existing resources. Teachers appreciate that everything is stored together, and that comments and feedback can flow through to reporting.
Opportunities to share resources, information and ideas with other schools and other teachers. 'One of the best things is building communities of like-minded schools and teachers regardless of geographic area'		

Functions of the Ultranet teachers perceived as particularly useful in different school contexts

Primary Schools

Students having access to high quality resources anywhere and anytime, especially for older primary students

Maintenance of consistency of teaching across grades, through mutual support and sharing resources

Being able to look more closely at grouping students when setting project work, and using a buddy system to support students

Students being able to chat with students at other schools

Secondary Schools

Easy access to Victorian Essential Learning Standards (VELS) for students to monitor their own progress and to gain a clear understanding of what is expected of them.

Supporting communication and collaboration between teachers, and minimizing ‘reinvention of the wheel’ in terms of duplication of teaching materials. Teachers expect to be able to decrease the amount of photocopying and build up a resource bank

Ensuring equity in assessment (all students being assessed against similar tasks, and the severity of marking being open to comment)

Helping students to manage their own workload and keep up to date

Building education partnerships between teachers, parents and students. The ability to support communication with the parents is widely welcomed in secondary schools.

Special Education Schools

The Learning Federation resources are attractive for students in Special Developmental schools.

Conclusions

1. Professional development strategies be developed within school to target staff readiness to learn with regard to:
 - a. use of technology
 - b. use of intranet features
 - c. use of Ultranet features

2. A further data collection be conducted in 12 months time or when the Ultranet has been fully implemented in the pilot schools. There would be no need at that stage for a comparison school data collection.

3. Appointments or redeployments of IT staff to assist in staff development pertinent to the Ultranet are essential and each school will need to be provided with or find the resources to achieve this support infrastructure.

4. Each school implementing the Ultranet needs to ensure that appropriate infrastructure is in place and the Department of Education and Training should establish a minimum set of technical specifications needed by schools in order to gain the optimum for teaching and learning impact.

5. In secondary schools there is a need to encourage the use of the Ultranet for its unique properties than differentiate it from an intranet. These are:
 - a. Sharing curriculum across schools
 - b. Monitoring student progress across primary to secondary school or between schools
 - c. Involvement of parents in monitoring
 - d. Continuous reporting to parents
 - e. Attendance and central data base interrogation

6. At secondary level, the anxiety surrounding competition among schools in senior secondary examination years needs to be addressed in order to maximize the utility of the Ultranet,

7. In all schools, the power of the Ultranet can be demonstrated during parent teacher interviews. Models of this already exist in many schools

8. The iconographic portals have facilitated the use of the Ultranet in many primary schools. The lessons learned from this innovation can be built upon for students in younger and older primary grades and for students in Special Education schools. They may also be used to improve the accessibility of the portal for students and parents in the secondary school context.

9. The Ultranet needs to be exposed to teachers in training, through in-service programs and in particular in school leadership education programs.

The Evaluation Protocol

This evaluation report focuses on the impact of the Student@Centre Ultranet on the engagement and activities of teachers and students after implementation and a trial period of several months. At the stage of data collection, the Ultranet had not been fully implemented and teachers had not yet had the opportunity to use the full range of its capabilities.

The procedural guidelines discussed in this report focus on the identification of the goals set for the Student@Centre Ultranet initiative in the twelve pilot schools at the outset of the project. It describes the impact on teaching and learning and the engagement of students and teachers in the six primary schools, five secondary schools and one Special Education school that were piloting the Ultranet. This has been achieved by comparison of changes in the Ultranet schools with matched schools elsewhere using their own intranet facilities. The evaluation uses a series of measures developed in consultation with the Department of Education and Training, as described in the next section.

Evaluation Measures

At the outset of the project, the goals of the Student@Centre Ultranet initiative were set out by the Victorian Department of Education and Training, and a clear statement of change objectives were developed for the Ultranet project. In collaboration and consultation with a team of specialists from the Department of Education and Training, performance indicators, measures, benchmarks and targets for the Ultranet strategy were established. These measures and targets were used to develop the survey materials against which progress was tracked. The initial goals for the initiative in schools were that the Ultranet would support:

- An enhanced learning environment for every student
- Improved planning, preparation, sharing and delivery of learning materials by teachers
- Improved capacity to track progress and manage the learning pathway of every student, including the transition between schools
- Improved reporting of student progress to parents, teachers and school administration

At system level, the goals for the Ultranet were that it would improve the capacity for:

- Performance monitoring within each school and across the Government school system to enable program evaluation and intervention
- Appropriate integration with management information systems operated by DE&T and the Victorian Curriculum Assessment Authority (VCAA)³
- A high degree of usability and accessibility to facilitate universal uptake by students, teachers and administrators.

The primary purpose of the evaluation of the pilot Ultranet initiative was to reflect upon the progress of the initiative in schools in terms of the engagement and uptake shown by teachers and students. The evaluation focused on specific measures and contrasted these in a series of matched schools without the Ultranet, but with access to other technology. The measures were:

- teachers' access to computers and technology;
- teachers' ideas and attitudes about using an intranet/Ultranet;
- teachers' capacity for preparing, sharing and delivering learning materials;
- teachers' capacity to track student data;
- teachers' capacity to report on student performance; and
- teachers' perceptions of the learning environment for their students.

The goals set out at the beginning of the evaluation have remained unchanged except for the following addition:

- Capacity to support and improve curriculum planning within schools through provision of links to the Victorian Essential Learning Standards (VELS).

This goal has met with very strong support within the schools, where the potential ease of linking to the VELS progression points was seen by teachers as a particularly useful attribute of the Ultranet in terms of planning and mapping the curriculum. It was seen as a way of giving students opportunities to monitor their own progress, and of organizing curriculum around smaller groups of students and individualizing tasks. Measures related to this goal were not explicitly added to the evaluation instrumentation but information about its success was collected through focus groups with teachers and visits to schools.

Monitoring capacity to track student transition between schools and year levels will not be possible until data have been generated on students' learning pathways from primary to secondary school, or from one year level to another. This will be possible with a forthcoming release of the Ultranet.

Similarly opportunities to observe changes in the student learning environment and capacity of students and parents to use the Ultranet have yet to be realised. All pilot schools had started working with the Ultranet for attendance marking and at the time of data collection some were using the Ultranet to plan the curriculum, to store, access and share teaching resources, and to work with small groups of students. While the internal reporting aspects of the system were developing, the capacity to communicate with students and parents via the Ultranet was not yet established to a level where meaningful data were available, but the potential of this function of the Ultranet was enthusiastically endorsed by pilot schools and teachers.

Baseline Results

In December 2005, the results of a baseline analysis of the current status of schools, in terms of the goals of the Ultranet initiative, were reported to the Department of Education and Training (Griffin & Woods, 2005).

One hundred and eighty-six teachers from 21 schools responded to the survey of teachers' initial attitudes towards the implementation of the [Student@Centre](#) Ultranet in schools and their current access to technology and record management procedures.

Eleven of the schools were piloting the Ultranet in 2006, and ten were schools matched to the pilot schools on the basis of characteristics such as the number of students and teachers, and the proportions of students from a non English-speaking background or receiving Education Maintenance Allowance.

The baseline data confirmed that, prior to the installation of the Ultranet in pilot schools, the pilot and comparison schools were similar on all of the indicators of successful implementation of the Ultranet, including:

- teachers' access to computers and technology;
- teachers' ideas and attitudes about using an intranet/Ultranet;
- teachers' capacity for preparing, sharing and delivering learning materials;
- teachers' capacity to track student data;
- teachers' capacity to report on student performance; and
- teachers' perceptions of the learning environment for their students.

The baseline study revealed that in both pilot and matched schools most of the teachers:

- had basic access to computers, as did their students, with some technical support provided;
- were either trying to learn more about a school intranet or the Ultranet, or were looking for more and better ways to use a school intranet or the Ultranet;
- routinely worked with colleagues to develop and exchange learning materials;
- examined reports with parents regularly at the end of the term or semester;
- were able to provide information as and when required about individual student progress to students, parents and school leadership; and
- had some basic access to school data on student learning outcomes, engagement and pathways and transitions.

The type of school in which teachers worked was an important influence on their access to computers, capacity to track student data and capacity to report on student data:

- More teachers in secondary schools than in primary or Special Education schools reported that they had access to computers, technical support and/or a school intranet.
- More teachers in primary and Special Education schools than in secondary schools responded that they could access, track and use student data from a range of sources for development of individual student learning plans.
- More teachers in primary schools than in secondary or Special Education schools reported that they collaborated with students and parents in individual tailoring of assessment strategies and work plans as part of a process of continuous feedback.

These baseline differences between the primary, secondary and Special Education contexts for teaching, and large differences in the number of teachers who participated in the evaluation from these different school contexts, have been acknowledged by the separate analysis and presentation of results for teachers from each of these three types of schools.

The evaluation study was not longitudinal in the sense that the same teachers and students were not tracked over time. Rather, the baseline study established the parallel nature of the pilot and comparison schools and the second data analysis focused on two things:

- Change in the pilot schools from baseline to post-implementation
- Differences between the pilot and comparison schools post-implementation

The Ultranet Impact

In October 2006, the second investigation of teachers in pilot and matched schools was carried out. The same measures were used as in the baseline study with the exception of the change in measures of student engagement as indicated above. As a result of the baseline study, measures of student engagement were developed. This enabled teachers to report the percentage of students in their class who demonstrated levels of engagement rather than report individually on a random sample of students within their class as was the case in the baseline study. It also meant that a larger number of teachers could respond to the survey.

Demographics

Six hundred and twenty seven teachers from 22 schools contributed to a survey of progress in terms of the pilot implementation of the [Student@Centre](#) Ultranet in schools. Twelve schools (six primary, five secondary and one Special Education) piloted the Ultranet in 2006. Ten schools were matched to the pilot schools on the basis of characteristics such as the number of students and teachers, and the proportions of students from a non English-speaking background or receiving Education Maintenance Allowance. The ten matched schools included four primary, five secondary and one Special Education school.

As secondary schools employed more teachers than primary schools, more secondary teachers contributed to the baseline evaluation. Thus, 71% of the teachers were at secondary level, 23% were primary teachers, and 6% were in Special Education schools. In 2005, half of the teachers who contributed data to the baseline analyses were from the pilot schools and half were from the matched schools.

In 2006, by contrast, the response rate was higher in the schools piloting the Ultranet (with response rates of 64% from pilot schools, and 43% from matched schools). In addition, 24 members of school leadership teams or administrative staff members contributed to the survey in 2006.

Most of the participating teachers were female (69%), and teachers were well spread across age groups with 19% aged between 20 and 29 years, 19% between 30 and 39 years, 29% between 40 and 49 years, 31% between 50 and 59 years and 2% aged over 60 years. Teachers ranged in experience from those who had just started teaching to those who had been teaching for 40 years in total and for over 30 years at their current school. The average number of years teaching experience was 16.6 ($SD = 11$). Of the teachers from pilot schools who responded to the evaluation, 65% were actively using the Ultranet for some purpose and it is these teachers who form the basis of the comparison with the matched schools.

School-based Planning for the Ultranet

The data on planning for the implementation of the Ultranet initiative was important for this evaluation as a source of potential explanation of change in pilot schools and any differences between the pilot schools and their matched comparative schools. While similar discussions were not conducted in the comparison schools, the focus of these data was the impact of the Ultranet and its unique potential capabilities and to provide possible explanation of changes attributed to the Ultranet.

All pilot schools shared common approaches in their planning for the Ultranet, with emphasis placed on three key areas as follows:

Relevance

All pilot schools had provided professional development activities to familiarize teachers with potential uses of the Ultranet, and in particular how it could benefit their students and support their teaching. This had been done with varying success. Several schools had used the Ultranet as a vehicle through which to audit or renovate the curriculum, and this was related to an acceptance of the Ultranet by teachers. Other schools were taking a more gradual approach, and were engaged in negotiating the roles and relevance of the Ultranet for their school communities. An example of the ideas of teachers at a school that had been successful in terms of establishing the relevance of the Ultranet for teachers and students is provided in the textbox below:

The school created a specific purpose and role for the Ultranet, by taking the opportunity to renovate the curriculum using the Ultranet as a primary support and medium. Pairing the Ultranet with interactive whiteboards was particularly useful in terms of helping teachers and students build real enthusiasm for the changes. The school thought about the Ultranet in terms of a paradigm shift - a new way of doing things. We brought together VELS, the Teaching for Understanding model, and then put together model units of work to show the teachers exactly what was expected of them. Each teacher took responsibility for building another unit of work, and then teams of teachers worked to bring everything together. It was seen as a vehicle for driving the new curriculum, but required lots of individual and incidental talking with teachers to allay fears and get everyone going. The most important thing was to introduce the teachers to the Ultranet as part of a bigger purpose so they could see the value and usefulness – in this school, we used curriculum change and linked everything back to pedagogy and the goals of the school. (Assistant principal and teachers, primary school)

Resources

All pilot schools agreed upon the critical importance of ensuring that use of the Ultranet was fully supported and resourced, to minimize discouragement when teachers and students were starting to use the system, and to provide the conditions for ongoing success with the technology. A reliable wireless network was reported to have helped teachers to become confident to use the technology.

The provision of resources to support the use of the Ultranet meant more than improvements in technological infrastructure. Most schools were considering ways to provide the technical support and advice their teachers, students and parents would need as they used the Ultranet.

Almost all schools had appointed or redeployed staff in a specific IT consultative role to assist teachers to develop with the Ultranet. The inter-personal skills of these appointees proved to be of paramount importance.

Some illustrative comments are included below:

Schools need to have the technical hardware and facilities well established before trying to introduce something new like the Ultranet. If the overall facilities are not up to scratch, teachers will just get frustrated and give up too quickly. Schools need a robust network with excellent broadband width. (Primary school teachers)

Before rolling out the Ultranet, the school rebuilt the server. We got an excellent technician in and made sure that everything in terms of hardware and software was well in place before introducing the Ultranet to teachers. You need a good foundation. (Primary school principal)

It was important for the school to involve the technical staff who have to pick up all the pieces. Don't set unrealistic timelines for installation, because this results in overload and disillusionment. The infrastructure has to be in place before you start. There are lots of hidden technical issues that need to be addressed before schools can expect teachers to start using the Ultranet. Java needs to be installed, but this is a problem with lots of different types of laptops and Macs in the school. The system has been designed to work with the latest laptops but because of the three year rollover, many teachers may be behind (Secondary school teachers).

In every Ultranet school, teachers considered access to an appropriate level of technical support to be a critical factor for ongoing success of the Ultranet initiative.

Readiness

At all pilot schools, the teachers and school leaders stressed the importance of acknowledging that there were wide differences, not only between schools, but also between teachers within schools and between parents and students in terms of their basic knowledge of ICT and readiness to start working with the Ultranet.

The amount of training needed depended on varying states of readiness of the staff and was considered important to understand levels of engagement and differences between the pilot schools and their matched comparison schools.

Some schools had adopted a 'train the trainer' approach to introducing the Ultranet, while other schools had taken a 'whole school' approach, although all stressed the importance of training in small groups and building support groups for teachers. Examples of teachers' comments on training, support and variations in skill levels are shown in the text boxes that follow:

(For the Ultranet initiative to work well in the school) it needs to be comfortable for everybody – you can't risk creating divisions between teachers. Remove the pressure on teachers by creating a 'have a go' attitude. Provide training through constant, incidental discussions with all teachers. Use teams rather than individuals. Provide PD to all teachers at whole staff level, to create a climate of sharing, mutual support, confidence and comfort, buddy systems - avoid excluding anybody because of their low level of technical knowledge or burning out your more ICT savvy 'specialists' (Assistant principal, primary school).

Make sure there's lots of good PD available at the start, and suited to a wide range of starting points for teachers in terms of their skills. The school needs to be really organised so that teachers and administrative staff are not inundated with new information and overloaded with tasks. There needs to be a mixture of teachers chosen as mentors, not just the ICT savvy people. If less confident teachers see others similar to themselves able to work with the system, they are more confident to give it a go. It's important for teachers to be able to work in small groups, and given time to practise and explore. Training needs to be repeated so that teachers can learn, practise, and then refresh their learning again. Cheat sheets, designed for self-paced learning, should be provided to support hands on training sessions. (Special Education teachers).

It's important to think about teacher readiness to take up new technology, and how to bring teachers' skills up to speed. There's a staff management problem to be dealt with, in terms of resistance to change and need for training. So the school saw it as crucial to get both the technical infrastructure and support personnel in place before introducing the Ultranet to teachers. An e-learning coordinator and an assistant were appointed to provide assistance to all teachers. This assistance was designed to be on tap, non threatening and specialised. An e-learning group of teachers was also established - a core group. The school needs to plan to create instructions for teachers to support their use of the Ultranet, and to give teachers plenty of notice of intended changes. There also needs to be thought given to ways of getting over teacher resistance to carrying laptops around with them all the time (Coordinator and teachers, secondary school).

Teachers need regular training and lots of repetition, plus opportunities for hands on practice. Train in small teams and develop buddy systems. Teachers are starting from different points in terms of their ICT skills, and training needs to be able to accommodate this. It needs to be specific to teachers' needs and abilities, rather than too generic and broad. (Secondary school teachers)

Access to Technology

Teachers' access to and use of technology was not related to teacher age nor to teacher gender in secondary schools. In primary schools, women were more likely than men to indicate that they and their students had only basic access to computers, but this may be an artefact of the gender balance in the different types of schools. Only one of the Special Education teachers was male, so relationships between gender and access to technology could not be meaningfully compared in that context. There were no gender- or age-based differences between teachers in attitudes towards using the Ultranet or ideas about using the Ultranet.

Initially, meaningful comparisons can be made between teachers with access and ability to use the Ultranet. In Figure 1, proportions of teachers in pilot and matched schools with good access to the technology are reported. It is evident that in both types of school, access to technology was variable and that there was still very little difference in this measure between the two groups of schools at this early stage of implementation.

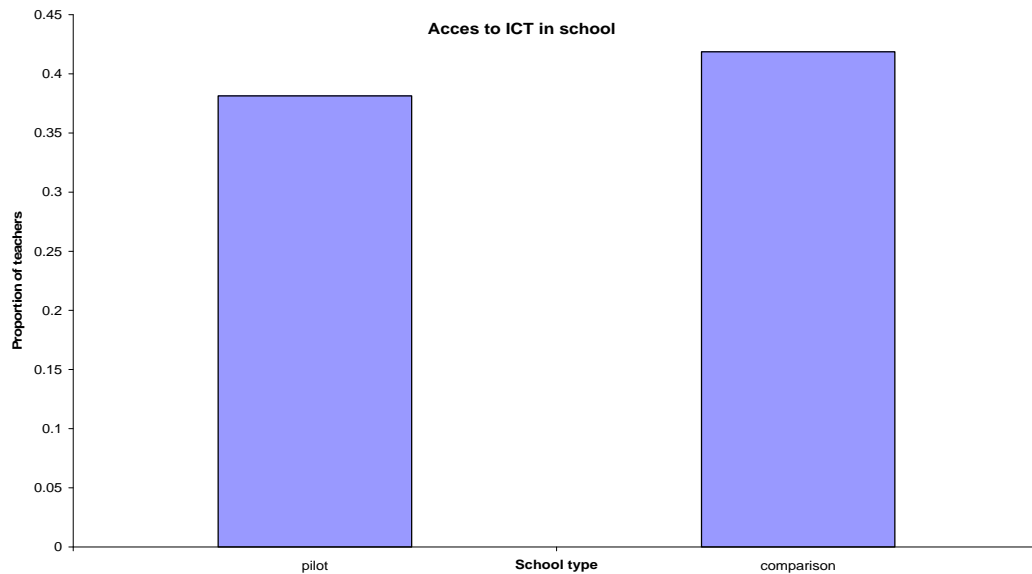


Figure 1. *Overall good access to technology in pilot and matched schools.*

What had changed, however, was the nature of access to technology for teachers, and this can be seen from an analysis of the subsequent figures. Figures 2, 3 and 4 illustrate the differences between pilot and matched primary, secondary and Special Education schools in terms of the proportions of teachers who responded that they had different levels of access to technology. These included access to computers, a school intranet or the Ultranet, and training and technical support for themselves and their students.

At the time of the baseline study there were no differences between pilot and matched schools in terms of teachers' access to technology, but this had shifted in the period between the baseline study and the data collection reported in this analysis. When the nature of the access was considered real differences had emerged.

Primary Schools

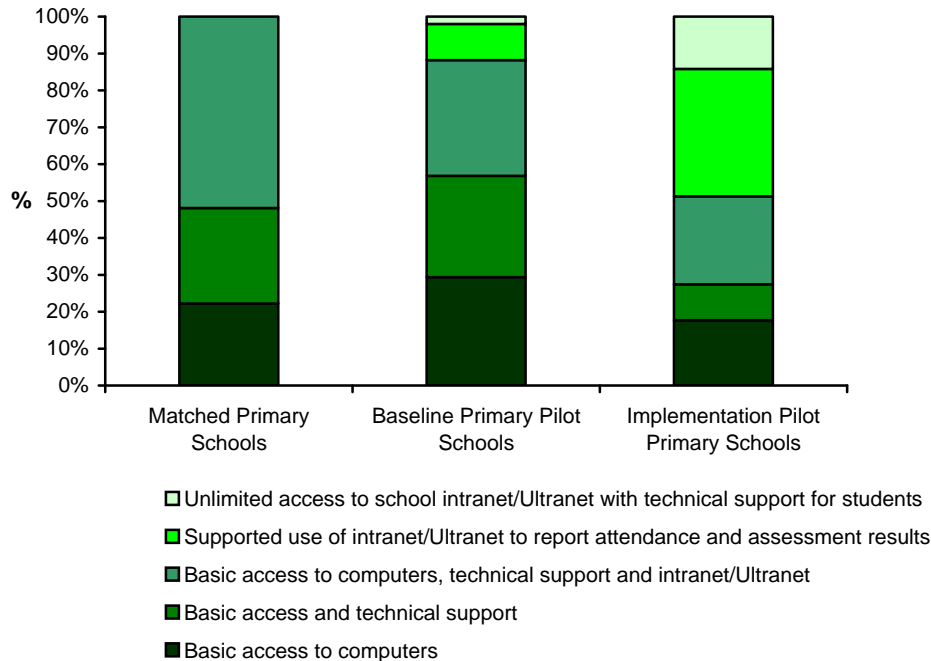


Figure 2. Access to computers and technology for teachers in pilot and matched primary schools.

In Figure 2, differences between the pilot and matched primary schools were evident. The first bar of this, and subsequent similar, graph displays the distribution of teachers in matched primary schools in 2006. The middle bar displays the distribution of teachers in pilot primary schools at the time of baseline data collection in 2005. The third bar displays the distribution of teachers in pilot primary schools in 2006 and after implementation of the Ultranet. This allows two comparisons to be made. Access to technology can be compared between teachers in the pilot schools before and after implementation of the Ultranet (baseline pilot compared with implementation pilot), and between teachers in pilot schools and teachers in matched schools at the time of post-implementation data collection. The major trends were that:

- After implementation, 35% of teachers in pilot primary schools had good access to training and support for their own and their students' use of the Ultranet, and were able to report attendance and some assessment results via the Ultranet.
- More than 14% of primary teachers in pilot schools indicated that they had unlimited and well-supported access to the Ultranet, that technical assistance was readily available for students and that parent access was supported by the school.
- None of the primary teachers in the matched schools gave these responses,. Rather, in the matched schools, most of the teachers and students had basic access to computers with some technical support, and some teachers also had access to a school intranet.

Secondary Schools

The situation was not so starkly contrasted in secondary schools. As shown in Figure 3, the proportions of teachers at different levels of access to technology were similar in the pilot and matched secondary schools, and in pilot schools before and after implementation of the Ultranet.

Several of the matched schools had well-established school intranets, and some of the pilot schools were in the process of changing over from a school intranet to the Ultranet. Secondary schools have been slower to change than primary schools and little evidence of change in access to technology was evident in these schools. It is possible that this lack of change is due to the Ultranet facilities not yet being distinguishable from the earlier versions of intranets available in secondary schools.

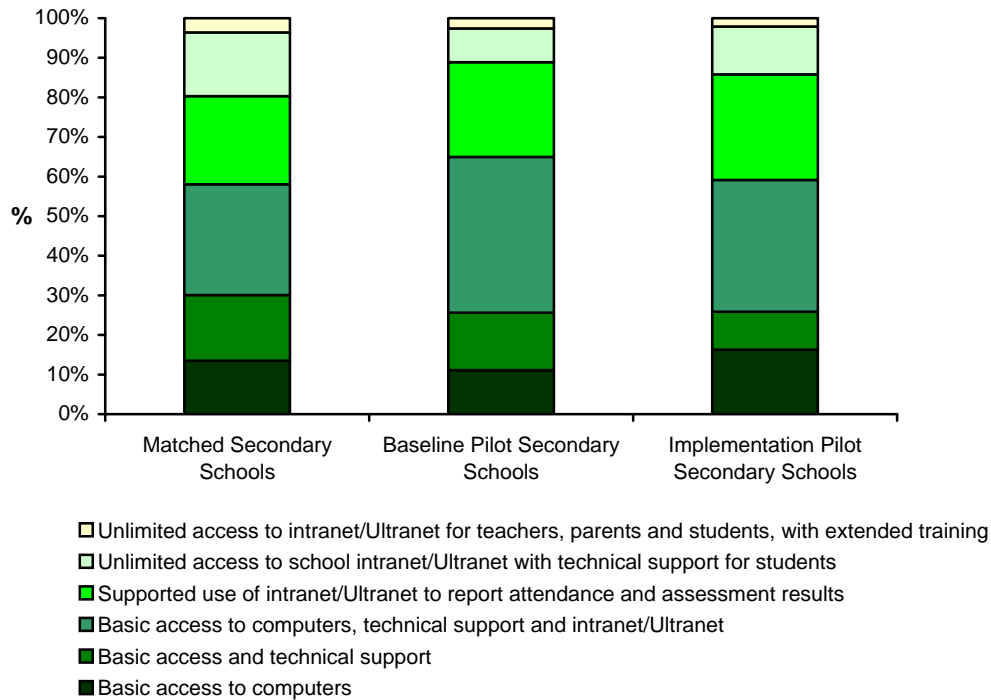


Figure 3 Access to computers and technology for teachers in pilot and matched secondary schools.

Special Education Schools

Only two Special Education schools were included in the evaluation study, and so the number of participating teachers in this context was relatively small (16 teachers from the matched school, and 22 teachers from the pilot school). A clear shift from the baseline study is evident post-implementation among the teachers in the pilot Special Education school towards a higher level of access to the technology. Teachers in the matched Special Education school reported good access to a school intranet.

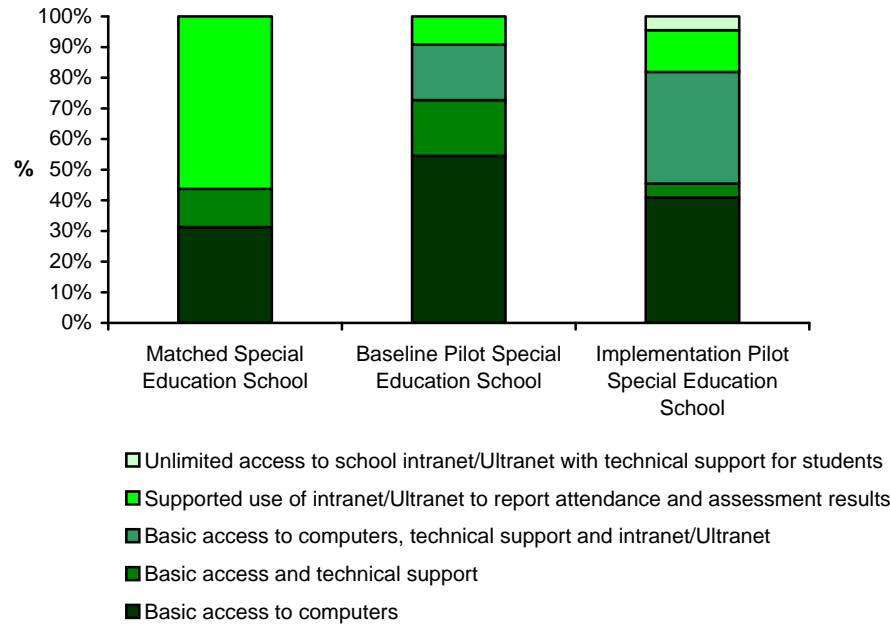


Figure 4. Access to computers and technology for teachers in pilot and matched Special Education schools.

The teachers in the pilot Special Education school had faced some technical challenges in establishing their use of the Ultranet. In particular, the school had become aware of a need to improve the technical infrastructure and access to technical support for teachers. The use of the Ultranet was being gradually introduced to teachers across the school, to minimize frustrations and overload on resources.

This was reflected in the pattern of teachers' description of their access to technology shown in Figure 4. The low incidence of use of established use of the Ultranet in the Special Education pilot school indicated that it would be premature to comment upon impact of the Ultranet in this context.

Teachers' Ideas and Attitudes to the Use of Technology

At the outset of the evaluation and prior to installation of the Ultranet in pilot schools, teachers in pilot primary, secondary and Special Education schools were interested in learning about the technology. In matched schools, emphasis was on learning to use the intranet or other technology.

Teachers' Ideas about the Technology Applications

Primary Schools

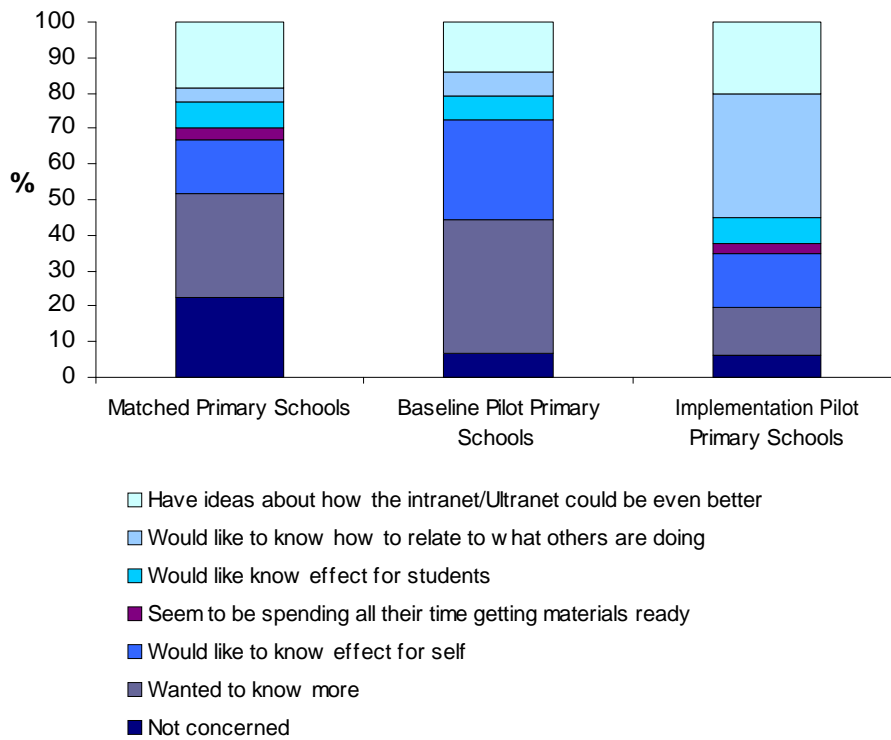


Figure 5. Ideas about using technology for teachers in pilot and matched primary schools.

There had been a shift in the ideas of the teachers in the pilot primary schools when compared against their ideas at baseline data collection, and they were also clearly different when compared with teachers in the matched primary schools. In particular:

- An increased motivation to collaborate with other teachers via the Ultranet/Intranet was clearly noticeable in the pilot primary schools.
- After implementation, 35% of the pilot primary teachers responded that they would like to know how to relate what they were doing with the Ultranet to what other teachers were doing. Less than 7% of the primary teachers in the pilot schools had given this response at the time of baseline data collection. Only 4% of the primary teachers in the matched schools gave this response in relation to their school intranet, although 30% of primary teachers in matched schools were interested to know more about the Ultranet.

Secondary Schools

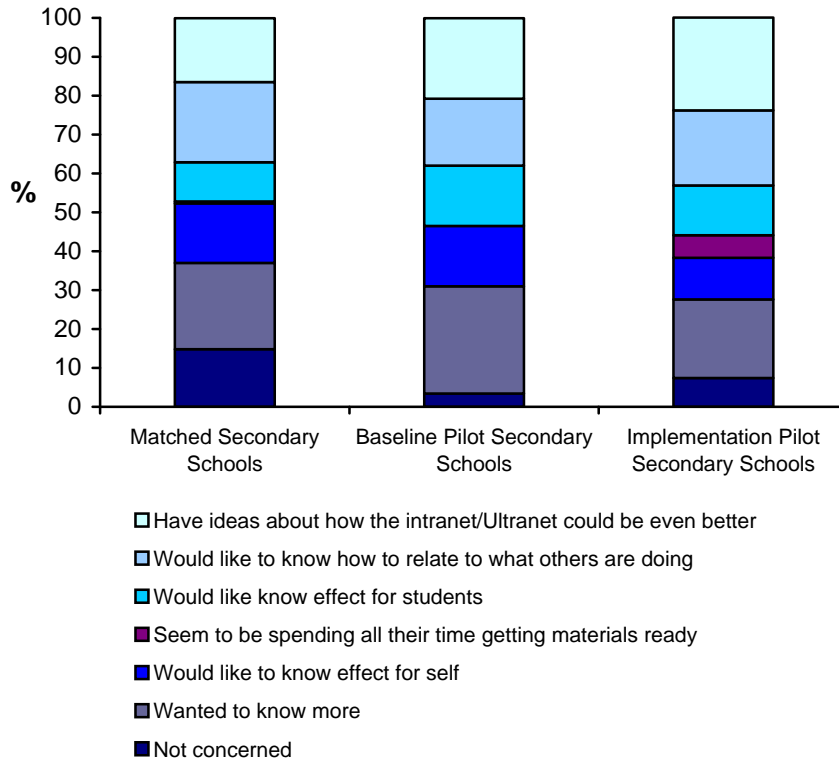


Figure 6. Ideas about using the Ultranet/intranet for teachers in pilot and matched secondary schools.

Teachers in pilot and matched secondary schools differed in terms of their ideas about the technology:

- More teachers in implementation pilot than matched secondary schools responded that they had ideas about how to improve the use of technology.
- More teachers in matched than pilot schools expressed little interest in learning more about the school intranet technology.

Special Education Schools

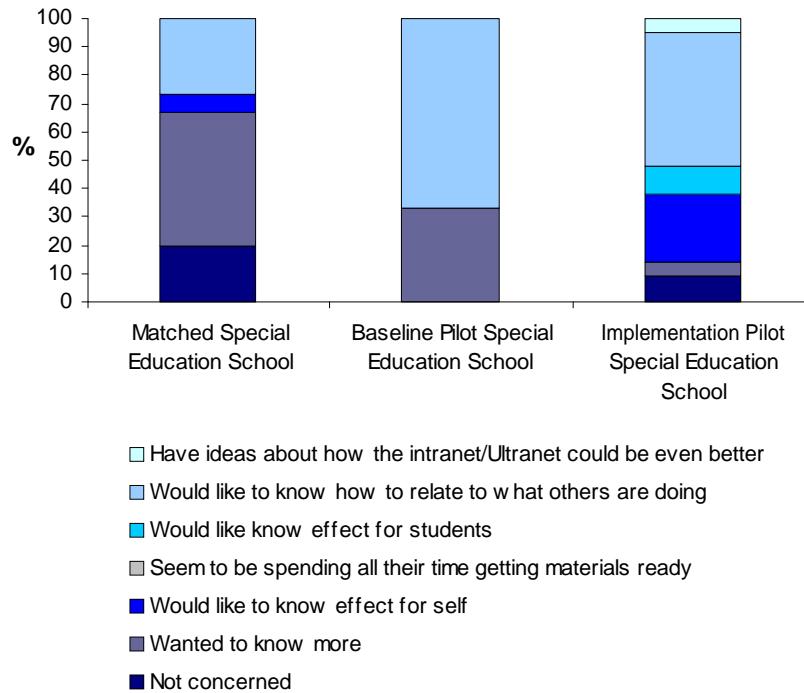


Figure 7 Ideas about using the intranet technology for teachers in Special Education schools.

In the Special Education schools:

- At the time of the baseline data collection, the Special Education teachers in the pilot school were divided between those who wanted to know more about the Ultranet and those who wanted to know how to collaborate with other teachers. Similarly, after implementation almost half of the teachers in the pilot school responded that they wanted to be able to relate what they were doing with the technology to what other teachers were doing.
- Like their primary school counterparts, collaboration and sharing with other teachers was a priority for the Special Education teachers.
- Almost half of the teachers in the matched school responded that they would like to know more about the Ultranet.
- More teachers in the matched than pilot Special Education school indicated indifference to the Ultranet or a school intranet.

Teachers' Attitudes to the Intranet/ Ultranet Technology

The baseline data had revealed no differences between teachers in pilot and matched schools in terms of their attitudes towards using an intranet or the Ultranet. A majority of teachers in both pilot and matched schools were trying to learn more about the technology at the outset of the evaluation.

The patterns of attitudes to using the an intranet for teachers in primary, secondary and Special Education schools at the end of the evaluation period are shown in Figures 8, 9 and 10 respectively.

Primary Schools

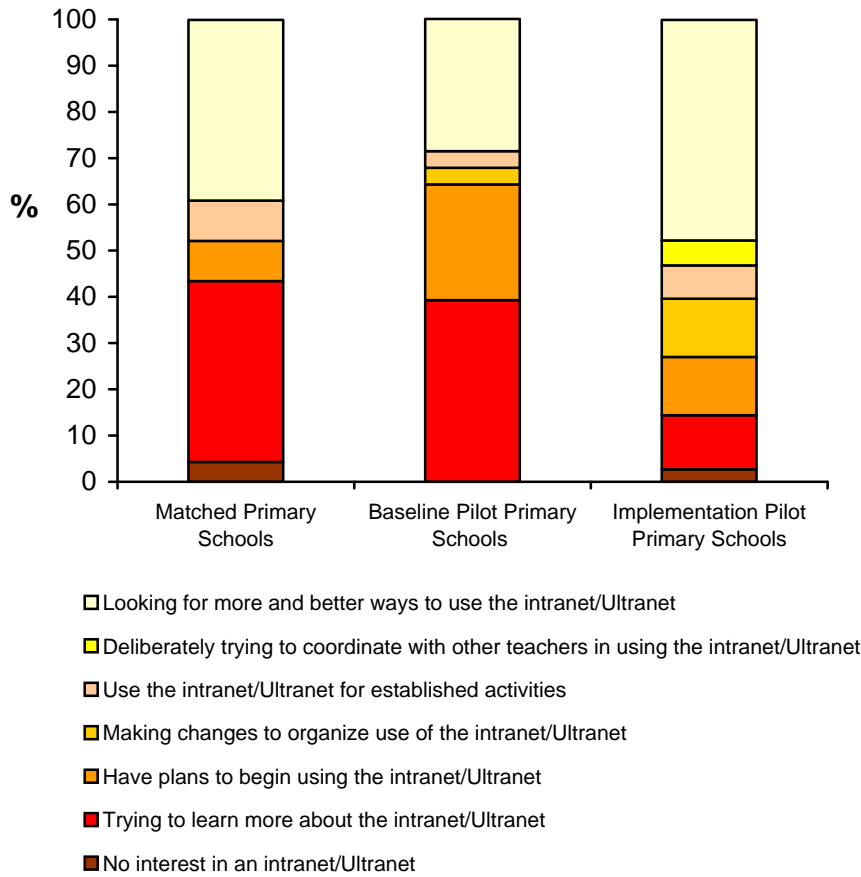


Figure 8. Attitudes to using the Ultranet/intranet for teachers in pilot and matched primary schools.

At the time of baseline data collection, primary teachers in primary schools were most likely to be trying to learn about the Ultranet or planning to begin using the Ultranet. Their attitudes had shifted significantly over the implementation period, with most of the primary teachers actively seeking more and better ways to use the Ultranet.

- Primary teachers in pilot schools were more likely than teachers in matched schools to be making changes to organize their use of the Ultranet or school intranet, using the Ultranet or intranet for an established group of activities, or deliberately and actively coordinating with other teachers to use the Ultranet or intranet.
- Most teachers in pilot and matched schools responded that they were interested in using the technology, and many of the primary teachers responded that they were keen to look for more and better ways to use it.

Secondary Schools

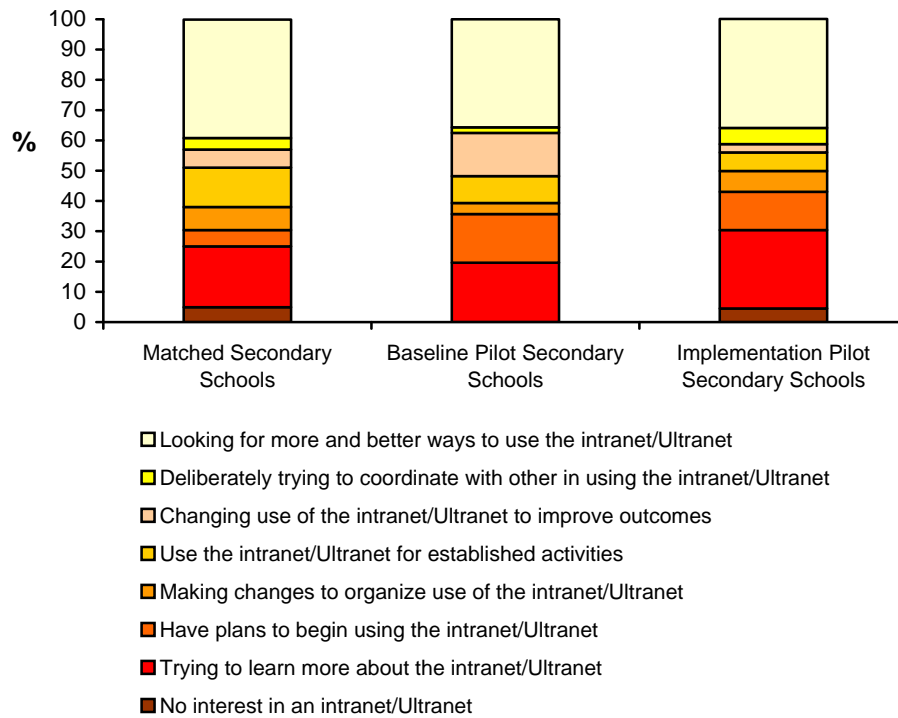


Figure 9. Attitudes to using the Ultranet/intranet for teachers in secondary schools.

In Figure 9 it can be seen that:

- Patterns of teachers' attitudes to using the Ultranet / intranet differed only slightly between pilot secondary schools before and after implementation and matched secondary schools.
- In both pilot and matched schools, almost 40% of teachers were actively looking for more and better ways to use the Ultranet / intranet.
- Teachers in pilot schools were more likely to respond that they were making plans to start using the Ultranet as new technology, while teachers in matched schools were more likely to respond that they used the school intranet for an established group of activities.

Special Education Schools

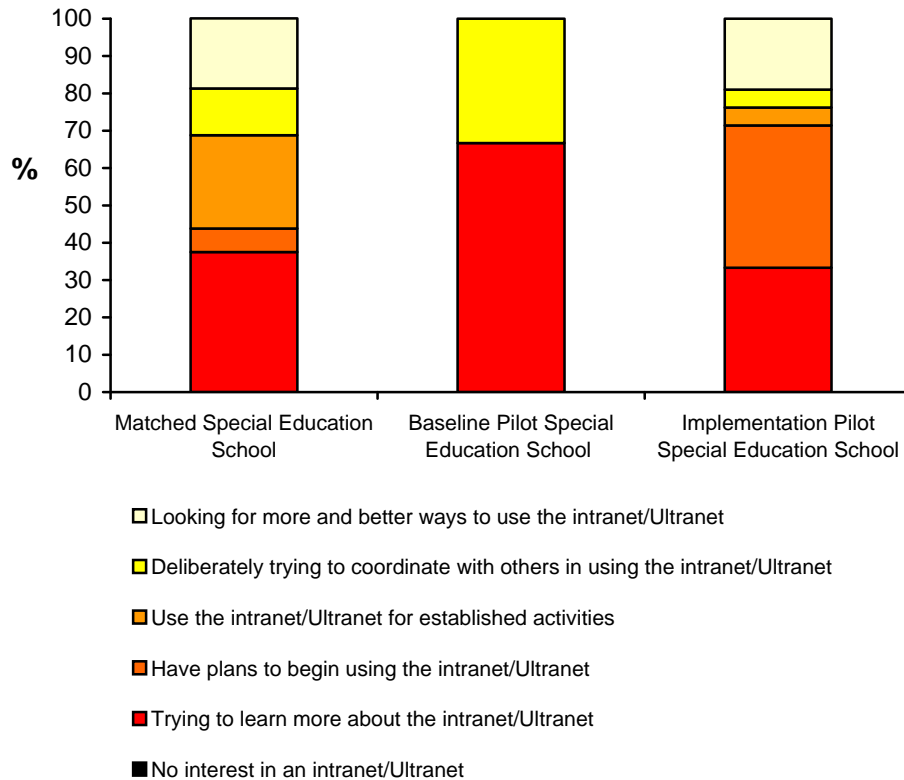


Figure 10. Attitudes to using an intranet/Ultranet for teachers in pilot and matched Special Education schools.

In the Special Education schools:

- Teachers in the pilot school were most likely to be either trying to learn more about the Ultranet (33% of teachers) or making plans to begin using it (38%).
- At the time of baseline data collection, teachers in the pilot Special Education school were either trying to learn more about the Ultranet or to coordinate their plans for the Ultranet with others.

Attitudes and Ideas

There were positive relationships between teachers' access to technology and their attitudes to using the technology in both pilot and matched schools. Where teachers indicated that their use of the Ultranet or school intranet was supported by good technical infrastructure and advice, they were likely to also be actively coordinating their use of the Ultranet or intranet with other teachers and searching for more and better ways to use the technology.

While the baseline study reported no difference in these measures, some differences had emerged after implementation of the Ultranet in schools, especially among primary teachers where curriculum emphasis had been reviewed in terms of the use of the relevant technology.

The Ultranet clearly provided an impetus to reconsider the use of technology. Perhaps unsurprisingly, the continued use of an intranet did not lead to a rethink of the link between technology and curriculum. It may have been the novelty of the Ultranet and its potential, but it apparently led to a reform of thinking in the area of curriculum and ways in which the technology and the curriculum could be improved.

Use of the Technology to Prepare Materials, Track Student Data, and Report and Monitor Student Progress

The baseline report suggested that there were no differences between pilot and matched schools in terms of the key indicators of success for the initiative. The relevant measures were:

- Teachers' capacity to prepare, share and deliver learning materials
- Teachers' capacity to track student progress and to use data on individual student progress for curriculum planning and development of individual learning plans
- Teachers' capacity to communicate with students and parents on progress and to tailor assessment strategies and work plans to meet the needs of individual students
- Teachers' capacity to use data on student learning outcomes, engagement and pathways and transitions, from within and between schools, to improve strategies for evaluation and intervention.

To compare the impact of the Ultranet on these indicators of success, it was important to establish that teachers in the pilot schools had started to use the Ultranet, and that they had opportunities to work with specific aspects of the technology. As reported earlier, there were small differences in the involvement with technology between pilot and matched schools and these differences were clear when they were broken down by type of school. The purposes of the comparisons were twofold. The first was to compare the matched and pilot schools and the second was to compare the pilot schools from the baseline to the implementation study.

Over 50% of the primary teachers and 40% of secondary teachers in the pilot schools were actively using the Ultranet and exploring ways to extend their use of the Ultranet, as shown in Figures 11 and 12.

Comparisons of impact of the Ultranet between pilot and matched schools were made between teachers in pilot schools who had been using the Ultranet and teachers in matched schools (although some teachers in the matched secondary schools had been using a school intranet). The comparisons are not made for Special Education schools because of the small numbers of teachers involved and the possible misleading interpretation arising from such a small N .

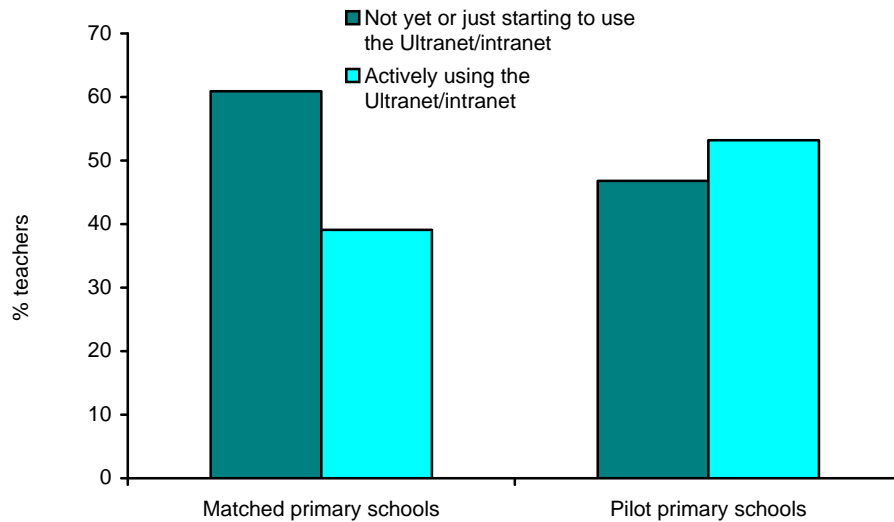


Figure 11. Comparison of proportions of teachers using the Ultranet/intranet in pilot and matched primary schools.

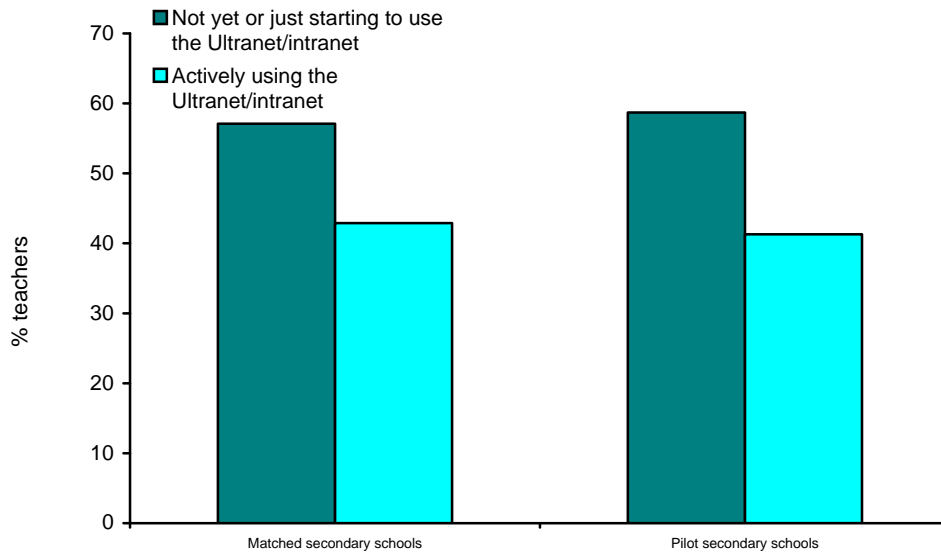


Figure 12. Comparison of proportions of teachers using the Ultranet/intranet in pilot and matched secondary schools.

The proportion of teachers in pilot schools who were not yet using the Ultranet was similar to the proportion of teachers in the matched schools not using the school intranet. As the subsequent graphs illustrate, only teachers in pilot schools who were using the Ultranet showed improvements on any of the key indicators of successful implementation.

At the time of data collection, the Ultranet had not yet been fully implemented in the pilot schools and this meant that teachers had not had opportunities to use the Ultranet to access data on students as they moved between schools or year levels.

Preparing, Sharing and Delivering Learning Materials

Several measures were developed to monitor development in teachers’ use of the technology. The data from the baseline study was used to validate the measures and again two comparisons were made. The first was between the matched schools and the pilot schools and the second was within the pilot school group. The measures were designed to capture the developmental nature of the teachers’ use of the technology and the following figures are used to illustrate that progressive development across teacher groups.

Primary Teachers

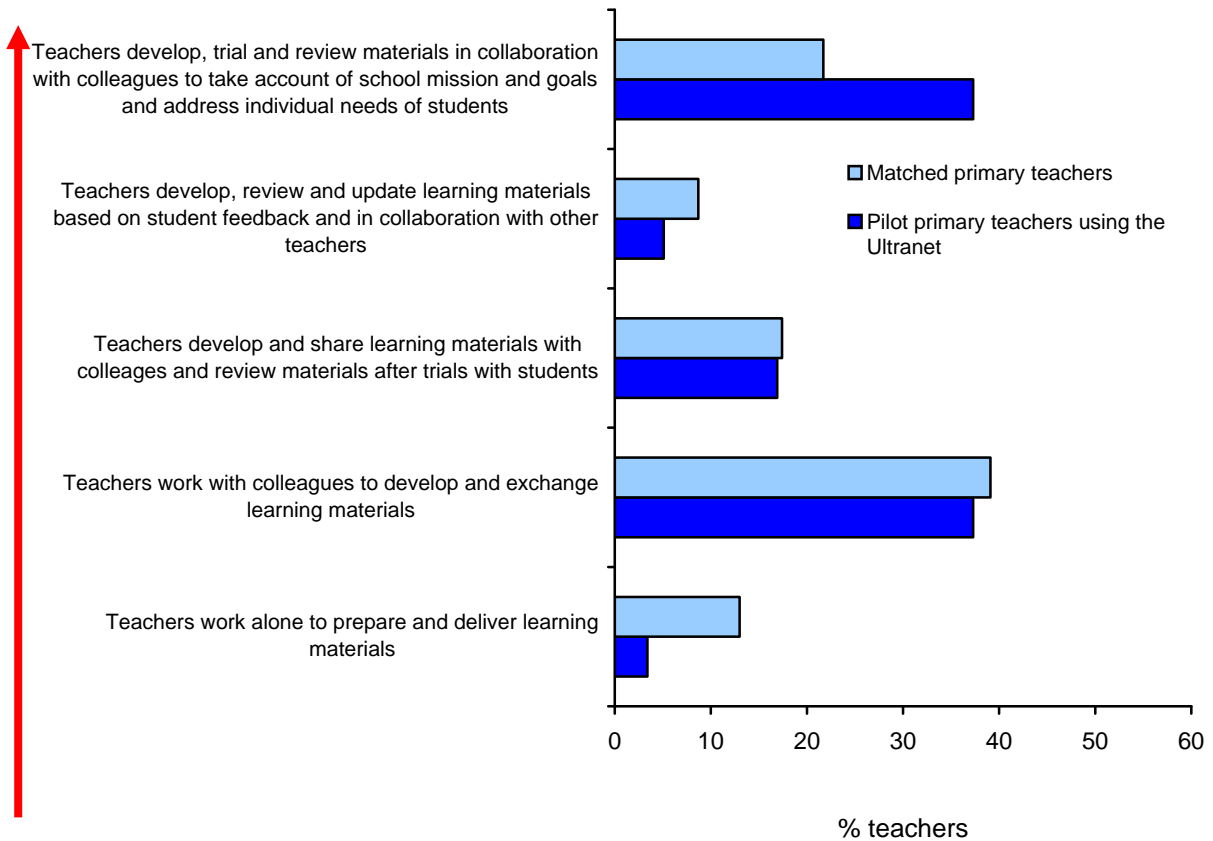


Figure 13. Primary teachers’ capacity to prepare, share and deliver learning materials in pilot and matched schools.

In the pilot primary schools, teachers’ capacity to develop, trial, review, update and share learning materials was positively influenced by their use of the Ultranet, as illustrated in Figure 13.

- Compared with the teachers in the matched schools, a larger proportion of teachers in the pilot primary schools were reporting that they could develop, trial and review materials in collaboration with other teachers, and take into account the school mission and goals and the needs of their individual students.
- A greater proportion of teachers in the matched primary schools responded that they worked on their own to prepare and deliver learning materials.

Secondary Teachers

In the secondary schools, teachers’ capacity to develop, trial, review, update and share learning materials was positively influenced by their use of the Ultranet, as illustrated in Figure 14.

Differences between teachers in pilot schools who were using the Ultranet and their counterparts in matched schools were less extreme in secondary than primary schools, perhaps because many of the teachers in the matched secondary schools already had access to well-established school intranets.

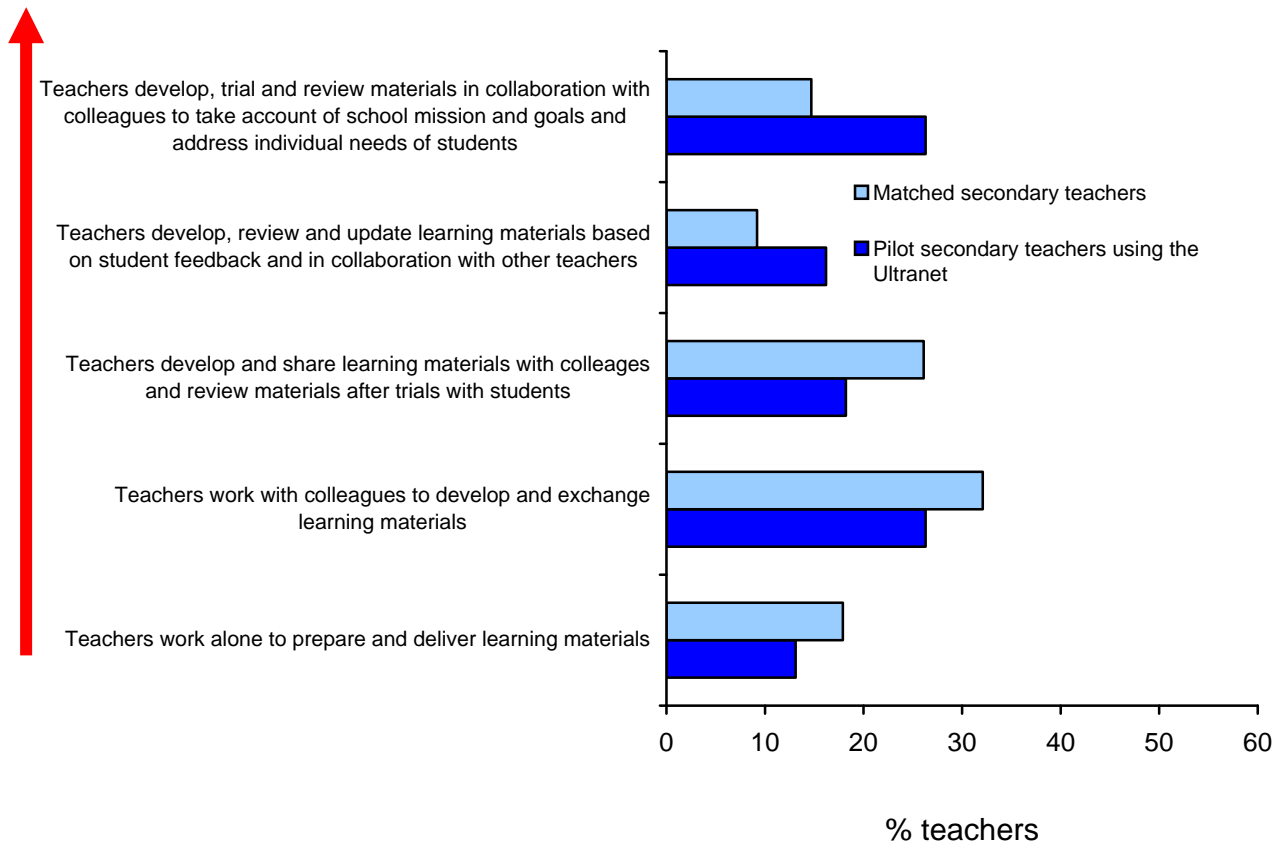


Figure 14. Secondary teachers’ capacity to prepare, share and deliver learning materials in pilot and matched schools.

Teachers' Capacity to Track Student Progress for Curriculum Planning

Primary Teachers

In the primary schools, use of the Ultranet could be clearly linked to improvements in teachers' capacity to track and use information on student progress from a range of sources and for development of individual learning plans for students, as illustrated in Figure 15.

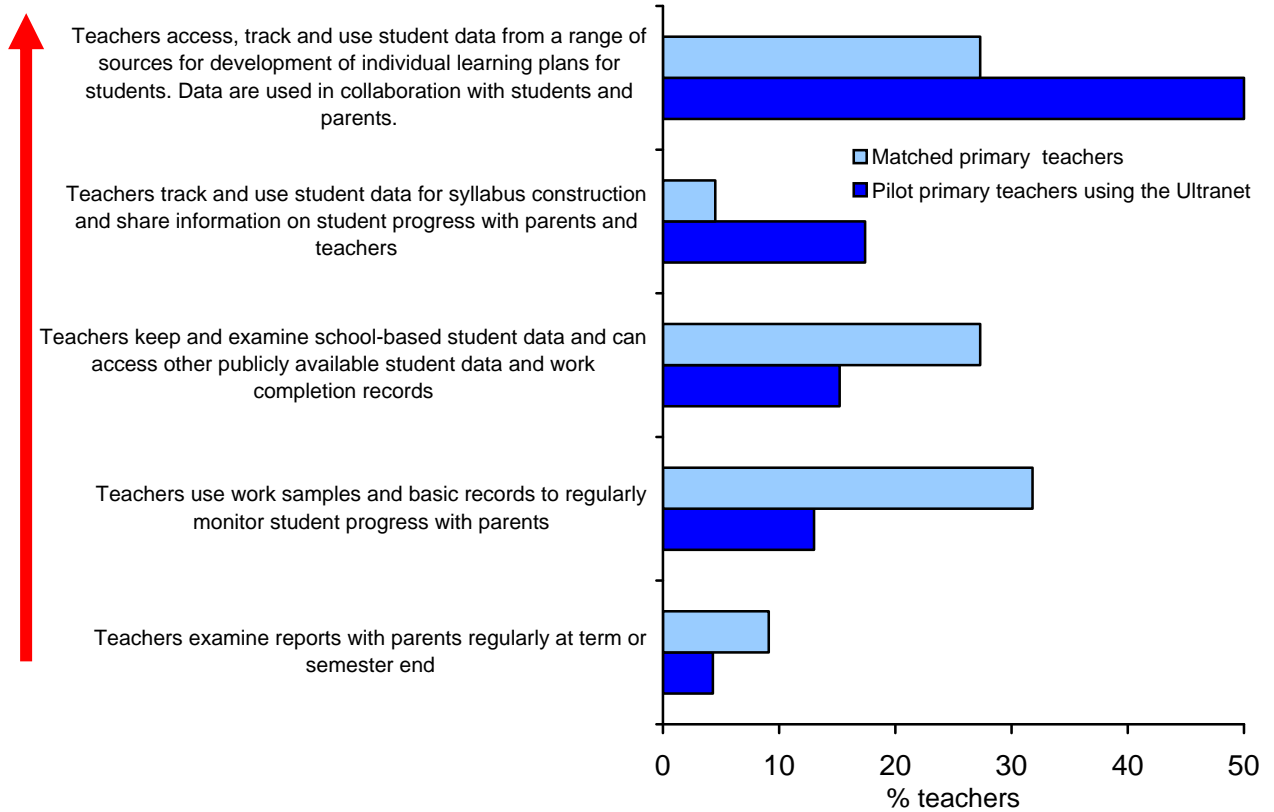


Figure 15. Primary teachers' capacity to track and use data on student data for curriculum planning and development of individual learning plans in pilot and matched schools.

Secondary Teachers

Teachers in pilot and matched secondary schools were similar in terms of their capacity to access, track and use student data in collaboration with students and parents, and to develop individual learning plans on the basis of those data.

In both pilot and matched secondary schools, the regular use of a school intranet or the Ultranet was linked to improvements in teachers' capacity to access these functions.

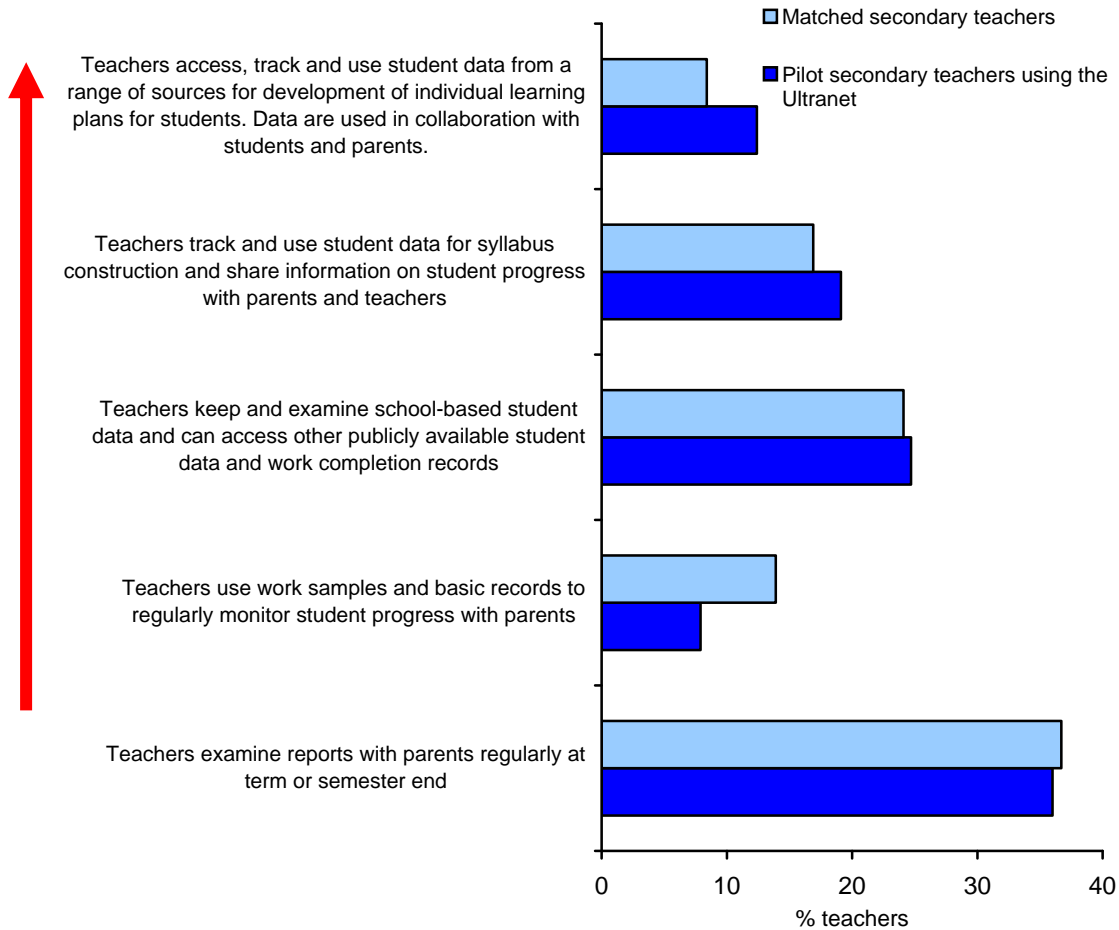


Figure 16. Secondary teachers' capacity to track and use data on student data for curriculum planning and development of individual learning plans in pilot and matched schools.

Teachers' Capacity to Report Student Progress

Primary Teachers

Primary teachers' capacity to collaborate with students and parents in individual tailoring of assessment strategies and to report as part of a process of continuous feedback was clearly related to their use of the Ultranet, as illustrated in Figure 17.

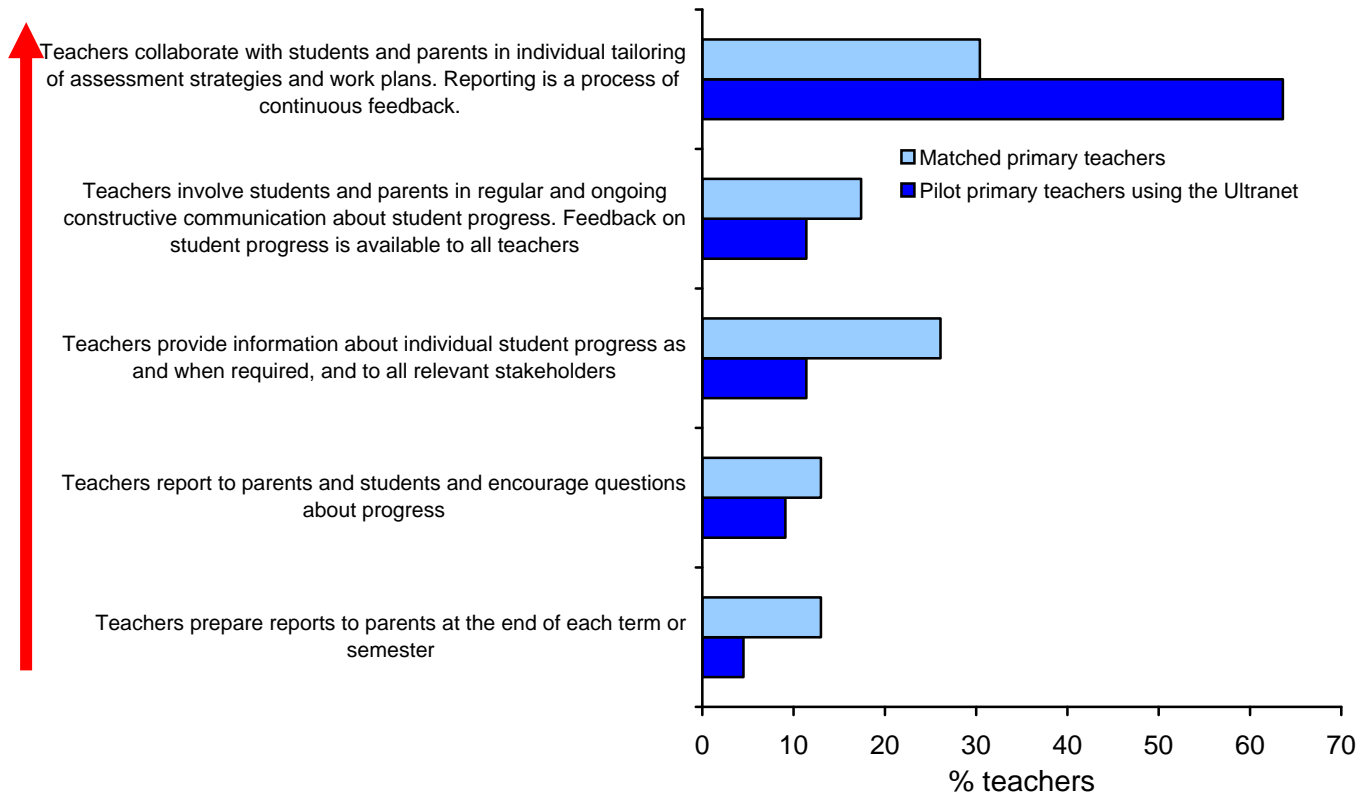


Figure 17. Primary teachers' capacity to report on student progress in pilot and matched schools.

Secondary Teachers

Secondary teachers who were using the Ultranet in the pilot schools were more likely than their matched counterparts to respond that they could collaborate with students and parents in individual tailoring of assessment and work plans, and report to all relevant stakeholders as part of a process of continuous feedback.

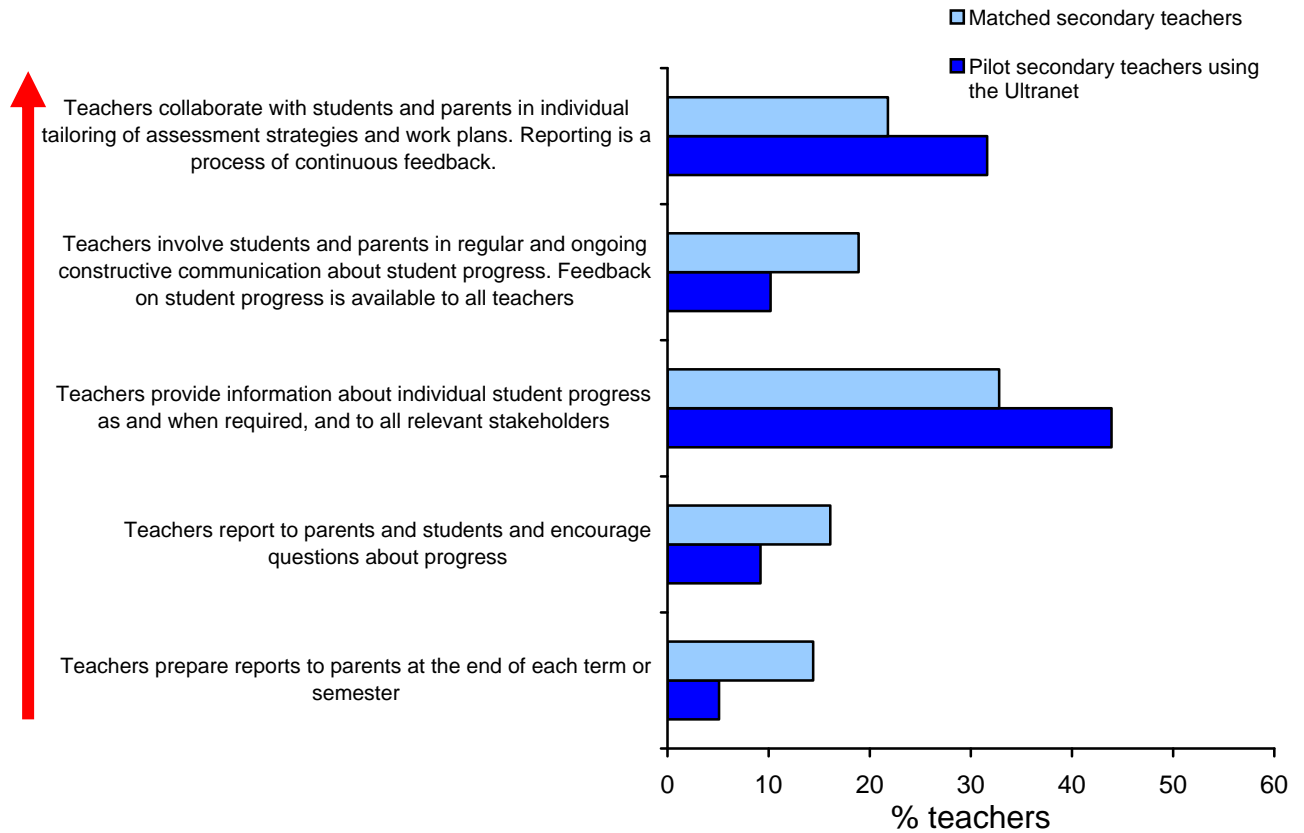


Figure 18. Secondary teachers' capacity to report on student progress in pilot and matched schools.

Curriculum Implications of the Ultranet

The study included visits to each pilot school for discussions with school leaders and teaching, administrative and technical staff, to ask about progress in use of the Ultranet and attitudes and responses to the initiative. Two hundred and one teachers, seven principals or assistant principals, and nine school administrative or technical support staff contributed to focus group discussions in schools. Focus groups were not conducted in matched schools because of the nature of the investigation related to the Ultranet.

In all pilot schools, teachers and administrative staff had started to use the Ultranet, and there was strong support expressed for the initiative. The teachers and administrators were positive and enthusiastic about the potential of the technology. Even in schools where there had been initial setbacks and technical challenges which had delayed use of the system, the support for the Ultranet initiative was strong. Much of the use of the Ultranet was still in the planning and exploratory stages but the potential for the system was recognised and there was a general anticipation of the benefits it would yield. The comments in the text boxes below are illustrative of schools in which teachers had started working with various functions of the Ultranet:

We expected it to be more work, but we are getting used to it and it's becoming just part of our normal teaching program. Recording attendance doesn't make much difference in the primary system. The principal can generate absence reports for individual students, but this is not a priority as absenteeism is not a particular problem at the school. It has forced the school to redefine what it meant by lateness, and this has been useful. In terms of posting resources onto the Ultranet, we are not interested in just delivery of content. We are more interested in how to incorporate enquiry-based learning with the Ultranet. In terms of communicating with students, teachers prefer to use face to face or email communication, to chat via email. But we'd like the students to be able to chat with students at other schools. One of the best things is the opportunity of building communities of like-minded schools and teachers regardless of geographic area. We are also interested in connecting with schools in other states. The potential for collaboration with other schools is incredibly exciting, and the overall concept of Students@Centre is brilliant. In terms of sharing resources, the school is interested in access to resources at other schools. Sharing within the school has been routinely done as part of the curriculum planning, and the current sharing of resources via the Ultranet is largely teacher-driven and in the form of overviews. Teachers are encouraged to post and share best practice lessons - things that have worked particularly well. We have also been renovating units of work, integrating enquiry-based learning. We can access what's going on in all classrooms. It's particularly useful for teachers to look into the Ultranet, find what they need, when planning a new unit of work. This will make a big difference for those teachers in schools with a culture that doesn't promote sharing, because it will allow them to overcome that and not be so isolated. In terms of recording and reporting outcomes, this is still a bit abstract. Teachers want to be able to include comments on work and not just report against maths and English. (Primary school teachers)

All teachers are now taking laptops to class, and this is a major and very quick change in the ICT culture of the school. The Ultranet clearly fits in well with the interactive whiteboards. These new ICT tools are motivating the school to invest in more resources. Communication is better between teachers, with more teachers using email and keeping up to date with information. (Secondary school teachers)

We are looking forward to being able to be in contact with other schools. We are just getting started on the Ultranet, but looking to the future teachers want to be able to use the Ultranet for meaningful assessment, built up over time, using the VELS progression points. We like the idea that VELS is just two clicks away when planning activities. We like the portal arrangement and look forward to using it to communicate with the school community. (Primary school teachers).

Teachers are particularly excited about being able to share resources, ideas and materials with other Special Education teachers within the school, in other Special schools, and in mainstream schools. We hope that the information we post will be useful to teachers working with integrated students in mainstream classrooms. It's difficult to search by VELS in terms of resources, because there's not much available at lower levels yet. Teachers would rather see a facility to upload each student's Individual Learning Plan (ILP), and then be able to assess, record and report against that ILP. Teachers expect to use the facilities for creating tasks and report writing, but need time to sit down with other special ed teachers to decide what we do and don't need. We value it as a way of managing information, and keeping things in one place, but our main focus is upon catering to students' individual needs and we need direction on how this can best be managed in the Ultranet. We see lots of potential for the future in terms of cutting down paper work, reducing time spent checking back over resources, modifying existing resources. We like the idea that everything is stored together, and that comments and feedback can flow through to reporting (Special Education teachers).

Being able to access the VELS progression points during planning and design of the curriculum and units of teaching will be really useful. The Ultranet will increase the accountability of teachers, and this is a good thing. The Ultranet offers potential for the development of a much more cohesive curriculum, allows curriculum mapping, the capacity to share ideas and resources, and particularly the ability to track student progress from year to year (Secondary school teachers).

Teachers' Perceptions of Conditions that Support or Impede Successful Implementation of the Ultranet

Teachers were asked to reflect upon the conditions that would make it easier for them, and their students, to use the Ultranet, and also upon the conditions that acted as barriers to use of the technology. As a general rule, teachers talked about their role in the research and development of the Ultranet, and expressed both pride and interest in contributing information to assist in its improvement. Most of the teachers talked about the importance of:

- ready and ongoing access to technical support and advice, both within the school and from outside 'expert' sources;
- access to a Help Desk environment, perhaps via email and telephone, plus a handbook of simple step by step instructions on how to navigate through the system and use the different functions;
- maintaining or upgrading the infrastructure at the school, including the server and network;
- providing sufficient and appropriately targeted training to improve teachers' ICT knowledge that recognizes the needs of a diverse workforce;
- increasing student access to computers, via student laptops, additional computers in the classroom and/or providing computer facilities for students and parents to use outside hours on school premises. Access and equity issues were of concern to many of the teachers;
- simplification and streamlining of functions so that activities such as adding classes, changing classes, setting up timetables, and managing data are more accessible to teachers.

Some of the ideas that were put forward by teachers differed, depending upon the school context: primary, secondary or Special Education schools. For example:

- the primary teachers expressed interest in a simplified method for logging very young students onto the system, and different interfaces that were suitable and attractive for younger and older primary students;
- the Special Education teachers talked about the desirability of a very simple and friendly interface, tailored to the needs of their students, that would encourage their students and parents to try to use the system, a good bank of learning resources specifically targeted to Special Education, and provision of access to the Ultranet for the professional staff (i.e., speech therapists, occupational therapists, music therapists) and teaching assistants (SSOs);
- the secondary teachers saw the Learning Federation resources as better suited to younger students, and wanted access to an electronic library of good quality, educationally sound resources, linked to the curriculum, and appropriate for older students.

Teachers' Perceptions of Different Roles for the Ultranet in Primary, Special Education and Secondary Teaching

Due to the relatively short duration of their experience with the Ultranet, most teachers discussed the things they were *looking forward* to being able to do rather than the things they were currently able to do. There were differences, however, between teachers in primary, Special Education and secondary schools in the specific roles and usefulness they perceived for the Ultranet in terms of their classroom practice and learning opportunities for their students. They stressed the differences between teaching and learning in primary, secondary and Special Education classrooms, and discussed their ideas about the specific strengths of the Ultranet in relation to those differences. For example:

Functions of the Ultranet teachers perceived as particularly useful in different school contexts

Primary Schools	Secondary Schools	Special Education Schools
Curriculum planning that is shared and agreed across the school	Vehicle for delivery of a unified and equitable curriculum, so all students have similar access to quality teaching and resources	Being able to share resources, ideas and materials with other Special Education teachers within the school, in other Special schools, and in mainstream schools. Teachers hope that the information they post will be useful to teachers working with integrated students in mainstream classrooms.
Easy access to VELs and learning materials when planning tasks and activities: 'It's particularly useful for teachers to look into the Ultranet, find what they need, when planning a new unit of work'. "There's a really good buzz about the Learning Federation materials".	Shift away from end of semester reporting towards a constant and ongoing feedback model. Teachers are pleased about the possibility of allowing parents to get a clear indication of student progress, and track whether or not students are handing work in on time and to a satisfactory standard.	Teachers would like to have a facility to upload each student's Individual Learning Plan (ILP), and be able to assess, record and report against that ILP.
Opportunities to share resources, information and ideas with other schools and other teachers. 'One of the best things is building communities of like-minded schools and teachers regardless of geographic area'	Attendance marking to monitor absenteeism and habitual lateness, but preferably linked to a timetabling package.	Potential for the future in terms of cutting down paper work, reducing time spent checking back over resources, and modifying existing resources. Teachers appreciate that everything is stored together, and that comments and feedback can flow through to reporting.
Students having access to high quality resources anywhere and anytime, especially for older primary students		
Maintenance of consistency		

Functions of the Ultranet teachers perceived as particularly useful in different school contexts

Primary Schools

of teaching across grades, through mutual support and sharing resources

Being able to look more closely at grouping students when setting project work, and using a buddy system to support students

Students being able to chat with students at other schools

Secondary Schools

Access to VELs for students to monitor their progress and to gain a clear understanding of what is expected of them.

Supporting communication and collaboration between teachers, minimizing ‘reinvention of the wheel’, duplication of teaching materials.

Teachers expect to be able to decrease the amount of photocopying and build up a resource bank

Ensuring equity in assessment (all students being assessed against similar tasks, and the severity of marking being open to comment)

Helping students to manage their own workload and keep up to date

Building education partnerships between teachers, parents and students. The ability to support communication with the parents is widely welcomed in secondary schools.

Special Education Schools

The Learning Federation resources are attractive for students in Special Education schools.

Summary

Despite the short duration of teachers' experience with the Ultranet in the pilot schools, its impact was evident and particularly so in primary schools. There was less impact in secondary schools, but this could be related to the existence of well-established school intranets in several of the matched secondary schools, and also that some of the distinctive functions of the Ultranet had not yet had time to become obvious to teachers. The pilot Special Education school had experienced initial technical challenges that had slowed teachers' uptake of the technology, but they maintained a high level of interest in the technology. In all pilot schools, teachers and administrative staff had started to explore and use the Ultranet, and enthusiasm and interest were strongly expressed for the initiative.

References

Griffin, P., & Woods, K. (2005). *Evaluation of the pilot implementation of the Student@Centre Ultranet in Victorian Schools: Baseline results*. Assessment Research Centre, The University of Melbourne.

¹ <http://www.education.vic.gov.au/studentsupport/financialassistance.htm>

² <http://www.thelearningfederation.edu.au/tlf2/>

³ <http://www.vcaa.vic.edu.au>

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