LANCASTER UNIVERSITY

VIRTUAL WORKSPACE:

AN INDEPENDENT EVALUATIVE REVIEW

worcestershire countycouncil

Wolverhampton City Council

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FOREWORD BY COUNCILLOR L EYRE CHAIR FOR PFI PROJECT BOARD

The Virtual Workspace was project undertaken by Worcestershire and Wolverhampton Local Authorities supported by the then DfES to explore the potential of ICT to provide a more personalised educational experience for young people. As with many projects there have been many challenges and successes along the way and this report provides a midway review of the impact of the service on young people and their schools within the two authorities.

The report provides some interesting insights into the project and the impact on learners and teachers. It also provides challenges for the future and indicates some areas for future work that will be needed to make the most of the service that has been provided.

Councillor L Eyre

Worcestershire County Council

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A review of this nature relies on a large amount of goodwill and support from those involved as providers and users. The author would like to acknowledge most sincerely the help and co-operation of: the Virtual Workspace project board members, project core team, project managers, the local authority managers and advisers, the management and mentor teams at Nord Anglia, school head teachers, school co-ordinators, school teachers, and the many learners who have generously and honestly provided feedback. Without the support and responses from all concerned, it would not have been possible to put together this report with its findings. The author would like to assure all those who have contributed that any errors or misrepresentations are solely the responsibility of the author.

1. EXECUTIVE SUMMARY AND OVERVIEW OF REVIEW FINDINGS

THE DIMENSIONS OF THE INITIATIVE

Virtual Workspace is an online learning environment, providing facilities for teachers and learners to work with forms of e-learning both in classrooms and, importantly, beyond. The facilities support ways to focus on e-learning and the personalisation of learning: completing, sending and receiving comments about assignments online; seeking guidance about useful web-resources from online mentors; discussing subject topics with peers, for example. The width of use of the online facilities is open to learner and teacher exploration. The provision of facilities is supported by a management group and a commercial provider team.

THE CHALLENGE OF PERSONALISATION

Virtual Workspace has the potential to support aspects of personalisation. This review will indicate that this potential is being achieved in a range of instances. As one learner insightfully said, Virtual Workspace: "Helps teachers to know what help we need". Exactly what was this learner saying? What implications for teachers lie behind this statement? Is there evidence that teachers are finding what help is needed? Are learners gaining positive experiences when they use Virtual Workspace?

THE EVALUATIVE REVIEW

This report offers an independent evaluative review of the Virtual Workspace initiative. Evidence has been gathered during school visits, through interviews with key stakeholders, through questionnaire responses from learners, and from relevant documents. The review has focused on an exploration of outcomes arising through to the end of the 2006 calendar year, of perceptions of those using the system, the involvement of online mentors, resulting approaches to teaching and learning, concerns with aspects of change management, and a consideration of reporting systems in place.

KEY POINTS ARISING

New systems are often concerned with new cultures, of working, as well as of acceptance. Virtual Workspace is no different in this respect from a number of other new systems. It is sufficiently different in a range of respects to challenge existing working practices and cultural acceptances.

Virtual Workspace facilities have been used at this stage far more as a tool to support learning than they have been to support teaching. Learners have used the system facilities more, and their experiences offer indicators of the potential of the system. Examples of effective teacher uses exist, and where teachers are

exploiting facilities, they are finding that their support for learners is enhanced. However, much of the focus of enhancement is concerned with a focus on learning; pedagogy that focuses to greater extents on teaching is enhanced in different respects through use of Virtual Workspace, supporting aspects of information provision, rather than learning through forms of communication.

Not all learners necessarily benefit to the same extents from the use of Virtual Workspace. The system facilities focus on communication aspects, and learners that perceive learning as being concerned with information (rather than communication) may well benefit to lesser extents. There is a perception from some teachers (and learners to a much lesser extent) that the provision of the environment is primarily concerned with resources and content. The evidence suggests, however, that those benefiting most are gaining through the nature and focus of social interaction, rather than gaining through forms of direct information transfer.

The socialisation of learning is an aspect that is supported through a number of the Virtual Workspace facilities. Learning through discussion, through social engagement, and through an internal 'verbalisation' is likely to be supported by the facilities that are available. However, it is important not to conclude that those who talk most in class are those that will benefit most; indeed, those who do not talk in class may well be those who 'more secretly' desire forms of discussion and communication where their 'voices can be heard' rather than 'challenged by physical presence'. These learners are likely to be those within classrooms that teachers might regard as being 'quiet'.

The approaches and impacts on 'quiet' learners has been an important aspect highlighted in this review. Many teachers during interviews suggested that those learners who are quiet in classrooms are not quiet in community areas within Virtual Workspace. Evidence from learners indicates that Virtual Workspace is indeed supporting learning, and evidence indicates that 'quiet' learners are benefiting in some respects to greater extents than other learners.

Supporting 'quiet' learners is not, as teachers report, easy. Virtual Workspace is enhancing opportunities and the learning potential for these learners. It is difficult to see how schools might support these learners otherwise. If schools have 'quiet' learners in their classrooms, then the potential that Virtual Workspace offers in this respect has a place, and its appropriate use should be considered.

Many positive impacts arising from uses of Virtual Workspace are reported by learners. Developing wider uses of the facilities, therefore, must involve a capturing of these learner experiences, and the involvement of mechanisms to make them more widely known to other learners and, particularly, to teachers. Some schools have considered how they might achieve this need best. Without an appropriate 'cycle of

encouragement' of this form, and with no mechanism to capture benefits, and to share these with others, implementation moves to its highest level, and then, if anything, declines, since encouragement is neither seen nor reported.

There is a potentially strong link to aspects of 'Student Voice' that relate to issues of both wider awareness and encouragement, and collaborative learning. There are increasing opportunities being taken by some schools to 'listen' to learners on different topics. Virtual Workspace provides opportunities for listening, as well as reasons for listening.

Forms of participative and collaborative learning that are emerging are welcomed by learners (and some teachers). There is a need, however, to make known more widely the examples of effective practices that are emerging, and the examples of benefits that are arising. The technology and facilities now available are reported by schools to be usable, and a re-implementation phase has been considered and instigated in a number of schools.

Although levels of interaction between learners and mentors have been comparatively low by proportion to the use of 'Communities', there are reports of individually significant and important interactions in this respect. It is recognised by a range of learners (as by some teachers) that mentors have provided positive support not just with subject and topic endeavours, but also with social or emotional issues. Such interactions have been carefully handled (to preserve confidentiality, but with school personnel appropriately informed). There are no indications of negative concern or outcomes arising where mentors have supported in these ways. Some teachers report that mentors have supported at social and emotional levels in ways that would have been difficult through face-to-face situations. It is difficult to estimate what the cost of not being able to support in this way might be, but positive engagement for learners even in holiday periods is clearly an important aspect that needs to have appropriate value ascribed in terms of this provision.

Managing an environment in which learners feel free to collaborate and communicate requires both time and effort. Mentors (and peer mentors) provide this facility in Virtual Workspace; they monitor interactions, report unacceptable behaviours, and take out unwanted or inappropriate interactions. Learner 'chat' in an unmonitored, open environment is open to abuses; 'chat' in Virtual Workspace is monitored to ensure acceptable openness.

Implementing Virtual Workspace has not been easy for some schools. Although the technology itself has become easier to use since the early days of the initiative, there are certain factors that appear to determine levels of use. This technology is a difficult technology to implement if teachers do not have

easy access to ICT, and if schools are implementing ICT at early stages of development. Access to ICT, confidence with ICT uses, and rapid technical support when problems arise, are factors that need to be in place if the technology is to be rapidly implemented.

USES OF VIRTUAL WORKSPACE

Virtual Workspace provides a mentoring service, a bank of learning materials, a range of communication channels (including messaging, discussion forums and chat rooms), online assignment management, online communities, an incentive scheme for learners, and a continuing professional development programme for teachers.

Statistical data generated by the system indicate that the total number of hours online by learners varies widely from school to school, as does the total number of hours online by teachers. The total numbers of hours online by learners and teachers relates roughly to an average teacher:learner ratio of 1:24. Although the total numbers of hours by learners online relates proportionately in many cases to the total number of hours online by teachers, this is not always the case. Some of these instances can be explained both by the ratio of teachers to learners in those schools, and the abilities of learners in some schools to easily access the systems, but this explanation does not hold in all instances. It is clear that learners in some schools are becoming involved in using the system without parallel involvement from teachers in their own schools.

Numbers of interactions through communities is higher than interaction levels for other features, but numbers of learner interactions do not always relate proportionately to the number of teacher interactions. The number of community contributions are about one tenth of the number of community access interactions, while resource access levels are about one third of the number of community contributions. The levels of usage of mentors in each school do not follow a general proportional pattern related to total hours of use by either learners or teachers.

IMPACTS OF VIRTUAL WORKSPACE

An online questionnaire made accessible through Virtual Workspace was completed by 1,486 learners (some 6.8% of the total learner population that are registered to use the system). This sample was found to be representative of the entire learner population in a number of respects, except that there were more girls represented in the sample (953 in number) than boys (533 in number).

Most boys (more than 60% of respondents) reported that they felt the system was safe and secure, they would like to see more use of the system, they liked the points system, the system allowed them to share ideas with other learners, they thought discussing points with other learners allowed them to learn better,

and they thought the system helped them with their school work. Other reports by fewer numbers of boys were also important, however. Potentially important levels of outcome were arising in cases where 2 in 5 boys indicated that they could maintain contact with work when absent from school, where 1 in 3 boys indicated that mentors helped them personally, and where 1 in 5 boys indicated that they had a better understanding of their teacher when using the system, for example.

Most girls (more than 60%) reported that they felt the system was safe and secure, they liked the points system, they would like to see more use of Virtual Workspace, it allowed them to share ideas with other learners, they thought discussing points with other learners allowed them to learn better, and it allowed them to remain in contact with other learners to support their work. Lower levels of responses were also indicating important levels of benefits.

When responses from boys and girls were compared, boys responses were higher (by at least 5%) in reporting having been given sufficient training and encouragement to use the system, Virtual Workspace having helped with school work, the Communities area having been used most, Virtual Workspace facilities having helped with discussion of work outside the classroom, Virtual Workspace facilities having helped to understand the teacher more, and online mentors having been contacted.

Girls' responses were higher (by at least 5%) in terms of teachers suggesting use of other online systems such as a school intranet, and their regarding themselves as being a 'quiet' person in terms of discussing ideas in class. It appeared that there were some differences, perhaps in terms of experiences or perhaps in approaches, between boys and girls. There was some evidence that girls might need to be supported more in the future in terms of training and encouragement to use the system, including awareness of the access to online mentors.

When self-reported 'shy' boys' and 'shy' girls' responses were analysed, most 'quiet' boys and girls (more than 60%) reported that they would like to see more use of Virtual Workspace, they felt the system was safe and secure, they liked the points system, Virtual Workspace had helped them with their school work, Virtual Workspace had allowed them to share ideas with other learners, they thought discussing points with other learners allowed them to learn better, Virtual Workspace had helped them with coursework or assignments, and Virtual Workspace had allowed them to maintain contact with other learners to support their work.

By comparing the responses of 'quiet' boys with all boys, the percentage of responses from 'quiet' boys was higher (by at least 8%) in their reports about being more involved in learning than might have been the case otherwise (16% difference), discussion of work outside the classroom (14% difference), allowing ideas to be expressed when this might not happen in class (13% difference), helping to understand

teachers more (9% difference), helping with coursework or assignments (9% difference), mentors helping personally (9% difference), and wanting to see more use of Virtual Workspace (8% difference).

By comparing the responses of 'quiet' girls with all girls, the percentage of responses from 'quiet' girls was higher (by at least 8%) in their reports about allowing ideas to be expressed when this might not happen in class (9% difference), and being more involved in learning than might have been the case otherwise (8% difference).

The system, according to learner feedback (and supported by qualitative evidence from a number of teachers), is having an impact particularly on 'quiet' learners. There appears to be a particular emphasis of certain impacts on 'quiet' boys (even though there were fewer of these that self-reported as being 'quiet'), but the impacts on both groups were potentially important. It should also be noted that 'quiet' is likely to encompass at least three different groups of learners: those who are naturally reticent in terms of offering their ideas in classrooms; those who find difficulty for emotional or social reasons with engaging in a classroom learning environment; and those who do not want to be seen by others as being engaged or interested in the topic or lesson.

Learners are, according to a range of teachers and their own reports, benefiting from uses of Virtual Workspace. Although not all learners will necessarily benefit, and not necessarily benefit in the same ways, those who do benefit may not be able to gain support easily (or economically) through any other existing support mechanisms.

USES BY TEACHERS AND LEARNERS

Teachers have used the Virtual Workspace facilities to support teaching and learning in widely different ways:

- Providing lesson notes prior to lessons, to enhance discussion in lessons.
- Setting up discussion forums in lessons.
- Asking learners to research in lessons.
- Providing access to lesson notes and resources after lessons, to support those present and absent.
- Asking questions about topics after lessons.
- Answering learner queries on lesson and homework tasks.
- Handling coursework and assignments online.
- Providing revision notes and questions.
- Reviewing and reflecting on answers to examination questions.
- Setting up a forum for discussion on a topic after lessons.
- Asking for responses through a poll.

These different approaches involve different teacher practices, different pedagogies, and lead to potentially different outcomes. Schools have not widely provided the means to support staff or learner use of the facilities in an ongoing way that build upon starting practices and develop further uses. This means that different practices can arise in isolated instances, sometimes instigated by learners alone. Schools do not generally closely monitor the emergence of different practices and pedagogies as they become established over a period of time, and different outcomes arise. Indeed, few schools have reported that they know the levels or detailed outcomes of use by learners within their own institutions.

Knowing about learner outcomes is of importance. For example, learners do not necessarily want Virtual Workspace to be used more extensively because they recognise that homework levels and demands might increase, as homework can be tracked and monitored more effectively. On the other hand, learners find that email messages in textual form enable them to understand, remember and revisit key needs more easily than they can when a response to a query is in verbal form.

Benefits arising from individual teacher approaches are potentially of value to other teachers. For example, teachers who have limited time to cover courses are finding that Virtual Workspace provides them with additional time to support learners. Although some teachers are concerned about the time commitments that might be involved in messaging learners outside school, some teachers who are already responding to learner emails that ask for support find this less intrusive than trying to handle queries during lunch times and other school times.

A few teachers report that email support and online assignment access has shifted possible examination course fails to pass levels (a B level pass was reported in one case). Many learners report that they can view work readily using the system, that teacher responses help them to focus on key aspects, and that they get better marks and grades as a consequence. Removing email contact has been reported by learners as a withdrawal of a major aspect of support on which they have come to rely. When learners use messaging, however, there is currently no facility for teachers to keep track of comments or submitted drafts.

There are cases where parents are sending emails to teachers at the weekend or during holiday periods. The support environment is undoubtedly shifting as a result of the use of Virtual Workspace, and learners recognise the additional benefits they have when they can contact online mentors outside school time, and in holiday periods for both subject and personal reasons. There are examples of instances where online mentors have supported learners positively and effectively at a personal level; there are no known instances where negative outcomes have arisen in this respect.

SCHOOL DEVELOPMENT OF PRACTICE

Findings indicate that stages of development reached in schools with regard to implementation of Virtual Workspace are not uniform. Many schools now feel that Virtual Workspace is more usable than it was eighteen months ago, (such as the means to obtain new passwords when these are lost), and many schools have or want to re-launch use at this time.

Some schools have found that Virtual Workspace has been regarded as a competitive technology, rather than as a complementary technology. Where this is the case, some teachers did (and do) not recognise the additional value that Virtual Workspace can offer. In making decisions about future technology directions, schools should very carefully consider the implications of asking learners to work in an environment that is not as secure and safe as Virtual Workspace, and that does not offer the forms of subject and personal support outside school times through contact with online mentors who have been carefully selected and trained to work across this environment. In terms of communication technologies, the system offers a secure and safe environment within which learners can work, which is not provided in the same way by other external forms of provision.

There are continuing professional development needs for teachers, and these forms of provision need to be tailored much more in the future to address issues that are arising in classrooms. For example, teachers who report that messaging is a distraction for learners in lessons may not be addressing other forms of distraction in their classrooms. Training to support those teachers with the 'messaging issue', could also support them in addressing other distractions that they cannot 'blame' in the same way. Similarly, if learners are to be provided with lesson resources prior to, in, and beyond lessons, then teachers are likely to need to plan more in advance to make resources accessible. This may well be supported positively through appropriate training.

Teacher training and development is likely to be supported by offering examples of effective practice, analysed to consider objectives, approaches, and intended and actual outcomes. Some examples of teacher uses gathered during this review could well provide useful and different case study exemplars. Similarly, some learner uses could provide useful user exemplars.

Some schools still feel that there is a general lack of resource within subject or topic areas. Different ways to enhance resource availability and access should be considered through the initiative as a matter of urgency, to support both learners and teachers.

More learners now have home ICT access, but not all have access to software such as MS Word and MS Excel at home. Ways to support learners in these situations can be found, but they need to be initially identified if their needs are to be addressed.

Overall, this is an initiative involving cultural shifts for many users. In that respect the current levels of involvement and outcome might well have been anticipated. Now that a range of past issues has been addressed, the desire to move forward can be considered as a positive indicator. Schools and teachers have the potential to implement and use a system to enhance learning positively for groups of learners that have traditionally been difficult to support; Virtual Workspace offers important opportunities for many learners.

2. APPROACHES TO THE REVIEW AND STRUCTURE OF THE REPORT

AIMS OF THE EVALUATIVE REVIEW

The review of the Virtual Workspace project aimed to gather evidence to provide illuminative perspectives concerned with:

- Perspectives of outcomes from a range of head teachers, ICT co-ordinators, teachers, mentors and learners.
- Identification of any unique features of the Virtual Workspace learning environment (including looking at the reasons for the perceived success of the 'Communities' area).
- The involvement and impact of mentors.
- How use of the Virtual Workspace fits with particular styles or approaches to learning (including forms of expression, and expression of verbal outcomes through a text medium).
- Evolution of pedagogies to complement online and personalised learning.
- Aspects of change management (including considering the impact of perceptions of pedagogical approach to any perceived fit with the National Curriculum and subject needs).
- How schools and the project gain evidence of outcomes at particular points in time through available reports.
- Issues that relate to ensuring effective use and value for money.

WORKING METHODS

The suggested methods for data gathering in an initial review period were:

- Visits to 10 schools, to talk to head teachers, senior managers, ICT co-ordinators, teachers, and learners.
- Discussion and feedback with key personnel at Nord Anglia, including mentors.
- Discussions with key project personnel by email and telephone.
- Questionnaires, developed following school visits and mentor interviews, for completion by a sample of learners across all schools.

STRUCTURE OF THE REPORT

This report details the findings of an independent evaluative review of the Virtual Workspace. Virtual Workspace is an e-mentoring pathfinder initiative, developed through a Partnership Funding Initiative (PFI) project run across 58 schools and educational institutions with secondary aged learners in Worcestershire and Wolverhampton Local Authorities (LAs). All learners aged 14 to 19 years in those schools and institutions involved have had rights of access to the system.

The details contained within this report provide an overview of the review concluded in March 2007. The elements of the report that follow describe the review tasks, review approaches and review outcomes within three discrete main sections:

- Section 3 outlines the initiative, the wider context, and the facilities within Virtual Workspace.
- Section 4 indicates learner views about uses and outcomes, gathered directly from learners through online questionnaires.
- Section 5 indicates details of evidence gathered during school visits, specifically from interviews with head teachers, senior managers, ICT co-ordinators, teachers and learners, and perspectives arising from this evidence.

3. INTRODUCTION AND BACKGROUND TO VIRTUAL WORKSPACE

THE VIRTUAL WORKSPACE INITIATIVE

The Virtual Workspace initiative is described on the website as: "The Virtual-Workspace is a dynamic online learning environment designed to engage learners aged 14 to 19 (Years 10 to 13), in and out of school/college. The aim is to raise attainment at all levels through helping them to become confident, independent and motivated learners". The initiative is described as an e-learning pathfinder initiative, developed for the two LAs by Nord Anglia eLearning Ltd.

Nord Anglia is a service provider to the two LAs. The service from Nord Anglia provides training, mentoring, content, and system development. There is a point of contact between Nord Anglia and the LAs through a project manager, and there are monthly liaison meetings of stakeholders. Nord Anglia work to stated Key Performance Indicators (KPIs), which refer to usability of the system, and attainment arising through its use. Statistics to identify KPI outcomes are gathered monthly and annually.

There are some 22,000 learners currently registered to use virtual workspace across the two LAs. The majority of institutions within both LAs with 14 to 19 year old learners are participating in the initiative (32 in Worcestershire and 25 in Wolverhampton LAs). Exploring learner population statistics, it is clear that most 14 to 19 year old learners are involved in this initiative. According to the 2007 census (Wolverhampton City Council, 2007), there were 8,740 learners aged 14 to 19 years on roll in schools. Of these, 2,997 were 14 to 15 years of age, 3,005 were 15 to 16 years of age, 1,513 were 16 to 17 years of age, 1,071 were 17 to 18 years of age, and 154 were 18 to 19 years of age. In Wolverhampton LA, 100% of the potential learner population are registered. According to the autumn census of 2006 (Worcestershire County Council, 2006), there were 17,697 learners aged 14 to 19 years on roll in schools. Of these, 6,557 were 14 to 15 years of age, 6,552 were 15 to 16 years of age, 2,593 were 16 to 17 years of age, 1,867 were 17 to 18 years of age, and 128 were 18 to 19 years of age. In Worcestershire LA, some 75% of the potential learner population are registered. Total student populations by age in each LA are shown in Figure 1 following, and in Table 11 in Appendix 2.

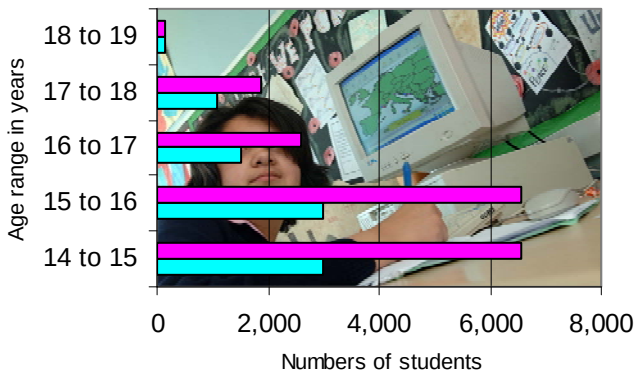

Figure 1: Student populations on roll in schools by age range (Sources: Wolverhampton City Council, 2007 census; Worcestershire County Council, 2006 census)

The website indicates that there are 2,000 educators from across 58 different schools involved in using Virtual Workspace. There are a variety of feedback statements on the site from stakeholders (LA key personnel, teachers, online mentors, peer mentors, and learners), providing ideas of how the facilities have been used, and outcomes that have been identified.

VIRTUAL WORKSPACE AND FUTURE LEARNING NEEDS

Virtual Workspace is an initiative that was intended by those who conceived and implemented it to be concerned with both e-learning and the personalisation of learning. Nationally, there is a key need for LAs and schools to support educational developments that seek to offer e-learning and learning personalisation facilities for learners. In 2005, in a key DfES report on e-learning, the then Secretary of State for Education (Ruth Kelly) stated that: "Technology is the key to personalised learning. And imaginative use of ICT should help engage more learners in the excitement of learning". The report indicated that systems nationally should be introduced that would: "Transform teaching, learning and help improve outcomes for children and young people, through shared ideas, more exciting lessons and online help for professionals. Engage 'hard to reach' learners, with special needs support, more motivating ways of learning, and more choice about how and where to learn". The report offered examples of how some schools were achieving outcomes with existing facilities, and indicated intentions for the creation of wider systems, offering learners:

- "More ways to learn: Along with listening and reading, you will be spending more time learning in groups, working with other learners, …
- "More flexible study: You will have more choice about where, when and how you study, making it easier for you to create your own mix between studying in a place with other learners, learning at work, learning at home, and learning online.

- "A personal online learning space: Where you can store electronically everything related to your learning and achievements, course resources, assignments, research, and where you can plan your next steps, and build links for professional advice and support".

In their report on approaches to the personalisation of learning, Green et al. (2005) highlight Virtual Workspace as one example of a learning environment that supports aspects of personalised learning. Within the same report, the authors present a charter recommending features of appropriate learning environments to learners:

- "To have access to different teaching and learning approaches and resources that meet my needs.
- "To have access to people who are able to extend and develop my understanding in my chosen areas.
- "To have access to learning environments and resources that enable me to develop my understanding and experience in authentic and appropriate contexts."

Shifting roles for teaching staff and support staff with regard to learning environments need to be taken into consideration. Teaching staff will not necessarily accept and know how to use learning environments without appropriate professional development opportunity and support. The DfES report (2005) indicated concern that teaching staff needed to be: "sufficiently confident, they must have the right skills and they must have access to the right technology, if they are to use ICT to transform front-line services". The provision of tutors to support such systems was indicated also: "a system where learners are well supported in all aspects of their education, through a combination of teachers and tutors, effective technology and well-equipped classrooms and libraries". The report also indicated the need for leaders to be: "free to decide which equipment they want for their institution, as well as where to buy it, and which managed services to employ. Because they are accountable for those decisions, they need to be sure they are getting the best value for their investment". However, it is clearly important that choice is considered not just in financial terms, but also in terms of security and safety. As the Green Paper entitled Every Child Matters (2003) states: "The five outcomes which mattered most to children and young people were: being healthy …, staying safe …, enjoying and achieving …, making a positive contribution …, economic well-being …".

The review of Virtual Workspace reported in this document explores the nature and outcomes of uses of Virtual Workspace facilities in terms of these national concerns. The review will indicate that many of the facilities described in the DfES report (2005) have been provided through Virtual Workspace, and that a range of learners (and teachers) are finding ways in which they are gaining effectively in terms of enhanced learning (and teaching) potential. As Condie et al. (2007) state: "The nature of the learning experience may have changed, but of greater interest is the extent to which the use of ICT has influenced a range of learner outcomes and what aspects of the ICT-augmented experience appear to have made a difference".

VIRTUAL WORKSPACE IN THE CONTEXT OF WIDER E-MENTORING DEVELOPMENTS

Some of the key features of Virtual Workspace are concerned with ways to engage and support social and collaborative aspects of learning. Downes (2007) argues that there has been a recent focus on these aspects rather than technological aspects: "Beginning in 2005 and continuing through 2006, discussion at the forefront of the educational technology community centred not around instructional design and the learning management system, but rather on approaches that dramatically shift the centre of e-learning; things like social networking applications …". He goes on to argue that: "Learning, in other words, occurs in communities, where the practice of learning is the participation in the community. A learning activity is, in essence, a conversation undertaken between the learner and other members of the community". Virtual Workspace has been set up as a system to support social networking across communities. It has been developed as a school-focused learning environment, and to date much of the evidence of benefit and outcomes of such environments have been identified from uses within the higher education (HE) and further education (FE) sectors. As Condie et al. (2007) state: "Specific benefits observed in the HE/FE sector … included improved motivation and engagement, flexibility of access, learning gains in ICT, in writing, understanding and presentation, enhanced communication and interaction, plus the adoption of new approaches to learning". Since 2005, research findings have pointed to learning benefits arising where learning environments have been supported in some schools. Condie et al. (2007) state that Becta found that: "… learners benefited from them in that they could extend their learning experiences beyond the confines of the classroom, submit and track electronic activities for assessment and manage aspects of their personalised learning". Virtual Workspace is a leading example of a range of different forms of learning environment being developed and implemented in schools. As Becta (2006) state: "The development of a technology infrastructure to support personalised learning beyond the institution, though at relatively early stages, is developing rapidly in certain areas. For example, there is increasing use of intranets, home-school email links, managed and virtual learning environments, handheld devices and podcasting. These represent indicators of progress towards access and availability of learning opportunities beyond the institution". This developing range of learning platform and e-mentoring systems has not been limited to those in England; indeed, there is a strong history of such developments in the United States (US), reported through the research review of Single and Single (2005), for example. Their review indicated that e-mentoring: "facilitates the benefits of mentoring opportunities". They identified three areas of benefit for users: provision of information; psychosocial interactions and outcomes; and instrumental outcomes. They indicated the importance of certain aspects that are provided through e-mentoring facilities, particularly impartiality and links across institutions, but also the influences of training and coaching.

Levels and qualities of interactions arising when using e-mentoring facilities have been debated in the literature. For example, Harrington (1999) argued that: "Email is frequently challenged as being incapable of supporting as deep a social contact as face-to-face communication. And it may well be that email needs to be used in combination with other media for best results. However, it should also be noted that there is a wealth of evidence of strong interpersonal relationships being built through email. For example, anecdotal and television documentary evidence, along with some interesting cases looking at the use of email to build intimate relationships, all of which demonstrate that social penetration processes (getting to know one's communication partners more closely, leading to relationship formation) occur with sustained email interactions as they do in face-to-face interactions (Van Gelder 1991; Walther & Burgoon 1992)." Harrington (1999) concludes further that: "those who argue about the 'leanness' of email are focusing not on the variety of its possibilities but on the rather limited use of addressing routine work-based tasks". In terms of the challenges posed when introducing e-mentoring, she draws attention to the need to consider:

- "Many people, possibly influenced by media richness theory, see email as a poor choice for complex exchanges.
- "E-mentoring has to be introduced thoughtfully and within an appropriate context.
- "It may take time to introduce e-mentoring.
- "Email is seen as a medium low in richness because it is text-based.
- "Concerns about the confidentiality of email."

In terms of how e-mentoring (referred to as 'telementoring' in the US) can be set up effectively, Nellen (1999) states that: "Telementoring can take on many configurations, from one telementor to one student or one telementor to an entire class. In my classroom, I use both variations. In the one-on-one relationships, I find that the student becomes more involved and engaged with the results being quite remarkable and rewarding for the student. Students speak proudly of their telementor and come to rely on that outside voice. … Additionally, one of the best by-products has been students communicating with their parents via electronic mail. Parents are able to examine and study the work of their children, becoming engaged in the education of their children". As Gan and Zhu (2007) state: "The greatest challenge to education in a knowledge society is not how to effectively help learners to acquire a defined set of knowledge and skills, but in helping them to learn how to manage, work creatively with ideas and to contribute to the creation of new knowledge (Law and Wong, 2003)". They go further to say that: "Education and practice need to undergo a revolution to become 'idea-centered' from 'activity-centered', and to become collaborative learning from independent learning, so that learners can embark on a knowledge building trajectory from a young age to prepare for the challenge (Scardamalia, 2002). Thus it is essential to construct and cultivate learning environments such as learning communities, organizations, campuses, etc., for learners to develop these abilities".

From the perspective of social interactions concerned with learning, there are at least three aspects of concern within the literature: the ways in which e-mentoring might stimulate forms of 'inner discussion or thought' (as discussed by Vygotsky, 1986); the ways in which group or collaborative structure or endeavour might lead to the development of 'communities of practice' (as discussed by Lave and Wenger, 1991); and the ways that text might relate to verbal or discussive forms of interaction. The review of Virtual Workspace reported in this document explores outcomes in this wider social and networking context. It will be seen that the findings point more specifically to instances where benefits arise, as well as the nature of the interactions where those exist.

FACILITIES AND FUNCTIONALITY OFFERED BY VIRTUAL WORKSPACE

The key features of Virtual Workspace that are listed on the website are:

- "A mentoring service, which includes live communication with human mentors from 8am to 8pm on weekdays.
- "A bank of over 4,500 interactive learning materials supporting the 14-19 curriculum.
- "A range of communication channels, including messaging, discussion forums and chat rooms.
- "Online assignment management and storage of work and interest materials.
- "Online Communities, encouraging collaboration between learners and teachers across schools/colleges.
- "An incentive scheme for learners, offering real rewards.
- "A Continuing Professional Development (CPD) programme for teachers and support staff to help them integrate the Virtual-Workspace effectively into their teaching".

Key elements of the system, recognised by their high levels of usage, are the 20 top level communities. Mentors run these communities, as well as running a number of other communities that sit below them. In total, there are about 750,000 transactions per month through the system, and upwards of 4,000 transactions with mentors (on a one-to-one basis with learners).

LEARNER INVOLVEMENT

It is felt there is a sense of ownership when learners use the system; learners do not want to be 'thrown off' when they leave school. There is an active population of some 8000 learners per month, and learner responses tend to be high (1200 learners responded to a questionnaire, for example).

Nord Anglia personnel do not feel that schools necessarily know the impact of the initiative, especially as learners use it more than teachers recognise. There has been little analysis of teacher behaviour resulting from involvement, but outcomes from a 6 week training course indicated a 7 times greater likelihood of engaging in a teacher community.

HANDLING DEVELOPMENTS

Developments are identified through a core team (representatives of the LAs, the project manager, and the development manager from Nord Anglia). To date a one year development plan has been in place, and Nord Anglia would like this to become a 3 year development plan. There are pressures from Becta, and Building Schools for the Future (BSF) guidelines that affect development in terms of compliance. At this time, there are 4 years of development (product development) remaining.

TRAINING

The trainer work is changing; there is now a need to work at departmental level. To date, a single person from a school has been trained.

Nord Anglia offer a 6 week training course, a beginners' course, which can lead to an intermediate course (focusing on non-technical skills), using MS PowerPoint to make materials, using Content Creator, using Virtual Workspace in the library, and using Virtual Workspace for DIDA. There has not been a large take-up of these courses. However, schools do not offer increments or support to go on the courses, and they are not included in teacher professional review. Accreditation has helped somewhat.
Other possibilities are concerned with more one-off training events. These might involve going into a school for a training day or a one-off session. Nord Anglia is reactive with regard to these one-off events, and discusses them with individual staff. Lists of such events are advertised.

How to support schools with additional training where needed is clearly a key issue. LAs do not provide reviews of training needs. However, each school supports the development through its involvement in a User Reference Group (URG). Each school nominates a URG teacher (not the head teacher) and 2 learners. Active URGs tend to ask for support, and LA representatives attend those meetings. It is felt that Nord Anglia should drive the training support issue to a greater extent, perhaps looking to have a training need picture of each school. Nord Anglia does not always know background school information, but there is a needs analysis undertaken for a 6 week course. Communication with schools for one-off sessions is not clear, meaning that sometimes 22 teachers attend when only 6 to 10 teachers are expected.

MENTORS

There are 9 mentors in total. They work from Monday to Friday, in shifts, and between the hours of midday and 4pm all mentors are accessible. Mentor access is provided for learners between 8am and 8pm, so the total accessible time available to learners is 140 hours per week. Mentors provide a live service, and

they respond to queries, which could be curriculum questions or pastoral issues. Every transaction is recorded. Mentors are taking a 'more proactive' stance increasingly in the communities, and may set competitions for learners. Mentors focus activity and are reactive to learner need. They also 'tidy up' the communities, by taking graffiti out, for example. They operate an incentive scheme (which is reported as being 'extremely popular') and can take sanctions (they can remove rights for learner access, for example, which is set down in clear policy). Mentors train peer mentors (and there are over 100 of these currently). The mentor team is a novel development. There was no such team previously, which provided challenges in terms of recruitment Peer mentoring was started because of the idea and suggestion of one learner. Mentors talk to specific learners, but also see discussions that other mentors are involved in. Confidentiality is a key concern for mentors and learners. Some schools (but only one or two) have indicated their difficulty in accepting the access that learners have to mentors, when discussion is not 'controlled' or 'overseen' by the school. However, it is clear that taking a stance of forbidding access could be a dangerous decision to take if the consequence of this were to drive learners to use unsafe, unsecured access. Having mentor access during holiday times also provides a means for learners to make contact within a safe and secure environment.

Discussions can focus not just on subject or topic needs, but also on personal issues. Generally, if mentors gain insight into a personal learner issue, then they can ask the learner if they wish the school to be contacted (or might suggest it). Mentors feel confidentiality needs to be retained, but that at the same time, important details for the school to handle would be disclosed to the school. Mentors might encourage learners to talk to a school counsellor, for example.

Mentors do receive feedback from learners about the value of the information they have received, and how they feel they have been supported. One mentor feels that quiet and shy learners 'get a lot out of it'. It is felt that they can raise questions and opinions. Learners openly say they are shy and that they would not say anything in class. It is also felt to support learners who want to do well, but who have got into a 'behaviour' stereotype (they are excluded, or are out of class, for example). A learner in school can be 'someone else on line'. It is felt that the very physically disabled can interact more (disabilities are not known when someone interacts online).

According to the mentors, incentives provide a big motivator for a lot of learners. However, to gain from these incentives, teachers need to set assignments so that they can gain points. There is concern that teachers do not point learners to assignments or resources, so points do not accumulate readily.

AN ONLINE MENTORING SESSION

A mentoring session observed online started with a girl asking a question about abortion. The mentor tried to ascertain why the girl was making the query; the mentor needed to be guarded but helpful. The mentor identified some useful websites, and the online call lasted about 30 minutes. The girl said she found the websites useful (which was helpful, and mentors do not always get this level of feedback). When involved in an interaction with a learner, the mentor can see the learner name and year and can access the school name (but this is not automatically shown). An interaction lasting 30 minutes is said to be on the high end of the average. Mentors say they receive lots of shorter calls (perhaps of a technical nature, or learners just exploring). Statistics show the number of calls, but not the range or distribution.

When mentors identify websites, these are added to the mentor favourites. However, new questions arise, and other websites need often to be newly searched and found. Mentors do not share sites with each other, but favourites are sent on to a content team, to provide a number of links on the site for learner access.

Some learners seem to spend a great deal of time talking to mentors online. One girl seems to stay online for 2 hours a day, but it is not sure how this can be achieved. This girl thanked the mentors for helping her get back to school (after she had been away ill). The girl had been interacting with the mentors for 2 years, and the mentors felt that she contacted them for reassurance largely.

Mentors offer training for peer mentors, who help promote and moderate the site. Peer mentors can run their own communities. One school that has the highest level of active learner mentor access has no teacher access. Learners who may never meet can effectively work together on projects. There are clearly examples of specific learner mentoring outcomes that are likely to be important and to provide exemplars of practice, and how these might be made known to others is an issue that should be considered. Mentors sometimes encounter, rarely, persistent bad behaviour. Learners tend to self-monitor and regulate the use of the site. Year 11 tend to monitor and regulate year 10 behaviour when they come on initially.

PEER MENTORS

The website states that: "Peer Mentors are learners from schools and colleges signed up to the Virtual Workspace. They have willingly committed a little of their time to guide and steer interactions and activities". Peer mentors:

- Monitor discussion forums and chat rooms.
- Initiate discussions in the community forums and chat rooms and encourage learners to participate.

- Establish ‘closed’ communities for: “groups of learners who want to get together to share and acquire knowledge on a particular interest, subject or issue”.
- Report on unacceptable behaviour.
- Develop skills by working with a designated Learning Mentor.
- Liaise with other peer mentors through a ‘private’ community.

Learners who want to become peer mentors have to complete a two stage training programme:

- Stage 1 is an initial training assignment that provides: “an overview of what peer mentoring involves and information about key aspects of the Virtual Workspace”. Learners need to complete this.
- Stage 2 involves being allocated a Virtual Workspace Learning Mentor: “who provides one-to-one support when needed, and access to the Peer Mentors' community”.

CHAT EVENTS

The website describes the three stages of a chat event:

- Before a chat event itself, a chat room is set up, details are advertised on the homepage of a learner's workspace two weeks in advance, any special guest is given a temporary login for the duration of the event, learners who might not have access to the chat room are able to submit questions prior to the event, these are posted in the chat room during the 'live' chat, and pre-event questions are sent to any special guest to help them prepare.
- During a chat event itself, learners entering read the discussion and take part by posting questions and comments, a member of the virtual workspace staff approves contributions to prevent inappropriate or repeated questions and to regulate the pace so that any guest has enough time to respond before being given any further question.
- After an event, a transcript is posted in a community forum, allowing all members of the community to read the discussion, and learners who made positive contributions are awarded points, as part of the incentive scheme.

COMMUNITIES

The website states that: “An ‘Online Community’ contains tools for collaboration that help members to foster relationships, learn together, create new knowledge, and work together remotely (in and out of school hours) “. In Virtual-Workspace, learners and teachers can access the ‘Communities’ zone, where communities of interest can be joined or created. A community might contain:

- “A shared workspace - where relevant materials and resources can be uploaded for members of the community to access.
- “A shared calendar - on which dates and events relevant to the community can be saved for members to access.
- “A discussion forum - where community members can start and take part in topical discussions relevant to the community.

- "An opinion poll - which can be set by the owner to get instant feedback on their community's views.
- "An RSS news feed - which helps community members to keep up to date with news and information relevant to their community".

The website describes three types of Communities, focusing on:

- A subject or topic of interest.
- A learning group, so that it can continue to work beyond the classroom.
- A project, to support its management, activity or completion.

As the website says: "The Communities zone has become, by far, the most popular area in the Virtual Workspace. Our community-building tools are enriching the learning experience by enabling focused interaction between learners and teachers on an ongoing basis - in and out of school hours. In the month of November 2005 alone, there were 198,428 accesses to the Communities zone - that's around 6,614 accesses per day".

RESOURCES

There is a 'Digital Repository of learning materials' in Virtual Workspace. Digital learning materials have been sourced from a number of providers, intended to support both academic and non-academic subject needs. All materials are indexed and tagged. The tagging is described as: "a combination of the Curriculum Online (COL) and National Learning Network (NLN) meta tagging frameworks". There is additional tagging to indicate learning styles (based on the VARK model). Learners can complete a 'Learning Styles Questionnaire', which identifies potential preferences for materials of a visual, aural, reading and writing, kinaesthetic, or combined nature.

Teachers can save relevant learning materials of their choice within the communities' areas, and make these available to learners within their classes. Teachers can also attach learning materials to assignments and messages that are sent to learners.

The website describes the need for the Virtual Workspace to implement appropriate forms of quality control with regard to resources. The mechanisms used are not specified, but some of the features considered are stated: "academic and pedagogic level, ease of use, appropriateness of technology, engagement, and conformance with international educational technology standards".

LEARNER INCENTIVES

When learners use the Virtual Workspace for learning or leisure purposes, they can earn points. These points can be spent on rewards that are listed in the 'Rewards Catalogue'. The can also: " bid for them at lower prices in the Virtual Workspace auctions". As the website says: "The way in which points are earned can be altered to encourage learners to access particular resources or engage with certain areas or events in their workspace".

There are three elements to the incentive scheme:

Rewards Catalogue - learners can use points to order rewards online from the Rewards Catalogue, which includes: "gift vouchers, CDs, DVDs, books, sporting accessories, stationery, gadgets and much, much more". Special promotions are featured at certain times. If a learner does not have enough points to buy what they want, they can put it on a 'wish list'.

Auctions - learners can use points to bid for rewards in special auctions. Each month a book chosen for review is auctioned, and previous auction rewards have included: "mini iPods, bicycles, digital cameras, mobile phones, CDs, DVDs and computer software packages".

Competitions - from time to time competitions are promoted to encourage learner engagement, to support specialist interest areas, or to tie in with topical events. Previous competitions have included: "poetry writing, logic problems, photography and design".

INDICATORS OF LEVELS OF USE FROM VIRTUAL WORKSPACE STATISTICS

Statistical data are generated by the Virtual Workspace system at frequent and regular intervals. Statistics gathered between September 2006 and April 2007 indicate levels of interaction across the system (shown in Table 1 following).

Local Authority	Digital Learning Transaction	FAQ Mentor Transactions	Mentor Learning Transactions	Communities Accesses	Communities Contributions
Worcestershire	13923	4809	4065	328173	30480
Wolverhampton	8496	7749	6193	368441	36765
Total	22419	12558	10258	696614	67245

Table 1: Numbers of interactions of different types between September 2006 and April 2007

These data show that communities are accessed at comparatively high levels, and are accessed by registered users in Wolverhampton LA at a frequency that is higher proportionately than that occurring in Worcestershire LA. By proportion to communities' levels of access:

- Contribution to communities is at a level of about 9.6%.
- Digital resource access is at a level of about 3.2%.
- Transactions with mentors is at a level of about 1.5%.

Levels of usage are monitored regularly, and a fine level of data is provided for each school. The data shown in Table 2 following indicates levels of usage of the system by each school across the 2006 calendar year in one LA. It is clear from these data that:

- The total number of hours online by learners varies widely from school to school.
- The total number of hours online by teachers varies widely from school to school.
- The total numbers of hours online by learners and teachers relates roughly to an average teacher: learner ratio of 1:24.
- Although the total numbers of hours by learners online relates proportionately in many cases to the total number of hours online by teachers, this is not always the case (there are 9 instances in the list where this is not the case). Some of these instances can be explained both by the ratio of teachers to learners in those schools, and the abilities of learners in some schools to easily access the systems, but this explanation does not hold in at least 5 of these instances.
- The levels of usage of mentors in each school do not follow a general proportional pattern related to total hours of use by either learners or teachers.
- Numbers of interactions through communities is high, but again, numbers of learner interactions do not always relate to a proportional number of teacher interactions.
- It is clear that learners in some schools are becoming involved in using the system without parallel involvement from teachers in their own schools.

School	Total hours online by learners	Total hours online by teachers	Mentor learning transactions by learners	Communities access by learners	Communities access by teachers
1	9176	276	9	15,272	2,074
2	5976	1	143	10,815	0
3	5619	237	584	14,906	2,545
4	3610	182	226	18,894	2,744
5	3130	101	17	11,743	838
6	2764	16	271	8,535	95
7	2496	132	22	9,229	1,476
8	2346	20	74	4,862	35
9	2300	233	130	6,060	4,276
10	2298	133	25	8,994	909
11	2110	388	58	16,757	6,018
12	1720	7	49	14,720	70
13	1392	137	35	9,419	1,357
14	1118	62	28	2,812	381
15	594	44	198	515	30
16	535	9	0	1,569	90
17	492	2	5	646	8
18	451	2	57	908	22
19	446	10	0	1,842	65
20	370	3	3	1,296	19
21	335	2	21	993	20
22	301	27	2	1,126	136
23	217	0	12	530	5
24	109	1	23	258	7
25	8	2	0	22	0
26	1	13	0	4	63
27	1	5	0	13	0
28	1	50	0	0	664
29	0	1	0	0	2
30	0	6	0	0	7
Total	49913	2100	1992	162,740	23,956

Table 2: Levels of usage of the Virtual Workspace system by schools in one LA across the 2006 calendar year

It should be noted that in Table 2 above the schools shaded were those visited as a part of the evaluation. The six schools visited represent schools within three different usage bands.


Gyration

4. WHAT LEARNERS SAY THROUGH ONLINE QUESTIONNAIRES

ACCESS TO THE ONLINE QUESTIONNAIRE

An online questionnaire was provided from the beginning of January 2007, and made accessible to learners on the system until the beginning of March 2007. This offered a full 2 month period for learners to provide online responses.

LEVELS OF RESPONSES FROM LEARNERS

In total, 1605 questionnaire responses were extracted at the beginning of March 2007 from the online file. These responses were reviewed and edited, in order to remove items that would lead to the production of unreliable data. The numbers of items removed, and their reasons for being removed, are shown in Table 3 following.

Reason for removal of items	**Number of responses removed**
Test items	1
Blank items	39
Items with only 'no' responses	15
Items with only 'yes' responses	24
Items with only 'not sure' responses	5
Duplicated items (checked by school, name, year group, time completed, and pattern of response) (it should be noted that the first item was removed in every case where no identifiable differences in levels of completion could be detected)	35
Total	119

Table 3: Numbers of questionnaires removed, and reasons for their removal, from the data set

In total, 119 responses were deleted (7.4% of the original total). The remaining 1486 responses represented some 6.8% of the total number of learners with rights to access the system (using numbers of registered users reported by the project manager). This level of response is reasonably high, and although some bias through forms of self-selection might arise, the level provides a viable sample. The number provides for a high reliability of results (if self-reporting bias is taken into consideration, and the gender bias discussed below).

Learners from 48 different schools provided responses. However, more girls responded than did boys (indeed, nearly twice as many). The numbers are unlikely to represent the balance that exists across this learner population. The numbers are shown in Table 4 following.

Gender	Number Responding
Girls	953
Boys	533

Table 4: Numbers of questionnaire responses by gender

According to the Autumn Census of 2006 (Worcestershire County Council, 2006), there were 17,697 learners aged 14 to 19 years on roll in schools. Of these, 6,557 were 14 to 15 years of age, 6,552 were 15 to 16 years of age, 2,593 were 16 to 17 years of age, 1,867 were 17 to 18 years of age, and 128 were 18 to 19 years of age. In the survey, learners in Year 10 responded most frequently (shown in Figure 2 below and in Table 12 in Appendix 2), followed by learners in Year 11. There were fewer learners in Years 12 and 13 that were represented, and only a small number completed responses by comparison in Year 14.

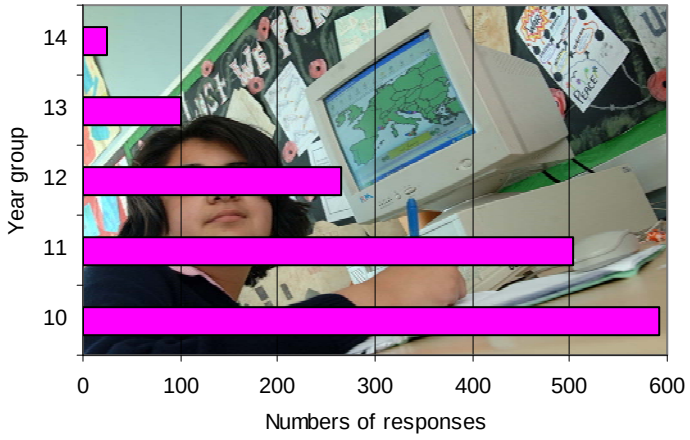

Figure 2: Numbers of questionnaire respondents by year group

The questionnaire responses are roughly representative of the numbers of learners in each age group. However, they are not representative of the balance of gender in the learner population. The balance towards a greater number of girl responses will be accommodated within the subsequent analyses presented in this section.

COMPARISONS WITH ONLINE ACCESS LEVELS RECORDED IN 2006

Using data from 30 schools within one LA, a comparison between numbers of questionnaires returned and total hours online by learners showed that the questionnaires returned were on the whole representative of the numbers of learners in each school using the system (shown in Table 5 following). On average, one questionnaire represented a view arising from about 82 hours of use on the system.

School	Total hours online by learners	Number of online questionnaire responses	Ratio of learners hours online to number of questionnaires returned
1	9176	74	124
2	5976	60	100
3	5619	84	67
4	3610	49	74
5	3130	40	78
6	2764	36	77
7	2496	26	96
8	2346	21	112
9	2300	31	74
10	2298	58	40
11	2110	33	64
12	1720	22	78
13	1392	16	87
14	1118	17	66
15	594	7	85
16	535	3	178
17	492	4	123
18	451	9	50
19	446	5	89
20	370	4	92
21	335	2	167
22	301	2	151
23	217	2	108
24	109	2	54
25	8	0	N/A
26	1	1	1
27	1	1	1
28	1	0	N/A
29	0	0	N/A
30	0	0	N/A
Total	49913	609	82

Table 5: Comparison of learner hours online to questionnaire responses by school in one LA

BOYS' RESPONSES

The questionnaires returned were subjected to a collation analysis by gender. Total numbers of responses to each question, to each question category, and the percentage responses provided by boys, are shown in Table 6 following.

Question	Total responses	No responses	No %	Not sure responses	Not sure %	Yes responses	Yes %
1	530	177	33	75	14	278	52
2	533	269	50	74	14	190	36
3	533	203	38	127	24	203	38
4	531	139	26	63	12	329	62
5	532	273	51	99	19	160	30
6	528	246	47	102	19	180	34
7	528	211	40	94	18	223	42
8	529	244	46	56	11	229	43
9	530	141	27	77	15	312	59
10	530	129	24	69	13	332	63
11	531	94	18	105	20	332	63
12	526	188	36	114	22	224	43
13	528	275	52	74	14	179	34
14	528	214	41	161	30	153	29
15	529	249	47	102	19	178	34
16	529	301	57	109	21	119	22
17	529	250	47	108	20	171	32
18	525	141	27	84	16	300	57
19	527	151	29	69	13	307	58
20	529	46	9	65	12	418	79
21	528	276	52	50	9	202	38
22	526	302	57	82	16	142	27
23	528	40	8	89	17	399	76
24	528	69	13	63	12	396	75

Table 6: Questionnaire responses to each question and question category by boys (n=533)

Percentage responses for 'Yes' questions are shown in descending rank order in Figure 3 following and in Table 13 in Appendix 2.

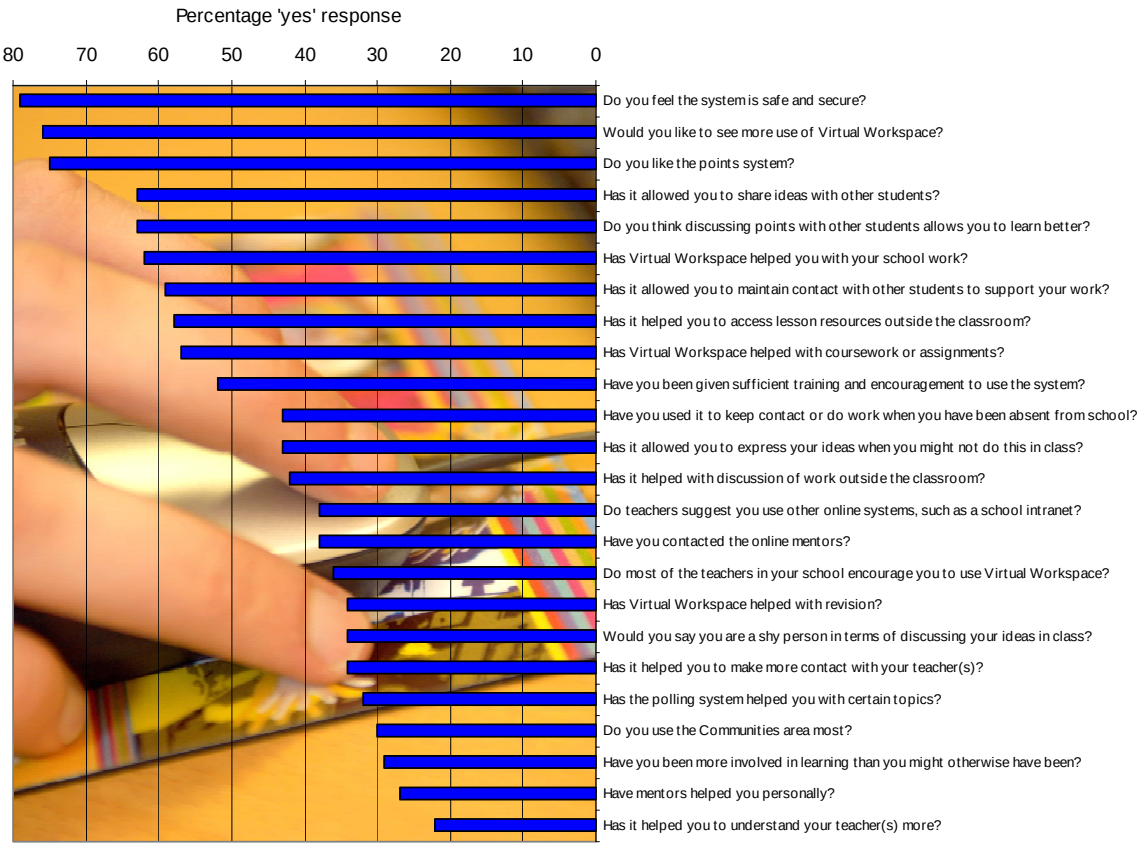

Figure 3: Rank order of 'yes' responses to individual questions by boys (n=533)

Most boys (more than 60%) reported that:

- They feel the system is safe and secure.
- They would like to see more use of the system.
- They like the points system.
- The system has allowed them to share ideas with other learners.
- They think discussing points with other learners allows them to learn better.
- They think the system has helped them with their school work.

Potentially important levels of outcome are arising in other cases, where 2 in 5 boys indicate that they can maintain contact with work when absent from school, or 1 in 5 boys indicates that they have a better understanding of their teacher when using the system, for example. Between 1 in 3 and 1 in 5 of boys reported that the system supported them by:

- Enabling contact to be maintained with others learners to support work.

- Helping access to lesson resources outside the classroom.
- Helping with coursework and assignments.
- Keeping contact or doing work when absent from school.
- Expressing ideas when this might not happen in class.
- Helping discussion of work outside the classroom.
- Contacting online mentors.
- Helping with revision.
- Helping to make contact with teachers.
- Using the polling system to help with certain topics.
- Being involved in learning more than might have been the case otherwise.
- Being helped by mentors.
- Helping to understand teachers more.

GIRLS' RESPONSES

Girls' responses were subjected to the same collation analysis. Total numbers of responses to each question, to each question category, and the percentage responses provided by girls, are shown in Table 7 following.

Question	Total responses	No responses	No %	Not sure responses	Not sure %	Yes responses	Yes %
1	953	314	33	224	24	415	44
2	952	488	51	106	11	358	38
3	953	313	33	197	21	443	46
4	949	282	30	138	15	529	56
5	950	541	57	174	18	235	25
6	948	480	51	176	19	292	31
7	948	447	47	158	17	343	36
8	945	444	47	66	7	435	46
9	943	245	26	110	12	588	62
10	947	212	22	116	12	619	65
11	947	158	17	185	20	604	64
12	947	321	34	212	22	414	44
13	940	407	43	121	13	412	44
14	941	409	43	297	32	235	25
15	942	511	54	147	16	284	30
16	941	621	66	157	17	163	17
17	944	455	48	223	24	266	28
18	941	302	32	103	11	536	57
19	947	271	29	141	15	535	56
20	944	50	5	117	12	777	82
21	942	566	60	71	8	305	32
22	935	582	62	119	13	234	25
23	943	55	6	160	17	728	77
24	944	73	8	123	13	748	79

Table 7: Questionnaire responses to each question and question category by girls (n=953)

Percentage responses for 'Yes' questions are shown in descending rank order in Figure 4 following and in Table 14 in Appendix 2.

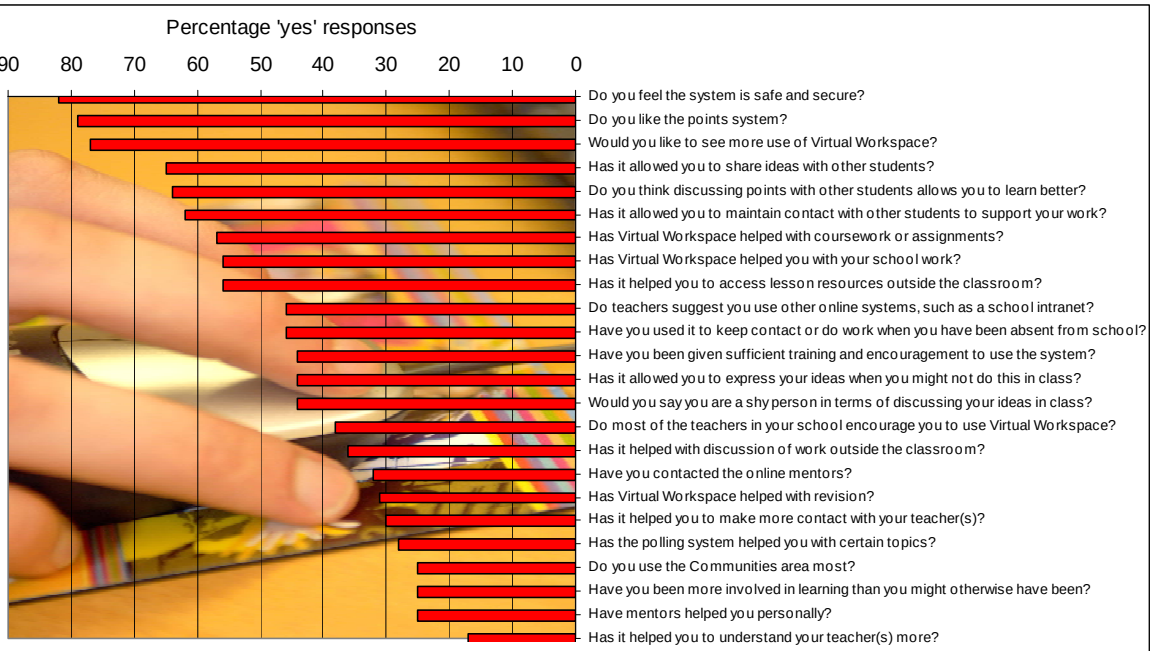

Figure 4: Rank order of 'yes' responses to individual questions by girls (n=953)

Most girls (more than 60%) reported that:

- They feel the system is safe and secure.
- They like the points system.
- They would like to see more use of Virtual Workspace.
- It has allowed them to share ideas with other learners.
- They think discussing points with other learners allows them to learn better.
- It has allowed them to remain in contact with other learners to support their work.
- Other reports, by between 1 in 3 and 1 in 5 girls, indicated that the system was:
- Helping with coursework of assignments.
- Helping with school work.
- Helping to access lesson resources outside classrooms.
- Helping to keep contact or to do work when absent from school.
- Allowing ideas to be expressed when this might not happen in class.
- Helping with discussion of work outside the classroom.
- Contacting online mentors.
- Helping with revision.
- Helping to make contact with teachers.
- Using the polling system to help with certain topics.
- Being more involved in learning than might otherwise have been the case.

- Being helped by mentors.
- Helping to understand teachers more.

A comparison of boys' and girls' responses

Percentage responses by boys and girls are in some cases at similar levels, but in other cases they are at different levels. The percentage responses of boys and girls are shown alongside each other in Figure 5 following and in Table 15 in Appendix 2.

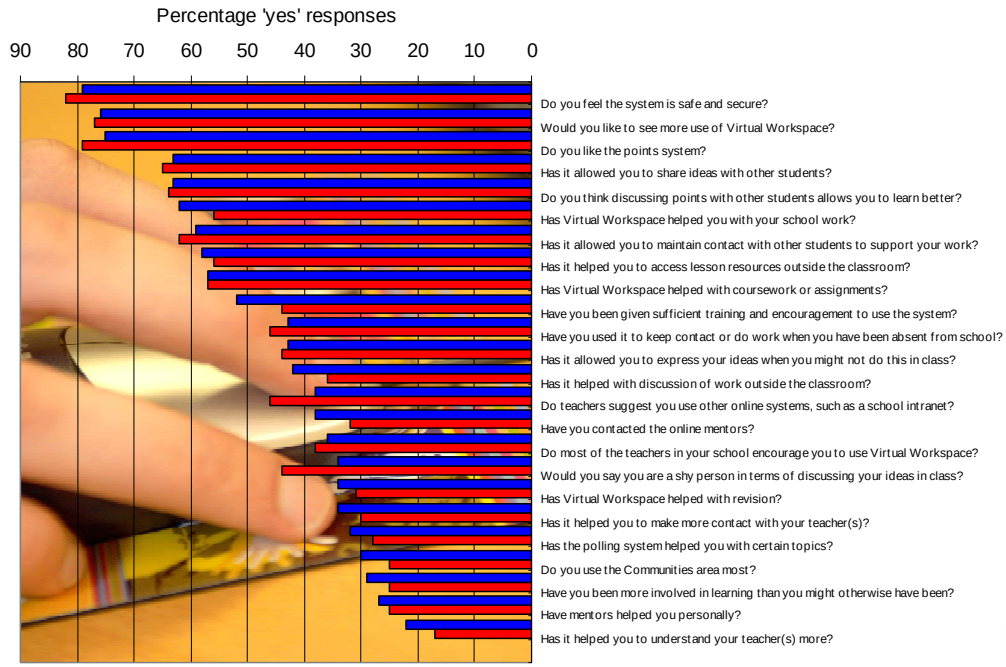

Figure 5: A comparison of percentage responses by boys (n=533) and girls (n=953)

When responses from boys and girls are compared, boys responses are higher (by at least 5%) in reporting:

- Having been given sufficient training and encouragement to use the system.
- Virtual Workspace having helped with school work.
- The Communities area having been used most.
- Virtual Workspace facilities having helped with discussion of work outside the classroom.
- Virtual Workspace facilities having helped to understand the teacher more.
- Online mentors having been contacted.
- Girls' responses are higher (by at least 5%) in reporting:
- Teachers suggesting use of other online systems such as a school intranet.
- Being a shy person in terms of discussing ideas in class.

It appears that there are some differences, perhaps in terms of experiences or perhaps in approaches, between boys and girls. There is some evidence that girls might need to be supported more in terms of training and encouragement to use the system, including the use of the online mentors.

RESPONSES OF 'QUIET' BOYS

Qualitative evidence from interviews in schools suggested that the system might be supporting learners who are seen to be 'quiet' in class. The online questionnaire specifically asked learners to self-report if they felt they were 'shy' in class, and this group of learners could then be selected out for specific analysis. In total, 179 boys said that they would class themselves as being shy when responding in class. An analysis of their questionnaire responses was undertaken separately. Total numbers of responses to each question, to each question category, and the percentage responses provided by quiet boys, are shown in Table 8 following.

Question	Total responses	No responses	No %	Not sure responses	Not sure %	Yes responses	Yes %
1	179	54	30	31	17	94	53
2	179	80	45	29	16	70	39
3	179	64	36	46	26	69	39
4	179	37	21	22	12	120	67
5	179	81	45	40	22	58	32
6	179	76	42	31	17	72	40
7	179	46	26	33	18	100	56
8	179	76	42	16	9	87	49
9	179	39	22	26	15	114	64
10	179	39	22	20	11	120	67
11	179	22	12	37	21	120	67
12	179	36	20	42	23	101	56
13	179	0	0	0	0	179	100
14	179	37	21	61	34	81	45
15	179	79	44	35	20	65	36
16	179	80	45	43	24	56	31
17	179	71	40	42	23	66	37
18	179	34	19	26	15	119	66
19	179	40	22	26	15	113	63
20	179	10	6	20	11	149	83
21	179	90	50	11	6	78	44
22	179	88	49	27	15	64	36
23	179	8	4	21	12	150	84
24	179	18	10	16	9	145	81

Table 8: Questionnaire responses to each question and question category by quiet boys (n=179)

Percentage responses to each question were ranked. The descending rank order for 'Yes' questions is shown in Figure 6 following and in Table 16 in Appendix 2.

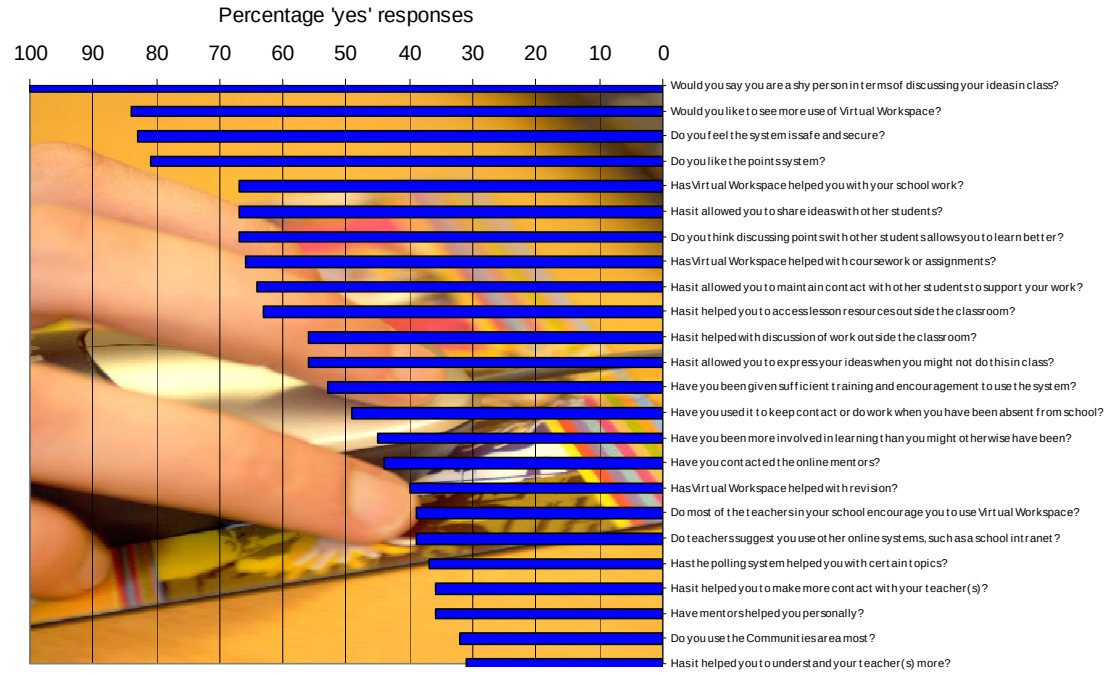

Figure 6: Rank order of 'yes' responses to individual questions by quiet boys (n=179)

Most quiet boys (more than 60%) reported that:

- They would like to see more use of Virtual Workspace.
- They feel the system is safe and secure.
- They like the points system.
- Virtual Workspace has helped them with their school work.
- Virtual Workspace has allowed them to share ideas with other learners.
- They think discussing points with other learners allows them to learn better.
- Virtual Workspace has helped them with coursework or assignments.
- Virtual Workspace has allowed them to maintain contact with other learners to support their work.
- Virtual Workspace has helped them to access lesson resources outside the classroom.

RESPONSES OF 'QUIET' GIRLS

In total, 412 girls said that they would class themselves as being shy when responding in class. An analysis of their questionnaire responses was undertaken separately. Total numbers of responses to each question, to each question category, and the percentage responses provided by quiet girls, are shown in Table 9 following.

Question	Total responses	No responses	No %	Not sure responses	Not sure %	Yes responses	Yes %
1	412	125	30	104	25	183	44
2	412	205	50	43	10	164	40
3	412	134	33	84	20	194	47
4	412	106	26	67	16	239	58
5	412	213	52	83	20	116	28
6	412	195	47	80	19	137	33
7	412	177	43	78	19	157	38
8	412	183	44	28	7	201	49
9	412	102	25	49	12	261	63
10	412	87	21	55	13	270	66
11	412	53	13	85	21	274	67
12	412	105	25	88	21	219	53
13	412	0	0	0	0	412	100
14	412	135	33	142	34	135	33
15	412	217	53	64	16	131	32
16	412	252	61	66	16	94	23
17	412	179	43	100	24	133	32
18	412	117	28	45	11	250	61
19	412	106	26	60	15	246	60
20	412	18	4	54	13	340	83
21	412	250	61	32	8	130	32
22	412	253	61	59	14	100	24
23	412	16	4	58	14	338	82
24	412	24	6	46	11	342	83

Table 9: Questionnaire responses to each question and question category by quiet girls (n=412)

Percentage responses for 'Yes' questions are shown in descending rank order in Figure 7 following and in Table 17 in Appendix 2.

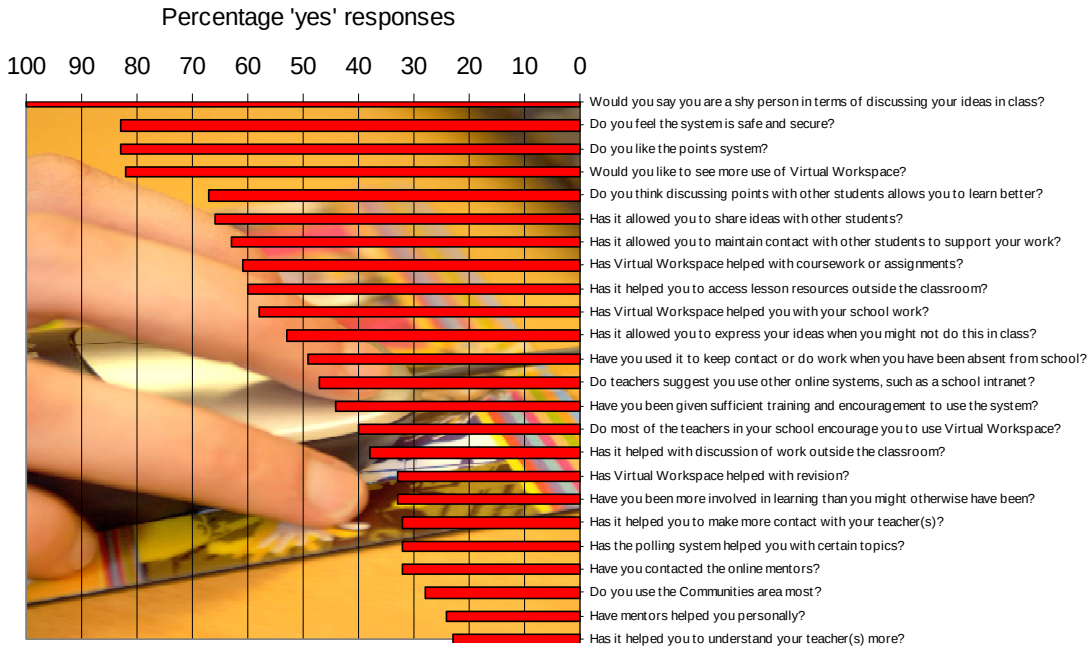

Figure 7: Rank order of 'yes' responses to individual questions by quiet girls (n=412)

Most quiet girls (more than 60%) reported that:

- They feel the system is safe and secure.
- They like the points system.
- They would like to see more use of Virtual Workspace.
- They think discussing points with other learners allows them to learn better.
- Virtual Workspace has allowed them to share ideas with other learners.
- Virtual Workspace has allowed them to maintain contact with other learners to support their work.
- Virtual Workspace has helped them with coursework or assignments.
- Virtual Workspace has helped them to access lesson resources outside the classroom.

The responses that have been reported positively most frequently by quiet girls are also those reported positively most frequently by quiet boys. When these positive reports are support are considered, it is difficult to see how these support features might otherwise have been provided. For example, how could quiet learners have found necessarily the time and opportunities to discuss points with other learners?

A COMPARISON OF SELF-REPORTED 'QUIET' RESPONDENTS WITH ALL RESPONDENTS

Percentage responses by quiet boys and all boys, and quiet girls and all girls, are in some cases at similar levels, but in other cases they are at different levels. The percentage responses of quiet boys and all boys, and quiet girls and all girls, are shown alongside each other in Figure 8 following and in Table 18 in Appendix 2.

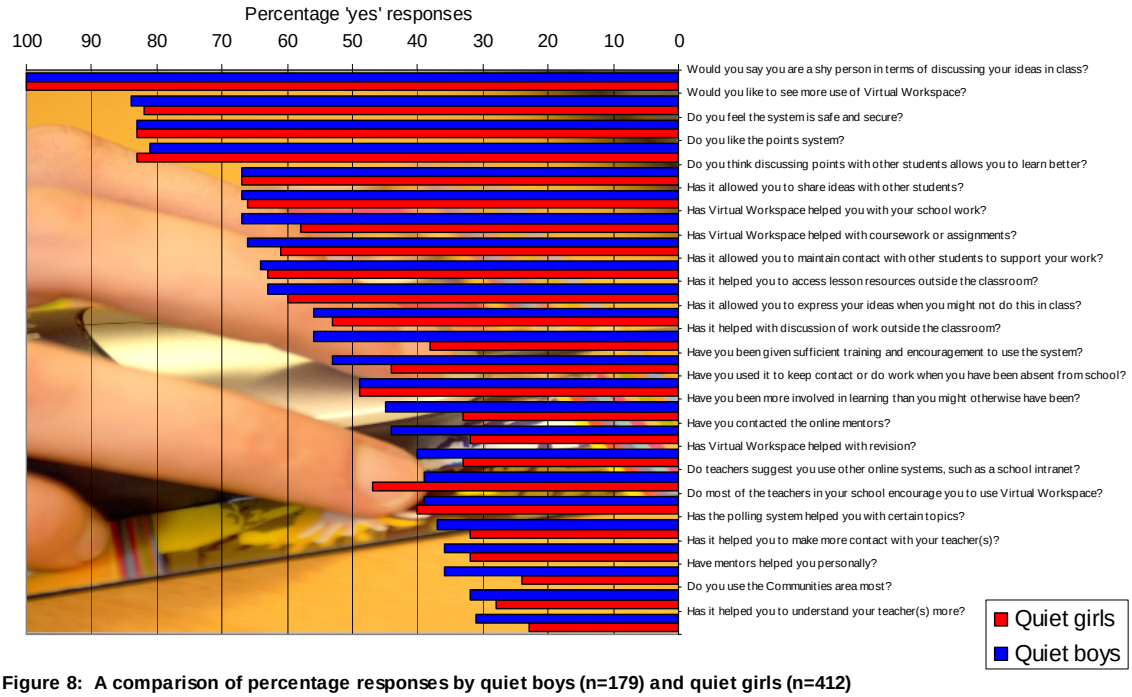

Figure 8: A comparison of percentage responses by quiet boys (n=179) and quiet girls (n=412)

By comparing the responses of quiet boys with all boys, the percentage of responses from quiet boys was higher (by at least 5%) in their reports about:

- Being more involved in learning than might have been the case otherwise (16% difference).
- Discussion of work outside the classroom (14% difference).
- Allowing ideas to be expressed when this might not happen in class (13% difference).
- Helping to understand teachers more (9% difference).
- Helping with coursework or assignments (9% difference).
- Mentors helping personally (9% difference).
- Wanting to see more use of Virtual Workspace (8% difference).
- Helping with revision (6% difference).
- Keeping contact or doing work when absent from school (6% difference).
- Contacting online mentors (6% difference).
- Liking the points system (6% difference).

- Helping with school work (5% difference).
- Maintaining contact with other learners to support work (5% difference).
- Using the polling system to help with certain topics (5% difference).
- Helping to access lesson resource outside the classroom (5% difference).

By comparing the responses of quiet girls with all girls, the percentage of responses from quiet girls was higher (by at least 5%) in their reports about:

- Allowing ideas to be expressed when this might not happen in class (9% difference).
- Being more involved in learning than might have been the case otherwise (8% difference).
- Helping to understand teachers more (6% difference).
- Wanting to see more use of Virtual Workspace (5% difference).

The system appears, therefore, to be having an impact particularly on quiet learners. There appears to be a particular emphasis of certain impacts on quiet boys (even though there are fewer of these that self-report as being 'shy').

5. EVIDENCE FROM SCHOOL VISITS AND INTERVIEWS

This section details the comments and feedback offered by head teachers and senior managers in schools, IT co-ordinators, teachers and learners, all of whom were interviewed during visits to 10 schools. Comments and feedback are grouped according to roles in schools.

HEAD TEACHER AND SENIOR MANAGER FEEDBACK

Comments from head teachers and senior managers indicated that:

- There had been often a slow introduction and take-up of the system by teachers.
- Learners had tended to use it more than had teachers, with some exceptions.
- There had sometimes been competing technologies, such as email or school intranets, that might have been in use prior to the introduction of Virtual Workspace. In some cases, the relationship between such technologies had been recognised only from a competitive viewpoint rather than an integrated viewpoint.

The level of funding investment in Virtual Workspace had sometimes been questioned, especially when technology levels in schools had been at low levels so that teacher access to technology had been limited (and as a consequence, opportunities for teachers to gain value from Virtual Workspace use had been low).

Teachers had needed good exemplars of use to indicate the value of the system and the support it could offer for learning (rather than, or as well as for, teaching).

In terms of overall commitment to Virtual Workspace, including financial aspects, head teachers and senior managers commented on:

- The strong desire of the LA to sign up schools to the initiative.
- Initial vagueness about the initiative and its outcomes, but its appearing to offer wide potential support and access. It was felt that it was a scheme that was difficult to envisage in terms of how it would work.
- The fact that the scheme appeared to meet needs, fitting broadly within the context of educational development.
- Schools largely being prepared to offer commitment to it.
- Costs are varied for schools with an upper level in the order of £15,000 per year.
- The need to balance funds, to integrate costs of this initiative with those for servers and hardware purchase (needing to replace computers as they age).

- The concern that the scheme was run by the provider, Nord Anglia, who wanted to gain in terms of consultancy, even though the schools were paying.

Some head teachers and senior managers commented on specific management challenges in supporting the initiative over a long term period:

Meetings for head teachers and other staff were sometimes difficult to attend.

- In one school the focus of the champion did not work. Consultation was found to be inadequate, and action resulting was found to be limited.
- In one school the co-ordination was established outside the senior management team. Being put in the hands of a teacher, teachers could show peers how the initiative would help teaching and learning.
- Virtual Workspace was not embedded in another school, and the present co-ordinator took over the previous year, following on from 2 previous co-ordinators.
- One school wanted the provider to undertake certain actions, so that, for example, resources offering greater challenge would be available to learners. Although teachers had been critical, it was found that the providers were now responding, and the school was increasingly comfortable with both Nord Anglia and the LA.

In terms of overall levels of usage, head teacher and senior managers indicated varying levels of take-up and use:

- The introduction was reported to have been slow and piecemeal in one school.
- The facilities were used fairly extensively by staff in another school.
- Take-up was reviewed regularly in a third school, but it was found that there was a need to continue to drive the initiative. At the time of the interview, 12 out of 80 staff used Virtual Workspace, some more than others.
- In a fourth school, all staff set up department zones.
- In a fifth school, the co-ordinator involved a team of staff, the initiative was in its third year, but still learners used it more than teachers.
- In a sixth school, it was found that certain facilities were used more than were others. Messaging and forums were found to be used initially.

Head teachers and senior managers commented on approaches to teacher awareness and training:

- One school launched the initiative at the beginning of each year to new learners (prospective year 10 learners). The school launched a new subject focus area each year – English one year, IT another year, and so on.
- One senior manager commented on the need for the initiative "to be driven; staff need to use it for work purposes". Forums were used by the co-ordinator to share ideas with other staff.
- Since September 2004 one school had run a staff whole day INSET, with only one half day since then. New staff were offered a session after school, on a voluntary basis covering particular aspects of use.
- One school had run twilight sessions for all staff, and the co-ordinator had supported learners directly.

- Time for staff to explore ways to use the facilities was recognised an issue, if staff were to use it in lessons effectively. Staff needed to encourage learners, but they needed time and incentive to use the facilities, to embed them in their practice.
- In one school the time commitment was built into contract time for training (2 days of training). Twilight sessions that were run then counted towards the compulsory staff commitment in terms of training time.
- The co-ordinator had maintained an impetus in one school, both training staff and providing induction days for learners, with a continuing 'regular drip feed of information'.

In spite of any concerns or issues, head teachers and senior managers reported positive outcomes:

- More and more learners kept in touch and sent coursework to staff in one school. It was found that the initiative saved a lot of paper (GCSE revision booklets did not need to be copied, for example).
- Coursework for mathematics was supported in one school, provided through help sheets and other documentation. One teacher regularly sent messages to 25% of learners in mathematics.
- Some lessons were reported to be able to be more structured when facilities were used. For example, the polling facility could be used to support a useful plenary session, and resources could be placed in the shared area for revision.
- Virtual Workspace was being used by learners at lunchtimes without prompting in one school (used mostly by year 10, then year 11, although it was found that years 12 and 13 logged on for longer periods of time).
- Learners were reported to be gaining in one school through the use of forums and chat.
- Forums were reported to be used to share ideas (where quiet learners could put ideas across).
- Learners knew the system was secure.

On the negative side, head teachers and senior managers often commented about issues that had arisen in the past, rather than issues that persisted:

- Broadband was needed in order to run the facilities, and it would have helped to have had this level of access initially.
- Verbal abuse had happened in the past (but this had led to change without it being repeated).
- Chat rooms were initially a problem, but these had been removed.
- The facility was not user-friendly initially, but was later found to be useful. Nord Anglia was reported to have listened and had moved forward on issues so that facilities were improved. It was reported that the system could now save time for staff.

Other comments referred to issues that still remained:

- The teacher search facility was not useful, but the summary facility was useful.
- Resources were under used.
- Resources were not challenging enough.
- Setting up learner details needed to be managed, and for putting new staff and new learners on the system, there ideally needed to be something put in place to do this more automatically.
- It was not possible to email anyone outside Virtual Workspace, so it did not encourage the facility to be used rather than email. Staff and learners might see Virtual Workspace and email competitively therefore.

- Replication with facilities and resources on the intranet was an issue.
- Email was used prior to the use of Virtual Workspace in one school. Initially the system was found to be very complex, so it detracted from use when there were competing technologies.
- There was not enough training initially.
- A few learners did not have MS Word and MS Excel at home, so could not work on some resources that teachers offered.

Although head teachers and senior managers were often able to identify specific areas of use or unique facilities within Virtual Workspace, few were aware of the levels of use of online mentors:

- Not known (reported in 2 schools).
- A few learners used the facilities but the specific learners using it were not known (reported in 1 school).
- A few learners accessed online mentors and found them useful (reported in 3 schools).
- Teachers supported use of online mentors in some sessions (reported in 1 school).
- Use of online mentors was unique, but the amount of use was disappointingly low (reported in 1 school).
- Learners were reported to enjoy it when they accessed mentors and got advice. They were impressed by responses and the times tutors were there (reported in 1 school).
- Mentors had been helpful, and personal problems had been supported and had been reported appropriately and very helpfully to the school (reported in 1 school).

In connection with the levels and quality of support from online mentors, the cost of providing this facility through other means, or the cost that might be associated with not addressing for some young people the personal issues that had sometimes been alleviated, appeared not be considered at a deep level.

Head teachers and senior managers sometimes identified specific groups of learners that were felt to be supported more effectively through the use of Virtual Workspace (although not in all cases). Their responses should be compared to those from teachers (as head teachers and senior managers often felt that teachers had more direct experience of this aspect):

- No specific trend identified, and no major distinctive groups seen to be accessing it (reported in 7 schools).
- Had tended to work better with more able learners (reported in 1 school).
- Generally supported all learners, but perhaps fitted visual learners better (reported in 1 school).
- Learners could use Virtual Workspace if they were embarrassed in class to ask questions. I was the 'classroom lurkers' who were reported to use the messaging support (reported in 2 schools).

Head teachers and senior managers offered some comments concerned with the next stages of implementation. Many initial issues had been seen to be addressed, so head teachers and senior managers were more committed to 'restarting' the initiative. In terms of important change management concerns, comments suggested the needs to:

- Ensure head teacher commitment, and to 'sell' the initiative to governors and parents.

- Invest in a teacher co-ordinator rather than a member of senior management necessarily.
- Run training for learners and staff regularly.
- Use a drip feed approach, to ensure that new staff, and new groups were set up as needed.
- Ensure content was provided before targeting teachers to use it.
- Discuss with heads of year to talk about increased use.
- Take department by department over a period of time.
- Encourage learner use to encourage staff use.
- Staff needing to be able to keep up with what was happening in terms of learner communication (which was not found to be easy).
- 'This is a big jump - from ICT use to VW use'; there is a need for more online help (on how to use the system and use it for effective use).
- Discuss issues of school intranet and other facilities, and where duplication was happening. Consider the security aspects of different systems.
- Staff needing to be able to select features of real value.
- Involve teaching assistants actively.
- Introduce the system also for years 7, 8, and 9.

ICT CO-ORDINATOR COMMENTS

Comments from ICT co-ordinators indicated that:

- The integration with other systems had proved difficult or had been an obstacle in some cases.
- The system provided a secure and safe environment to support contact between learners and mentors (which was not provided by other external systems).
- The facilities were reported as being particularly positive in terms of engagement for boys (although this was sometimes in contrast to evidence from learner interviews, where girls had clearly indicated specific positive uses and outcomes, both from a learning and from a personal perspective).
- Communities (formerly forums) had been used a great deal (but uses of other specific facilities had sometimes been determined by teacher interests).
- Contact with learners had been enhanced and maintained, on occasions when they had been in hospital, for example.
- Physical disabilities of learners had not got in the way of communication or contact.

In terms of IT issues, ICT co-ordinators reported:

- Very few problems, and where these had occurred they had been resolved by Nord Anglia (in 1 school).
- A lack of integration with other ICT in the school, so that staff had not taken it up largely (in 3 schools).
- Ease of use compared to some other systems (in 1 school).
- Low confidence of staff with IT being an obstacle (in 1 school).
- Positive outcomes were identified in a range of cases:

- More and more learners kept in touch and sent coursework to staff, when staff were absent and when learners were in hospital, for example (in 2 schools).
- Saved a lot of paper (in 1 school).
- Use had enabled social contact with other learners in the school and in other schools (in 2 schools).
- Work completed at home meant that pre-sessional work could be balanced with class work (in 1 school).
- Supported learner to teacher communication (in 1 school).
- Learners were motivated by the points system, so assignments were used to allow them to pick up points (in 1 school).

Negative points were highlighted:

- Forgetting passwords was an issue (although this had been addressed).
- Resources had been limited, and Nord Anglia had not been considered responsive to this need.
- Assignments seemed to disappear if they were not picked up by the assigned deadline.
- It was not possible to send an assignment to individual learners.
- The grade book was not found to be useful.
- Some learners did not have Internet at home.
- Some items that could be exchanged for points were rather 'expensive'.
- Use for years 8 and 9 was desirable.

TEACHER COMMENTS

Comments from teachers indicated:

- The need to encourage learner use and provide them with relevant ways to use the facilities.
- A lunchtime club had been set up to support use in one school.
- Plasma screens in one school advertised the facilities available to learners (particularly for revision purposes).
- There were facilities that allowed easy access to resources when learners were in lessons.
- Certain facilities had been used to support peer assessment, for reviewing answers to questions.
- Access beyond a school was possible and important from a social inclusion point of view.
- Quiet learners could put ideas across, and their views were valued by others.

In terms of the facilities available, teachers reported using:

- Communities (forums) (in 12 cases).
- Assignments (in 8 cases).
- Messaging (in 8 cases).
- Resources (in 7 cases).
- Polls (in 4 cases).

Difficulties that teachers reported were:

- Setting up class groups.
- Being able to import in MS Excel.
- Disliking marking on screen.
- Could be timed out too quickly.
- Content was not enhancing what was already available.
- Some learners did not have Internet at home.
- Some learners did not have MS Word and MS Excel at home.
- Learners in years 7, 8 and 9 would have liked to have been involved.
- Time to explore the facilities.
- Learners using the facilities in lessons as a distraction.
- The system could be unwieldy, and large files were not handled easily.

Ways to support learner involvement had been varied:

- Running a Virtual Workspace club at lunchtime, which arose from learner requests.
- Setting up some content on modular courses, grouping assignment tasks and sheets (so that learners could gain incentive points).
- Outside experts to debate online.

Some key pedagogic issues that teachers reported were:

- There was a need to be more organised.
- Tasks had to be more meaningful or ongoing, so there was a need to change homework sometimes.
- There was a need to think about planning earlier in the year, and this could be inconvenient, as there was still a need for flexibility in lessons to discuss points arising.
- Posting up slides before classes meant that these could be accessed in lessons, and learners could concentrate on listening and discussing in the lessons.
- Some teachers still preferred to mark by hand; so printing out was still desirable.
- During revision periods, learners could ask questions as they arose.
- Learners could both pursue their interests, and look at other interests, in terms of personalised learning approaches.
- Learners enjoyed the extra contact and support.
- Peer assessment was supported and enjoyed.

Key learning outcomes identified by teachers were:

- Access by learners was possible when needed, and access to necessary resources was not blocked.
- It was possible to point learners towards information or particular views of other learners.
- Opportunities to chat to other people in other schools.
- More work, and having a check at home helped with grades.
- Opportunity to give help on individual needs out of class time.

- Learners were more forthcoming with information, and sent absence messages in advance.
- Learners could contact teachers about coursework problems so they were not 'stuck' for such a long time, so they could complete work more easily.
- Communities did not judge people.
- Work could be corrected and sent back, so it speeded up the process.
- Learners who had missed lessons (including those off ill) could be kept updated.
- Facilities supported both girls (information and social interactions) and boys (using technology as a means to manage learning).
- Facilities were there for sharing information.
- It was possible to provide an outline of what would be done; so long term objectives were always there.
- It was possible to access from a wide range of locations.
- Virtual Workspace could be used to support dispersed communities across schools and colleges.
- It was possible to see what resources had been accessed.
- It was possible to see learning profiles, so items could be tailored more.
- Learners had access to all documents, so they did not lose items.
- Homework was increased, as learners could address issues they had with it.
- The facilities offered additional time for teachers to support learners when there were real emergencies.
- Helped to address misconceptions, to support individuals, and assignments gained higher grades than previously.
- Could raise points raised by learners in class, and access provided an enhanced monitoring capability.
- Girls (and boys) who were quiet in class tended to discuss on a one-to-one basis more easily.
- Learners who wanted to work at weekends sent messages and gained support from teachers.
- Learners sent questions when they thought about it (but they did not need instant responses).
- Girls liked messaging and perhaps related to learning through messaging more easily.

Other positive outcomes reported were:

- Costs of photocopies were reduced (£140 by one teacher in one year).
- Lunchtime requests were more stressful than responding to emails in your own time.
- It helped those covering lessons, as assignments could be set when a teacher was absent.
- It was a safe environment, so learners and teachers felt more secure using this environment.

With regard to use of mentors by learners, however, teachers reported lack of awareness generally:

- None reported by learners, or not aware of use (in 7 cases).
- Not used, or extent of use not known (in 11 cases).
- Use by learners known (in 4 cases).

Some teachers reported some specific outcomes related to individual learners:

- It helped a boy likely to fail, to gain a B grade.
- It helped a girl who did not like to work in silence; messaging provided a means to 'hear' and 'listen' while working.

In terms of the future, teachers suggested that certain factors should be considered:

- A need for more training.
- The facilities needing to be easy to use.
- Benefits and potential uses should be recognised and shared.
- Staff must encourage use.
- More self-marking and PHSE resources (such as quizzes) would be welcomed (on drugs and alcohol, for example).
- Learners needing to be trained on how to operate the system and use work items.

LEARNER COMMENTS

Comments from learners indicated that:

- Uses of Virtual Workspace had been wide, and there had been reported uses for revision, discussion, and polls, messaging for coursework, assignments, commenting, and lesson resource access.
- Some specific learners had been supported in specific personalised ways; the 'communities' offered one girl who did not like silence the chance to work in a perceived 'talk' environment.
- One boy found it difficult to remember verbal explanations, but could revisit explanations in textual form.
- Group work was supported, and could enable sharing of ideas and engagement.
- Typing ideas was not embarrassing.
- Everyone was encouraged to be involved.
- Peers said things differently, and this could support understanding and engagement.
- Learners would have liked more use of the Virtual Workspace facilities (only a few reported that they did not like the system).
- The points system was liked by some learners, but was felt to be a 'joke' by some others.
- Learners were empowered to make choices about how to use the system to support their learning needs.
- Use of discussion through the 'communities' area had built learner-teacher relationships in some cases.

Learners indicated that different approaches had been provided in supporting them in gaining operational skills. They reported:

- Being shown how to use the system in ICT lessons at the end of year 9.
- Being shown how to use the system in a year assembly.
- Being given written instructions from school.
- Finding the system easy to use, and could see how to use it immediately.

- Finding the system hard to use at first, as the layout was not easy to follow.

Learners indicated benefits in terms of how learning could be managed:

- Could be accessed as and when needed.
- Could get help from teachers.
- Could gain help from mentors.
- Resources were accessible, and links to websites were useful.
- Could send messages and homework easily.
- Assignments could be checked with teachers, who sent marks and comments.
- Did not 'miss out' if not in school (still had access to lesson notes and assignments).
- Could be used during study leave.
- Contact at weekends and during holiday periods was still possible.
- Helped to keep to deadlines.
- Helped to maintain attention and keep on task.
- Useful for revision.
- Could undertake revision tests and quizzes.
- Could contribute different points to a discussion.
- Helped to manage work in folder systems.
- Less easy to lose work.
- There was a greater check on homework through the system.

Learners indicated a range of benefits that were not just concerned with learning:

- Saved using and carrying disks or other electronic devices.
- Could access work easily at home.
- Points system encouraged some use.
- It was a secure medium, and was safe.
- Contact with the teacher built a positive learner-teacher relationship.
- Helped teachers to do some things more easily.

Overall, learners indicated that the system was easy to use. Some learners clearly used the system every day, while others used it once a week, or more rarely. A few learners indicated that they had some problems or did not know how to do certain things, such as how to generate prints.

Learners were able to identify positive uses and positive outcomes in terms of learning:

- Useful for tests and revision.
- Used resources to reinforce work already covered.
- Gained feedback on work that could be acted on.

- Had more time for work at home helping to improve the quality of work completed.
- Extra time was available to work on assignments.
- Written responses to questions were more useful than verbal responses, as it was possible to go back to the response.
- Aided discussion for those who were quieter in class.
- Everyone was encouraged to be involved.
- People were tolerated more easily.
- It was possible to talk about feelings (about examinations, for example) as well as subject topics.
- Felt more involved in learning, and worked more directly with the topics.
- It was easier to see things, or do things than to be told by teachers.
- The learning style preferences quiz helped to select resources.
- Teachers gave access to resources that were not in books.
- Additional questions stimulated thinking.
- Helped in terms of being less quiet after using Virtual Workspace.
- Messages in written form helped to focus attention on what to look at to get better marks.
- It was easier to engage with written material, but more difficult to engage and understand when things were said (highlighting issues with a low level of auditory reception).

Some learners identified some negative aspects, but some of these had been addressed:

- Log on problems.
- The menu was initially not easy to use with assignments.
- Some responses were quite long.
- The points system was a 'joke'; it was difficult to collect enough points within the time in school.
- Resources were not challenging enough.
- Resources were hard to identify (they were not named adequately).
- Teachers did not use it much.

Learners varied in their responses regarding contacting mentors:

- Not known about (in 5 cases).
- Not used (in 9 cases).
- Not used a great deal and not found to be that helpful (in 4 cases).
- Used for subject query (in 3 cases).
- Used quite a lot and found to be helpful (in 8 cases).

Asked about teacher use of Virtual Workspace, learners commented that:

- In some schools, some teachers did not use it often.
- Overall, teachers should use it more.
- In some schools, most teachers of some learners used it, but not many teachers of other learners used it.

- In some schools, most teachers used it.
- It helped if teachers set assignments on the system.
- Learners would do more homework if teachers used it more.
- Work would be managed better if it was all in the same place, and easily accessible.
- Teachers needed to know the benefits of the system more.
- "Helps teachers to know what help we need".

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APPENDIX 1: EVIDENCE USED

The range of evidence used to inform this evaluation review is detailed in Table 10 following.

FORM OF EVIDENCE	Frequency
Online questionnaires completed by learners	1486
Interviews with head teachers	4
Interviews with senior managers and lead-coordinators in schools	7
Interviews with ICT co-ordinators	7
Interviews with teachers and a teaching assistant	23
Interviews with learners	61 (33 boys and 28 girls)
Interviews with Nord Anglia personnel	6
Details sent by email and telephone discussions	10
Online access	2

Table 10: Range of evidence used to inform this evaluation review report

Age range (years)	Population on roll in schools in Wolverhampton	Population on roll in schools in Worcestershire
14 to 15	2,997	6,557
15 to 16	3,005	6,552
16 to 17	1,513	2,593
17 to 18	1,071	1,867
18 to 19	154	128

Table 11: Student populations on roll in Schools by age range (Sources: Wolverhampton City Council, 2007 census; Worcestershire County Council, 2006 census)

Year group	Number responding
10	592
11	503
12	266
13	100
14	25

Table 12: Numbers of questionnaire respondents by year group

Question	Yes %	Not sure %	No %
Do you feel the system is safe and secure?	79	12	9
Would you like to see more use of Virtual Workspace?	76	17	8
Do you like the points system?	75	12	13
Has it allowed you to share ideas with other students?	63	13	24
Do you think discussing points with other students allows you to learn better?	63	20	18
Has Virtual Workspace helped you with your school work?	62	12	26
Has it allowed you to maintain contact with other students to support your work?	59	15	27
Has it helped you to access lesson resources outside the classroom?	58	13	29
Has Virtual Workspace helped with coursework or assignments?	57	16	27
Have you been given sufficient training and encouragement to use the system?	52	14	33
Have you used it to keep contact or do work when you have been absent from school?	43	11	46
Has it allowed you to express your ideas when you might not do this in class?	43	22	36
Has it helped with discussion of work outside the classroom?	42	18	40
Do teachers suggest you use other online systems, such as a school intranet?	38	24	38
Have you contacted the online mentors?	38	9	52
Do most of the teachers in your school encourage you to use Virtual Workspace?	36	14	50
Has Virtual Workspace helped with revision?	34	19	47
Would you say you are a shy person in terms of discussing your ideas in class?	34	14	52
Has it helped you to make more contact with your teacher(s)?	34	19	47
Has the polling system helped you with certain topics?	32	20	47
Do you use the Communities area most?	30	19	51
Have you been more involved in learning than you might otherwise have been?	29	30	41
Have mentors helped you personally?	27	16	57
Has it helped you to understand your teacher(s) more?	22	21	57

Table 13: Rank order of 'yes' responses to individual questions by boys (n=533)

Question	Yes %	Not sure %	No %
Do you feel the system is safe and secure?	82	12	5
Do you like the points system?	79	13	8
Would you like to see more use of Virtual Workspace?	77	17	6
Has it allowed you to share ideas with other students?	65	12	22
Do you think discussing points with other students allows you to learn better?	64	20	17
Has it allowed you to maintain contact with other students to support your work?	62	12	26
Has Virtual Workspace helped with coursework or assignments?	57	11	32
Has Virtual Workspace helped you with your school work?	56	15	30
Has it helped you to access lesson resources outside the classroom?	56	15	29
Do teachers suggest you use other online systems, such as a school intranet?	46	21	33
Have you used it to keep contact or do work when you have been absent from school?	46	7	47
Have you been given sufficient training and encouragement to use the system?	44	24	33
Has it allowed you to express your ideas when you might not do this in class?	44	22	34
Would you say you are a shy person in terms of discussing your ideas in class?	44	13	43
Do most of the teachers in your school encourage you to use Virtual Workspace?	38	11	51
Has it helped with discussion of work outside the classroom?	36	17	47
Have you contacted the online mentors?	32	8	60
Has Virtual Workspace helped with revision?	31	19	51
Has it helped you to make more contact with your teacher(s)?	30	16	54
Has the polling system helped you with certain topics?	28	24	48
Do you use the Communities area most?	25	18	57
Have you been more involved in learning than you might otherwise have been?	25	32	43
Have mentors helped you personally?	25	13	62
Has it helped you to understand your teacher(s) more?	17	17	66

Table 14: Rank order of 'yes' responses to individual questions by girls (n=953)

Question	Yes % boys	Yes % girls	Not sure % boys	Not sure % girls	No % boys	No % girls
Have you been given sufficient training and encouragement to use the system?	52	44	14	24	33	33
Do most of the teachers in your school encourage you to use Virtual Workspace?	36	38	14	11	50	51
Do teachers suggest you use other online systems, such as a school intranet?	38	46	24	21	38	33
Has Virtual Workspace helped you with your school work?	62	56	12	15	26	30
Do you use the Communities area most?	30	25	19	18	51	57
Has Virtual Workspace helped with revision?	34	31	19	19	47	51
Has it helped with discussion of work outside the classroom?	42	36	18	17	40	47
Have you used it to keep contact or do work when you have been absent from school?	43	46	11	7	46	47
Has it allowed you to maintain contact with other students to support your work?	59	62	15	12	27	26
Has it allowed you to share ideas with other students?	63	65	13	12	24	22
Do you think discussing points with other students allows you to learn better?	63	64	20	20	18	17
Has it allowed you to express your ideas when you might not do this in class?	43	44	22	22	36	34
Would you say you are a shy person in terms of discussing your ideas in class?	34	44	14	13	52	43
Have you been more involved in learning than you might otherwise have been?	29	25	30	32	41	43
Has it helped you to make more contact with your teacher(s)?	34	30	19	16	47	54
Has it helped you to understand your teacher(s) more?	22	17	21	17	57	66
Has the polling system helped you with certain topics?	32	28	20	24	47	48
Has Virtual Workspace helped with coursework or assignments?	57	57	16	11	27	32
Has it helped you to access lesson resources outside the classroom?	58	56	13	15	29	29
Do you feel the system is safe and secure?	79	82	12	12	9	5
Have you contacted the online mentors?	38	32	9	8	52	60
Have mentors helped you personally?	27	25	16	13	57	62
Would you like to see more use of Virtual Workspace?	76	77	17	17	8	6
Do you like the points system?	75	79	12	13	13	8

Table 15: A comparison of percentage responses by boys (n=533) and girls (n=953)

Question	Yes %	Not sure %	No %
Would you say you are a shy person in terms of discussing your ideas in class?	100	0	0
Would you like to see more use of Virtual Workspace?	84	12	4
Do you feel the system is safe and secure?	83	11	6
Do you like the points system?	81	9	10
Has Virtual Workspace helped you with your school work?	67	12	21
Has it allowed you to share ideas with other students?	67	11	22
Do you think discussing points with other students allows you to learn better?	67	21	12
Has Virtual Workspace helped with coursework or assignments?	66	15	19
Has it allowed you to maintain contact with other students to support your work?	64	15	22
Has it helped you to access lesson resources outside the classroom?	63	15	22
Has it helped with discussion of work outside the classroom?	56	18	26
Has it allowed you to express your ideas when you might not do this in class?	56	23	20
Have you been given sufficient training and encouragement to use the system?	53	17	30
Have you used it to keep contact or do work when you have been absent from school?	49	9	42
Have you been more involved in learning than you might otherwise have been?	45	34	21
Have you contacted the online mentors?	44	6	50
Has Virtual Workspace helped with revision?	40	17	42
Do most of the teachers in your school encourage you to use Virtual Workspace?	39	16	45
Do teachers suggest you use other online systems, such as a school intranet?	39	26	36
Has the polling system helped you with certain topics?	37	23	40
Has it helped you to make more contact with your teacher(s)?	36	20	44
Have mentors helped you personally?	36	15	49
Do you use the Communities area most?	32	22	45
Has it helped you to understand your teacher(s) more?	31	24	45

Table 16: Rank order of 'yes' responses to individual questions by quiet boys (n=179)

Question	Yes %	Not sure %	No %
Would you say you are a shy person in terms of discussing your ideas in class?	100	0	0
Do you feel the system is safe and secure?	83	13	4
Do you like the points system?	83	11	6
Would you like to see more use of Virtual Workspace?	82	14	4
Do you think discussing points with other students allows you to learn better?	67	21	13
Has it allowed you to share ideas with other students?	66	13	21
Has it allowed you to maintain contact with other students to support your work?	63	12	25
Has Virtual Workspace helped with coursework or assignments?	61	11	28
Has it helped you to access lesson resources outside the classroom?	60	15	26
Has Virtual Workspace helped you with your school work?	58	16	26
Has it allowed you to express your ideas when you might not do this in class?	53	21	25
Have you used it to keep contact or do work when you have been absent from school?	49	7	44
Do teachers suggest you use other online systems, such as a school intranet?	47	20	33
Have you been given sufficient training and encouragement to use the system?	44	25	30
Do most of the teachers in your school encourage you to use Virtual Workspace?	40	10	50
Has it helped with discussion of work outside the classroom?	38	19	43
Has Virtual Workspace helped with revision?	33	19	47
Have you been more involved in learning than you might otherwise have been?	33	34	33
Has it helped you to make more contact with your teacher(s)?	32	16	53
Has the polling system helped you with certain topics?	32	24	43
Have you contacted the online mentors?	32	8	61
Do you use the Communities area most?	28	20	52
Have mentors helped you personally?	24	14	61
Has it helped you to understand your teacher(s) more?	23	16	61

Table 17: Rank order of 'yes' responses to individual questions by quiet girls (n=412)

Question	Yes % boys	Yes % quiet boys	Yes % girls	Yes % quiet girls
Have you been given sufficient training and encouragement to use the system?	52	53	44	44
Do most of the teachers in your school encourage you to use Virtual Workspace?	36	39	38	40
Do teachers suggest you use other online systems, such as a school intranet?	38	39	46	47
Has Virtual Workspace helped you with your school work?	62	67	56	58
Do you use the Communities area most?	30	32	25	28
Has Virtual Workspace helped with revision?	34	40	31	33
Has it helped with discussion of work outside the classroom?	42	56	36	38
Have you used it to keep contact or do work when you have been absent from school?	43	49	46	49
Has it allowed you to maintain contact with other students to support your work?	59	64	62	63
Has it allowed you to share ideas with other students?	63	67	65	66
Do you think discussing points with other students allows you to learn better?	63	67	64	67
Has it allowed you to express your ideas when you might not do this in class?	43	56	44	53
Would you say you are a shy person in terms of discussing your ideas in class?	34	100	44	100
Have you been more involved in learning than you might otherwise have been?	29	45	25	33
Has it helped you to make more contact with your teacher(s)?	34	36	30	32
Has it helped you to understand your teacher(s) more?	22	31	17	23
Has the polling system helped you with certain topics?	32	37	28	32
Has Virtual Workspace helped with coursework or assignments?	57	66	57	61
Has it helped you to access lesson resources outside the classroom?	58	63	56	60
Do you feel the system is safe and secure?	79	83	82	83
Have you contacted the online mentors?	38	44	32	32
Have mentors helped you personally?	27	36	25	24
Would you like to see more use of Virtual Workspace?	76	84	77	82
Do you like the points system?	75	81	79	83

Table 18: A comparison of percentage responses by quiet boys (n=179) and quiet girls (n=412)