Enhancement of Learning Support Project - Report

Using the ordinary to create the extraordinary - The potential of technology for further promoting independence and supporting learning

Yorkshire and Humber

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An overview of the Enhancement of Learning Support (ELS) Programme

In January 2010 LSIS commissioned Natspec (the Association of Specialist Colleges) to explore the training and development needs of Learning Support Assistants (LSAs) and those who manage them across the lifelong learning sector. The first phase of the project, the Enhancement of Learning Support, involved talking to practitioners and learners and scoping existing work and expertise in order to make recommendations for future training and development activities. Drawing on all the initial research findings, the final report identified a series of recommendations, which were accepted by LSIS and used to form the basis of a national development programme.

The 2nd phase of the project has been jointly undertaken by Natspec and the Association of Colleges (AOC), between September 2010 and March 2011. 20 lead colleges, both General Further Education Colleges and Independent Specialist Colleges, were supported by nine specialist advisers. Learners with learning difficulties and/or disabilities and learning support staff have continued to be heavily involved in the latest project. It aims to improve the quality of learning support for learners with learning difficulties and/or disabilities across the learning and skills sector and to promote and enhance the important work of learning support staff.

The development programme, which finished in April 2011, has produced a series of reports and resources. This report is one of those. The remaining materials can be accessed via the ELS section of the Excellence Gateway.

Executive Summary

This report summarises the findings of the Yorkshire and Humberside project research into the use of technology, undertaken as part of the Enhancement of Learning Support programme. It explores and exemplifies effective practice in the use of technology to support learning and promote independence and makes recommendations for future activities and developments to ensure that the use of technology is maximised and promoted across the sector. The project activity has been led by Henshaws College and Sheffield College with the support of JISCTechdis and the Yorkshire & Humber Regional Support Centre.

Henshaws College and Sheffield College are two different colleges in terms of scope, provision and size and this project provided an excellent opportunity to work together to identify best practice in the use of technology. The project activity highlighted the positive impact of technology on the access, participation, learning and achievement that promotes greater degrees of independence for learners with learning difficulties and/or disabilities in different contexts. It introduced delegates to a wide range of technology resources which are readily available, whose use can be both life enhancing and empowering and can significantly aide independence. (Annex A) The role of learning support assistants in supporting learners to use technology is crucial to optimising the learning experience. Training in the use of technology is important to ensure that

learning support assistants are able to offer the most effective support. Key to both colleges is the strategic planning and senior management commitment to technology. The integration of technology into curriculum needs a strategic approach with an infrastructure that supports developments for learners that meets individual needs. The evaluations and feedback from the regional network meetings highlight the crucial role that technology can play in promoting independence.

Recommendations

The following points are a summary of the key recommendations formulated from feedback from participants and contributors of the two regional events at York, and Sheffield and the ELS national conference in Warrington:

- The support and commitment of senior management to the use of technology to aid learning and promote independence is essential;
- A technology strategy is essential to ensure that independence is promoted and student success optimised;
- Infrastructure in terms of technical and teaching staff and hardware/ software needs to be focused on supporting student access, participation, learning and achievement;
- Training and development for staff and students in the use of technology is crucial;
- Modify and adapt existing, affordable, off the shelf ILT;
- Providers need to be proactive at bidding for additional funding;
- Technical IT roles need to be broadened to support access and training in using technology to support teaching and learning; and
- CPD should be built into LSA contracts as a requirement.

Introduction

This report and the associated resources have been developed and produced by the Yorkshire and Humber Region between October 2010 and March 2011 as part of the LSIS funded Enhancement of Learning Support Implementation Project, conducted by the National Association of Specialist Colleges (Natspec) and the Association of Colleges (AoC) and with the support of JISC TechDis.

Aim

This project aimed to explore the ways in which technology can support greater independence for learners and to identify the implications for the deployment and training of LSAs.

Rationale

Technology, be it specialised or 'high street', can be used creatively to promote increased independence for learners and reduce their reliance on physical support. This does not exclude a role for Learning Support Assistants (LSAs), who need to develop confidence in supporting learners to use their technology effectively.

Outputs

A report with practical examples, tested out in colleges, outlining ways in which technology can support greater independence for learners and the implications for the deployment and training of LSAs.

Methodology/Approach

The project commenced in October 2010, with a general FE college , Sheffield college and an independent specialist college, Henshaws colleges working together to identify best practice from their experience of engaging with technology through the role of their learning support assistants to support learners with learning difficulties and disabilities. The project was supported by JISC TechDIS and the Yorkshire & Humber Regional Support Centre.

Earlier discussions identified a range of diverse practice across both colleges and some challenges as well. It was agreed that it would also be important to capture wider practice across the Yorkshire and Humber region. The following steps were taken to capture the information:

- Several meetings were held between Henshaws College, Sheffield College, JISC Techdis and the Yorkshire and Humber Regional Support Centre to plan the investigation of effective practice in the sector regarding the use of technology;

- Two regional network meetings in November 2011 and February 2012 were held to gather the insight, information and knowledge of the practitioner community to ensure that as many people as possible can contribute to the development of resources;

- A questionnaire was designed to find out about current practice in using technology, to identify effective practice, the benefits of using technology and areas for development. The questionnaire used survey monkey and was distributed to LSAs and their managers in the region;

- A case study approach was used to identify and collate examples of effective practice and to demonstrate practical examples of using technology with learners. A template to collect case study data was developed (Annex B) and nine case studies were collected from the two lead colleges and are presented in Annex C. The research and feedback was designed to identify the potential impact of technology on learners in promoting independence and reducing the need for support to varying degrees depending upon the individual learner;

- Specialist support and expertise was provided by linking with Techdis to explore current solutions and future potential;

- An analysis of the key messages from research on the relationship between technology initiatives and Ofsted grades was undertaken; and

- Presentation and discussion of the findings was undertaken at the Enhancement of Learning Support Northern Conference to develop and refine the findings.

Findings and Outcomes

First regional event

Held in November 2010, the first regional event aimed to introduce the Enhancement of Learning Support Programme and the regional project.

There were workshops on the creative use of technology, supporting learners, using mobile technologies and ways of using mainstream computer hardware in place of specialist assistive technology. The event also provided the opportunity to gather participants views, based on their experiences, by sharing information about what they considered to be the one 'must have' piece of portable technology that can be used to support teaching and learning. They also considered how they might use technology to improve the quality of their teaching and learning.

The events were well attended and the feedback from delegates was very positive.

The key messages from the first regional event were as follows:

- Developing, optimising and increasing access to Information Learning Technology (ILT) requires the support of senior management;

- Infrastructure in terms of technical and teaching staff and hardware/ software is essential to promote ILT;

- A targeted strategy is required to implement training and support to develop ILT in the staff teams;

- Time is needed for training and development for both staff and learners;

- Learners who are trained and experienced in using technology can be invaluable in training their peers;

- Providers need to be proactive at bidding for additional funding;

- Existing, affordable, off the shelf ILT can be modified and adapted to support learning and promote independence;

- Technical ILT roles need to be broadened to support access and training in using technology;

- JISC Regional Support Centres (RSC) provide useful and free training and support which is valued by the sector– Out of the Box; and

- ILT does not have to be expensive.

The evaluation feedback confirmed that whilst some technologies were already being used by the LSA 's such as Asus net book, digital cameras/ video, digital voice recorders, and the iPod delegates were keen to explore different technologies that could support them in their roles and requested that the second regional event allowed them to do this.

Second regional event

Held in February 2011, the second regional event aimed to give delegates the opportunity to practically use technologies that they had not previously engaged with.

The programme included:

- Examples of technology to view and try including i-pod Touch;

- i-pad, Wii, Xerte, tablet touch screens and more;

- Input from JISC TechDis and the Regional Support Centre (RSC);

- Learners views on the impact and benefits of engaging with technology; and

- Practitioners showcasing the effective use of technology.

The event provided:

- Hands on workshops to try a wide range and variety of technology;

- Practical examples of affordable and accessible technology; and

- Practical tips, advice and examples of effective practice.

Delegates were able to evaluate their own skills in the use of technology and identify areas for further development.

The feedback from the second regional event was very positive. Delegates felt very strongly that training to support the use of technology was very important and that access to continuing professional development (CPD) should be built into LSA contracts as a requirement

Comments from the day included:

- A range of interesting work shops with different technology demonstrations;
- Wii, a great resource to engage learners;
- We need to think about more accessible media equipment;
- Need more drive from the top for us to embrace Technology;
- Liked the day very much , especially networking opportunities and using a range of resources;
- Opened my eyes to using a Wii in a more educational setting;
- Can see lots of potential for getting learners engaged using the Wii;
- Very useful day - didn't know about the photo channel, really interactive stuff;
- Liked the visual step by step guidance received on the day;
- Staff training is essential should be a feature of all support;
- Good to let people play with the equipment and for delegates to engage if they can; and
- More strategic lead in CPD from Learning support assistants from the top.

Survey

A questionnaire was developed and issued to LSAs and their managers across the Yorkshire and Humber region. The aim of the questionnaire was to identify challenges, development needs and best practice for learning support staff. There were 25 responses to the survey. The results of the questionnaire are in Annex D

The key messages from the survey:

- That only 37% of the respondents' organisations had a strategy to manage how learning support staff engage with and use technology to support learning within their organisations;
- 95 % confirmed that technology does support learning and achievement for learners with learning difficulties and/or disabilities;
- That a diverse range of technology is being used effectively to support learners with learning difficulties and/or disabilities which include:
  - IT software such as Inspirations Text read and write: physical things such as large screens adjustable tables, mice and keyboards;

- Text help, Dragon NaturallySpeaking, Pulse pen, Intel reader, screen;
- Lap tops Computers - Word, Publisher, PowerPoint, Dragons - Touch Screen Learners own communication aids Media Interactive resources (ICT) Mobile phones - student owned Whiteboard/Smart boards Wii Internet;
- Screen readers and magnifiers. Braillenotes, cctv handheld/desktop. tactile diagram machine daisy players scanner/readers;
- Various Specific software packages including Jaws, Kurzweill; and
- Makaton symbol software, Text to speech, Accessibility software, large keyboards, mice, adaptive technology for all subjects, laptops and netbooks, dictation software, overlays.

- An overwhelming finding form the survey was that using technology has a significant positive impact on learning and achievement for learners with learning difficulties and/or disabilities. Below are a few comments from respondents:

"Having these can make a lot of difference to student's success such as passing the exam that gets them in to university or just giving them the confidence and independence to manage their own lives."
"Huge impact on accessibility. Dragon NaturallySpeaking is used in examinations and can mean the difference between ungraded and a grade A. Some students who have physical disabilities depend on it."
"Technology overcomes all barriers, makes learning fun & accessible therefore increasing achievement. I don't know of any learner who doesn't like going on a computer, having a phone, iPod, iPhone or a lap top, they pick things up almost instinctively so they can be like everyone else"
"Allows students to participate fully in class activities, and giving them learning independence outside of class to complete assignments. Allowing the student to reach their full academic potential"

- 83 % of respondents confirmed that technology supports learners independence and reduces the need for support; and
- 76 % confirmed that training and development is needed for using technology to support learners to stay updated and have the confidence to use the technology.

Case studies

Case studies and examples of effective practice were identified and collated to demonstrate practical examples of using technology with learners. Staff at both Henshaws College and Sheffield College used the case study template to identify effective practice in relation to using technology to support learning and promoting independence. Some of this activity was focused on an individual level and some at group level. A variety of written case studies are provided in Annex C.

The use of Technology at Henshaws College:

At Henshaws College technology is integrated throughout the curriculum, the extended provision and promoted to parents/carers and other key stakeholders. The implementation of an ILT strategy has effectively promoted the use of technology at all levels for the benefit of the student to increase access, participation, learning and achievement to promote independence and support successful transitions.

Video of the BECTA Next Generation Learning award highlighting the use of technology at Henshaws College

The use of Technology at Sheffield College:

At Sheffield College technology is promoted throughout the curriculum at all levels and in direct response to the assessed needs of the individuals taking into account the impact of their disability on their learning. The introduction of new technologies for learners with learning difficulties and /or disabilities into the curriculum has massively benefited access for all learners and raised the awareness of staff about the possibilities and potential of assistive and adaptive technology. Learners have experienced new found independence and increased levels of motivation that promote full inclusion and success in their learning processes.

The Molenet Project introduced into Sheffield City College has a vast range of mobile technology that gives instant access to the internet through hand held devices. It has significantly shifted the culture of the College from restrictive practice around mobiles to one that welcomed technology into the classroom to enhance the learning process and strategies.

Quote from Heather Macdonald, principal Sheffield college:

"The Sheffield College has a long history in the promotion of new technologies to enhance learning support and has a strategic commitment to embed assistive and adaptive technologies in all areas across the College in the pursuit of excellence. It is essential that ILT strategies are driven by the Senior Managers

of the College and are backed up with professional development programmes to enable the embedding of ILT across all our provision."

The project activity has confirmed that a range of technology is being used effectively by providers including Henshaws College and Sheffield College, and promoted by organisations such as the Regional Support Centre and JISC Techdis. A list of hardware/software and links to resources can be found at Annex A.

The research undertaken and feedback gathered during the project has clearly identified the potential impact of technology on learners in promoting independence and reducing the need for support to varying degrees, depending upon the individual learner.

The technology used varies widely, ranging from household equipment such as talking microwaves to specialist equipment such as VOCAs. The range of students included all levels with a particular focus on students with learning difficulties and/or disabilities who were participating on learning programmes from Entry Level 1 up to Level 2. The breadth of technology and how it is used also varies widely in providers depending upon the organisational strategy and commitment to the utilisation of technology.

JISC TechDis

JISC Techdis have been delighted to be part of the ELS project in the Yorkshire and Humber region. At the regional events they found it heartening to have so many keen and enthusiastic learning support staff taking part.

The main focus for the regional events was using the ordinary to create the extra-ordinary. This involved highlighting the existing features within both the Microsoft Office products and other commonly used software applications like Adobe Acrobat PDF reader. The workshops included the use of audio for creating innovative interactive worksheets for use either in the classroom on aIWB or as consolidation and differentiation on a virtual learning environment. Learning support assistants and managers valued this in put and also the sign post to the range of JISC TechDis resources that are available for them.

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The following links show examples of technology being used. The first film clip shows a student from Henshaws College demonstrating how to use Clicker.

The second film clip shows a student also from Henshaws college using photographs as an attainment strategy for sequencing in a simple task.

Key messages from research on the relationship between technology initiatives and Ofsted grades

JISC TechDis has been successfully managing Learning and Skills Council (LSC) funded Independent Specialist Colleges' (ISCs') technology initiatives for the last six years. This period has seen the e-maturity of colleges grow exponentially with 45 of the 58 ISCs being fully or partially engaged with technology initiatives.

Recent internal research undertaken by JISC TechDis clearly shows that there is a positive relationship between Ofsted grades and engagement with technology initiatives.

- Many colleges have become fully engaged in technology, including all the Grade 1 colleges. Technology helps promote independent learning.

- Most large ISCs are fully engaged in technology; most medium are partly engaged and most small are not engaged**.** It is vital that, for smaller colleges in particular, development time and support is available to enable them to fully embrace technology.

- Technology is not flagged up sufficiently in the Ofsted reports but there is a great amount of excellent practice that Colleges need to promote to the Inspectorate.

The JISC TechDis research of ISC colleges demonstrates that the most effective specialist colleges from an Ofsted perspective are fully engaged with technologies that promote independent learning.

Learning Support

Technology can greatly aid access to curriculum for learners with learning difficulties and/or disabilities. The wide range of technology available can be used to support access to a wide range of learning activities. Technology can be used to motivate students and increase participation. Students become more engaged in activities when an element of technology is introduced to support participation. The range of technology used depends upon the context and the individual involved. When learning is taking place the use of technology underpins activity and supports knowledge, understanding and skills development. Achievement of goals, targets and outcomes can be accelerated and enhanced by the use of technology especially at an individual and group level. The use of technology has to be planned, meaningful and relevant to the individual student and not used for the sake of technology.

Promoting Independence

For any student technology can greatly increase independence and reduce the need for support. Initially students often need a period of time to explore, experiment and learn to use various technology and become motivated once the benefits are realised. Key to this period is assessment of technology needs to

identify what equipment and strategies can be used. The outcome of the assessment can then inform planning on an individual level to support cross college activity and maximise opportunities for promoting independence.

Read an article about ICT - Making Greater Independence a Reality

Continuous professional development (CPD)

The role of learning support staff is crucial to students using technology effectively. It is the role of learning support staff to understand how the technology works and how the technology promotes independence for the students they support.

Hence learning support staff do need training on general and specific technology. They also need training on technology that is particularly relevant to the students that they support on a regular basis. Once staff receive initial training they are then in a position to develop their own knowledge and skills of technology relating to individual students that they support.

To ensure that technology is effectively used. It is essential that CPD to address training needs is a central part of the ILT strategy.

Impact and benefits for students

The following points summarise the main points relating to the impact on students who use technology:

- The project has captured the benefit of students engaging with technology, it clearly motivates and provides innovative ways of engaging students;
- Technology has enabled students with learning difficulties and/or disabilities to be able to more readily progress in their learning; and
- Technology clearly supports the role of the LSA and enables them to offer more varied and interesting learning opportunities.

Recommendations

The following points are a summary of the key recommendations formulated from feedback from participants and contributors of the two regional events at York, and Sheffield and the ELS national conference in Warrington:

- The support and commitment of senior management to the use of technology to aid learning and promote independence is essential;
- A technology strategy is essential to ensure that independence is promoted and student success optimised;

- Infrastructure in terms of technical and teaching staff and hardware/ software needs to be focused on supporting student access, participation, learning and achievement;

- Training and development for staff and students in the use of technology is crucial;

- Modify and adapt existing, affordable, off the shelf ILT;

- Providers need to be proactive at bidding for additional funding;

- Technical IT roles need to be broadened to support access and training in using technology to support teaching and learning; and

- CPD should be built into LSA contracts as a requirement.

One of the key recommendations is the need for managers and leaders to have a strategy in place so that they can effectively plan their engagement with technology. This will enable providers to be better placed to effectively use technology in leadership and management and for LSA's in their teaching and learning role. LSIS may wish to consider what support may be available for managers in the development of technology strategies.

JISC Regional Support Centres exist to advise learning providers of designated sectors to realise their ambitions in deployment of ICT to achieve their organisational mission. *More information about JISC Regional Support Centres*.

Conclusion

The project has confirmed that where a strategic ILT plan is in place and the use of technology is planned and supported by senior managers; when the training and development support is available for LSAs and the infrastructure and resources are in place, this leads to positive outcomes for all concerned. The feedback from the conferences and the questionnaire highlighted the positive aspects of technology on student access, participation, learning and achievement. Those learning providers who have embraced and embedded technology into their organisational culture increase the opportunities for students to succeed and gain greater independence. For those students with learning difficulties and/or disabilities the impact of technology on their experience can be hugely beneficial to promoting independence and reducing the need for, but not the removal of, support.

Annex A: A list of hardware/software and links to resources

Hardware	Description
Alphasmart	Basic but very robust 'laptop' type device for adding and editing text.
Asus Netbook	Small notebook, with solid state storage (no moving parts)
BE Bookreader	e-book reader with other functions
Braillesense	Braille note taker, allowing the user to take notes with the Braille keyboard, it also acts as word processor, email, web browser, MP3 player and digital audio recorder.
Digimemo	Digital notebook which records keystrokes on a page using a supplied digital pen.
Digipen	Digital device which records the written word as it is being written and can then email the results back to the pc.
Digital camera / Video / wearable camcorder	Device for capture of static or moving images.
Digital voice recorder	Device for capture of voice or other audio recording.
DISGO fun video cameras	Simple cheap video camera
Fizzbook Spin	iPad alternative with windows operating system.
Gold Touch keyboard	Adjustable keyboards for those with difficulties accessing a standard keyboard
Gold Touch Numeric	Adjustable numeric keypad

Keypad	
Graphic tablet	Computer that allows one to hand-draw images and graphics
iPad	Tablet from Apple with very simple graphic interface
iPod touch / iPod Nano	Small touch screen handheld device for storing and retrieving digital content.
Livescribe pulse pen	Digital recorder which records both the writing on a specially supplied notebook and the audio.
Mac book	Apple Macintosh laptop
MileStone DAISY player	DAISY is a format that makes a CD work more like a book. For instance, you can make bookmarks in the audio. DAISY also makes it possible to put huge amounts of audio onto just one CD.
Mobile phones	Cell phone with various other functions depending on model
Nintendo Dsi / SonyPSP	Small hand held device for gaming, but has many other uses for education and communication
Nintendo Wii	Console which allows 'motion control gaming' using an infra red 'Wii-mote'
Penfriend audio labeller	Hand held device allowing the user to create audio labels – used by blind users but excellent for teaching and learning
Polaroid Pogo	Small printer which produces photos direct from mobile phone.
Powerbox 7	Assistive technology which links to a tablet PC enabling communication, amplification, and can be wheelchair mounted.

Promethean ActivSlate / ActivHub	Enables the control of an interactive white board from anywhere in the teaching space.
Samsung Q1 (Ultra Mobile PC) Galaxy Tab	Touch screen tablet pc.
Sony PSP	Portable Sony gaming device. Can also be used for video and still images.
Toshiba mini netbook	Small net book.

Software	Description
AccessApps / MyStudyBar etc	Collection of free software applications to assist and complement teaching and learning
app iPrompts	Picture based iphone app for organisation
Clicker	Scanning software which allows switch users to interact with a pc
Dragon naturally speaking (voice recognition)	Speech recognition software which converts the spoken word to text on the computer screen
Grid 2	Scanning software with additional functionality to enable environmental, system and other controls,
Interactive Word / PowerPoint	Ways to use Microsoft Word and PowerPoint in creative and innovative ways.
Penfriend XL Portable	Predictive text software
Screenruler suite software	Virtual ruler for the screen – useful in image editing.
Sonocent audio	Software to facilitate taking live audio notes

Supernova	Screen reader and magnification software for users with a visual impairment.
Text to speech (Text help / WordRead	Software to aid teaching and learning by creating audio version of written text. It also includes a number of study aids.
Xerte	Free learning object authoring toolkit. It enables the creating of interactive and accessible learning objects from a series of wizards.

Annex B: Case study template

Case study – sharing effective practice: Using Technology

Please provide us with an example(s) of how you have effectively used technology with learners. (This could be practice, activity, example, process or resource) ***e.g. Using video/ audio evidence to capture the learning experience and show progress and achievement made by learners.***	**Evidence to support** (What evidence do you have?)
What? (What is it that you do that is particularly good?)	
When? (When has this happened or when do you do this?)	
Why? (Why do you do this?)	
The Impact: What difference does your practice make or what benefits do is it have: To the learners? To other stakeholders? To other aspects of your provision? To the initial issue you wanted to address? **Your views are important to us, if you are happy to provide a quote and give us your consent to name you in the final project report. Please provide a quote below :**	

Annex C: Case studies

A range of case studies that demonstrate the benefits of engaging with technology and how this improves the learner experience

Name: Sophie

Medical Condition: Mitochondrial disorder, mild learning difficulty. Sophie has been left with limited arm movement, no mobility and speech problems after developing chicken pox in her early life.

Impact of IT: Sophie had a very keen interest in ILT prior to coming to Henshaws, having used a Lightwriter communication aid as her primary means for communication for most of her adult life. Since starting at college we have nurtured this interest in technology. This includes two new developments with regards to her accessing a computer.

Initially Sophie was using a standard keyboard with a rollerball mouse which, whilst she was very adept at using it, was difficult to set up due to her limited movement. Upon investigating other ways of accessing computers it was discovered that Sophie's wheelchair was Bluetooth enabled and we were therefore able to configure it to Windows and have it act as a mouse. This was then coupled with the on screen keyboard which is a standard feature of later versions of Windows, instantly increasing her independence in using ICT as she no longer had to rely on someone else to set her up with equipment, it was all done through her wheelchair control stick.

We have recently begun to try a new method of access for typing for Sophie which is to use the audio out from her Lightwriter and plugging it into the microphone socket on a computer. This has enabled Sophie to use the Speech Recognition Software in Windows to open and close programmes, navigate the internet and use Word, thus in theory speeding up the process compared to having to use a mouse to type on the on screen keyboard.

Name: Daniel

Medical Condition: Daniel has a left sided hemiplaegia. He is hydrocephalic and wears a shunt. He has severe learning difficulties.

Impact of IT: When Daniel started at Henshaws he was initially reluctant to try new activities, especially with new people, showed some limited social skills and preferred to stick to just familiar activities. He had chosen IT Club for his enrichment session and chose to play the Wii as this was something which he had done at home and enjoyed. Initially Daniel played individually on Wii Sports but as the term has progressed he began to play interactively with another student, showing them what they needed to do to play the game. He is now playing in a group of four, encouraging the other students when they are playing and taking part in conversations with his peers. This engagement in social activity has now extended beyond the IT session and Daniel now has a very active

social life within college. Using the Wii has helped him to positively interact with others and improve his social skills and confidence.

Name: Craig

Medical Condition: Optic nerve hypoplasia (perception of light only)

Moderate learning difficulties

Impact of IT: Craig is keenly motivated by IT. Prior to attending Henshaws, however, he had little use of 'screen-readers;' a piece of software that reads out the contents of the display so that a blind person is able to navigate a PC. At first Craig required support to use screen-readers, however after being taught the functions this software has to offer, he quickly learned how to use it to the point where he is now able to independently navigate a computer, browse the Internet and after much perseverance, even edit audio. Craig is the resident DJ for the Friday night disco, so he has been able to transfer his use of screen-reader technology to enhance his leisure time by producing music playlists which he can play at the disco. These skills have enabled Craig to have complete independent computer access and he has now started teaching his friends the skills he has learned.

Name: Samara

Medical condition: Visual Impairment

Impact of IT: Samara is 18 years old, in her second year at Sheffield City College on a Level 2 Office Administration course. Samara is a highly capable and motivated Visually Impaired (VI) student. She is a Braille reader and is becoming a proficient touch-typist. This year we have encouraged her use of technologies such as. text reading (Supernova) software, in order to enhance her independent study skills and mobility.

In conjunction with the above we have had tutorial sessions in using Braille Sense (a portable notetaker), which has numerous enabling functions for VI users. These include; email, word processor, scheduler, radio, web browser, digital recorder and an MP3 player. It has a text display (for sighted users), audio playback of content and importantly, has pop-up pins, updating in real-time, Braille text keyed by the operator. It outputs to a PC, printer or Braille embosser and to storage, such as compact flash. Braille sense can be used via mains or rechargeable battery and has interfaces with external devices via USB, microphone, headphones, ethernet , with ports for VGA, Serial and Parallel devices.

This technology has been used with other VI students too. All have found it accessible, easy to understand and handle. We feel it is useful in the transition process between the more traditionally taught 'Braille scholar' and the digital native generation. One of its strengths is its versatility, enabling users to interface with varying media and types of data in ways that are common and accessible to VI users from different generations and abilities.

At a recent AOC event Samara demonstrated Supernova and the Braille Sense. Both these technologies have proven empowering in interfacing to her coursework and to the wider world, via media devices and the internet. As Samara puts in her own words;

“I have found it useful for word processing and making any notes that need to be taken in class, e.g. English revision for descriptive writing. I think it has great potential”

Case study – sharing best practice: Using Wii Fit in Maths

<table>
<tr><th>Practice, activity, example, process, resource, method that effectively uses technology to support teaching, learning and attainment that promotes independent learning</th><th>Evidence to support (What evidence do you have?) Please include technologies used.</th></tr>
<tr><td>What? (What is it that you do that is particularly good?)
Use of the Wii fit as assistive adaptive hardware.
Used with Entry level 1 math students.</td><td rowspan="4">http://www.youtube.com/watch?v=HiS_Cf56zj0</td></tr>
<tr><td>When? (When has this happened or when do you do this?)
During a class session.</td></tr>
<tr><td>Why? (Why do you do this?)
These entry level 1 math students have low numerical skills, poor handwriting skills and poor reading skills and writing skills. They also find it difficult to apply calculations. The Wii helped the student use their body (kinaesthetic) to make these calculations in a fun and entertaining way.</td></tr>
<tr><td>The Impact: What difference does your practice make or what benefits does it have:
Confidence boost;
Better focus;
Independence;
Cooperation & team work; and
Supporting a range of learning styles.
The technology is easy enough to use that the tutor and class feel they could run the workshop again, but with harder/trickier calculations.

“As you can see from the short shots of the students using the Wii in our Friday maths lesson, they thoroughly enjoyed it. Used</td></tr>
</table>

as an educational tool, in this instance to move the body to hit multiples that add up to ten, they learn, have fun, it builds up their social skills, brings friendly competition into the frame to push them to improve, and more importantly this is a move away from the traditional style teaching of transmission that the research shows, does not work for many students, especially if their learning styles are practical or kinaesthetic." (Tina, Entry level 1 maths tutor)	

Case study – sharing best practice: Using mobile devices for documenting learning and achievement

Practice, activity, example, process, resource, method that effectively uses technology to support teaching, learning and attainment that promotes independent learning	**Evidence to support** (What evidence do you have?) Please include technologies used.
What? (What is it that you do that is particularly good?) • Use of mobile devices to allow foundation travel & tourism students to use evidence for portfolio building.	http://www.youtube.com/watch?v=evd4fJLNi4Q
When? (When has this happened or when do you do this?) • Field trip (walk around Rivelin Valley, Sheffield).	
Why? (Why do you do this?) • Students with low level literacy skills were falling behind in their work and needed a way of documenting evidence to put in a portfolio.	
The Impact: What difference does your practice make or what benefits does it have: • Students found the use of mobile devices (cameras, flip cams) interesting, fun and useful for collecting data for their work; • Improved map reading skills; • Found the use of these devices meaningful and were able to identify with the task; and	

• Makes the learners keen. *"I have found these mobile devices not only useful, but essential for learning, especially for foundation level students"* (Heather, Travel & Tourism tutor)	

Case study – sharing best practice: Using a digital abacus

Practice, activity, example, process, resource, method that effectively uses technology to support teaching, learning and attainment that promotes independent learning	**Evidence to support** (What evidence do you have?) Please include technologies used.
What? (What is it that you do that is particularly good?) • Designed and applied an abacus widget that allowed a student with poor motor skills to complete an initial assessment. (Widget developed by the Accessibility Research Centre at Teesside University).	Digital Abacus
When? (When has this happened or when do you do this?) • In the classroom.	
Why? (Why do you do this?) • A Student's poor motor skills meant that the learner could not use a pen and paper to work out calculations, and therefore was unable to score an accurate mark on an initial assessment. In the past, students in a similar position would have to rely on note takers for such a task, but found it hard to explain how to work out a long mathematical equation.	
The Impact: What difference does your practice make or what benefits does it have: • Learner able to complete tasks without the support of an assistant; • Increased independence; • Widget could eventually be embedded in operating system and used throughout college; and • Student could learn 'old style' counting skills.	

Case study – sharing best practice: Using mobile technology to support attainment

Practice, activity, example, process, resource, method that effectively uses technology to support teaching, learning and attainment that promotes independent learning	**Evidence to support** (What evidence do you have?)
What? (What is it that you do that is particularly good?) • Use of mobile technology to aid learners with communication difficulties.	Various videos and images showing learners completing practical tasks
When? (When has this happened or when do you do this?) • On residential visits, outside college visits, any practical tasks undertaken in college. • Work placements – step by step tasks recorded on video for reinforcement in college.	Video evidence
Why? (Why do you do this?) • Students with communication difficulties find it easier to relate to an image or video of themselves performing a task, rather than just talk about it. They can point out good practice, and identify areas for improvement.	
The Impact: What difference does your practice make or what benefits does it have: • Learners are motivated using mobile technology which they tend to be familiar with, devices such as mobile phones, Nintendo DS, Sony PSP and Flip Video Cameras enable students to document their own work and evidence; • Awarding bodies are becoming more accepting of video and photographic evidence to support work; and • Photographic and video evidence can be cross referenced with other units of work, within the same qualification. For example, video evidence of students performing independent tasks while on a residential can be cross referenced to Work Skills units.	

Case study – sharing best practice: Using voice recognition software

Practice, activity, example, process, resource, method that effectively uses technology to support teaching, learning and attainment that promotes independent learning	**Evidence to support** (What evidence do you have?)
What? (What is it that you do that is particularly good?) • Use of voice recognition software for students with poor handwriting and literacy skills.	Students work, completed with the use of Voice Recognition Software.
When? (When has this happened or when do you do this?) • During assignment support sessions. • In class.	Students work, completed with the use of Voice Recognition Software.
Why? (Why do you do this?) • Students with poor handwriting and literacy skills can find expressing themselves through written word very difficult, and can express themselves through speaking more effectively.	
The Impact: What difference does your practice make or what benefits does it have: • Learners increase in confidence through better assignment work as a result of using voice recognition software as opposed to written work. Students check work and have it read back to them which helps reinforce correct spelling and grammar; • Students gain independence through learning to use the software and completing a higher standard of work, individually, without as much support; and • Many students find writing long essays tiring, both mentally and physically, where as a long essay can be completed in less time through the use of this software.	Student feedback sheets Students requesting copies of the software for home use.

Annex D: Use of technology in learning support

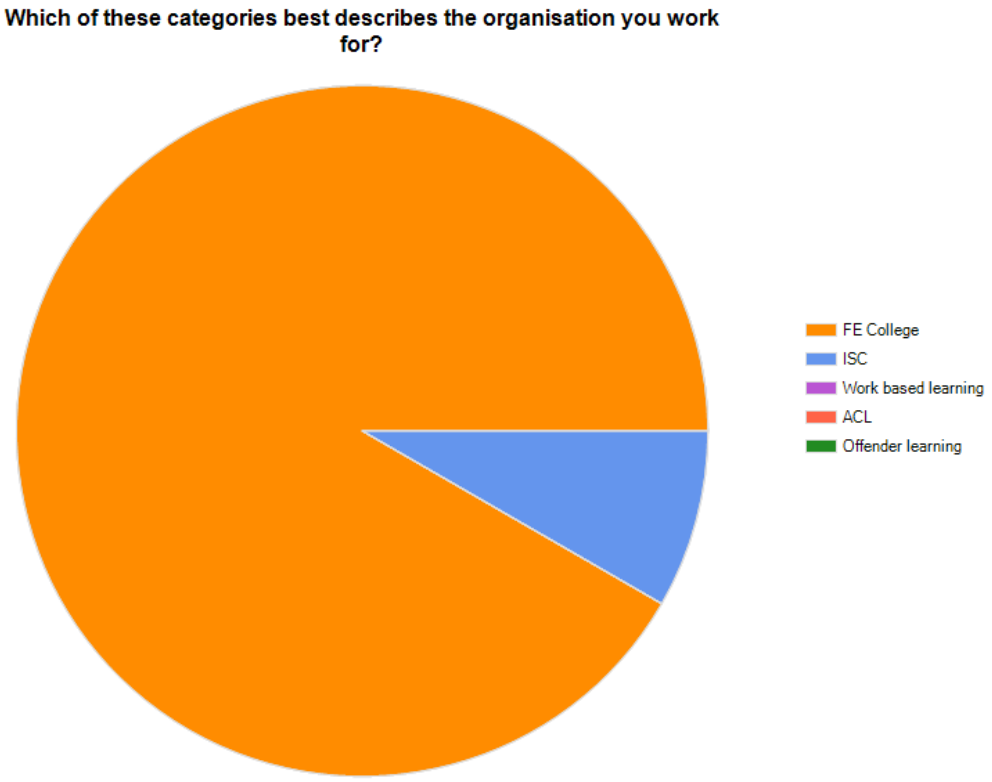
A questionnaire to gauge how technology is being used by learning support staff and their managers.

Q1. What is your job title?

A mixture of learning and learner support managers/coordinators, curriculum managers, learning support assistants, specialist learning support assistants, specialist tutors and learning advisors.

Q2. Which of these categories best describes the organisation you work for?

Of the respondents, 92% were from General Further Education colleges and 8% from Independent Specialist colleges.

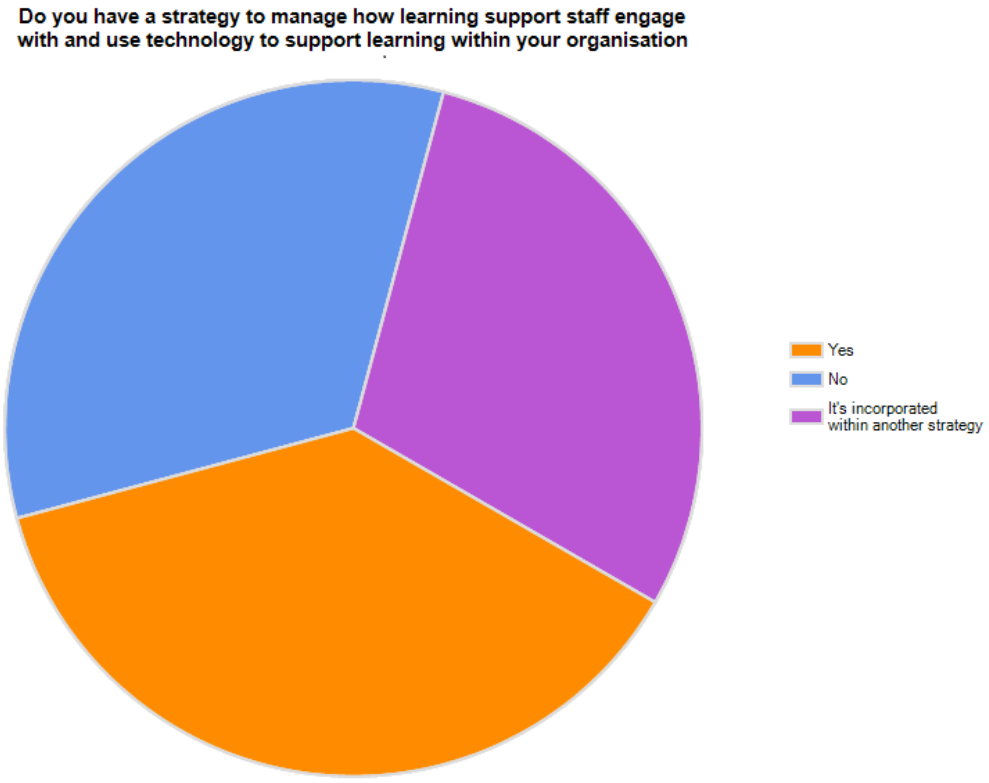


Q3. Approximately how many full or part-time learners with learning difficulties and/or disabilities does your organisation provide for?

Some providers did not know the answer to this question and answers ranged from 40 to 6,000.

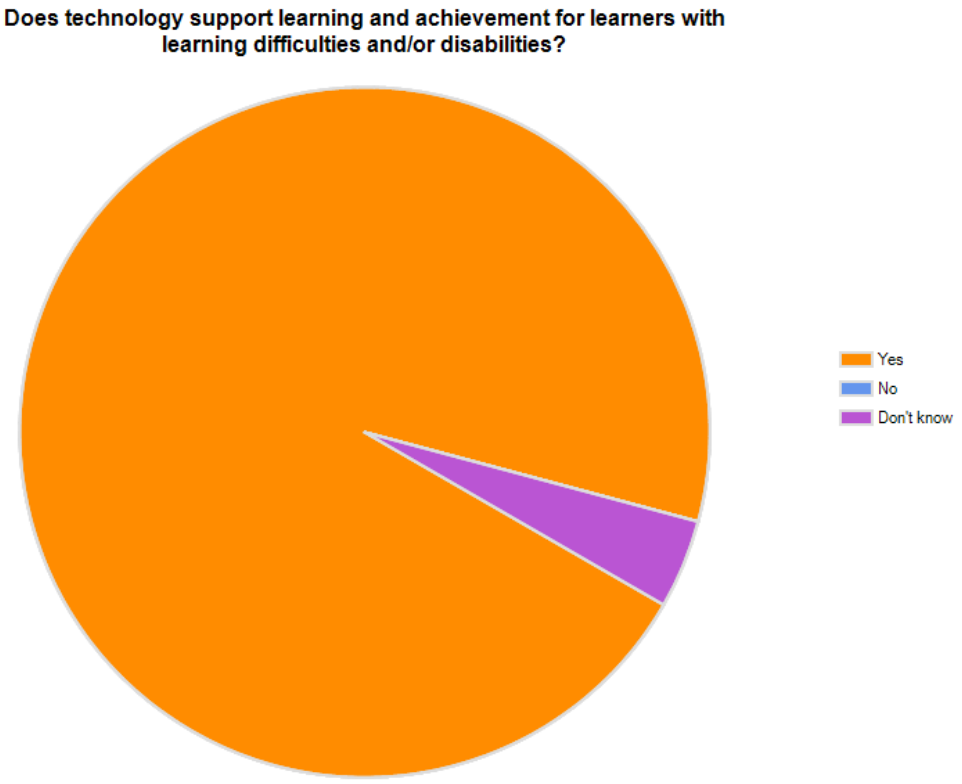
Q4. Do you have a strategy to manage how learning support staff engage with and use technology to support learning within your organisation?

Of the respondents, 38% said yes, 33% said no and 29% said it was incorporated into another strategy.



Q5. Does technology support learning and achievement for learners with learning difficulties and/or disabilities?

96% said yes and 4% said don't know.



Q6. What kinds of technology do you use to support learners with learning difficulties and/or disabilities? (Please list below)

The list of technology included many of the items and equipment listed in Annex A

Q7. Can you explain the impact and benefits of technology on learning and achievement for learners with learning difficulties and/or disabilities?

Below is a range of answers that demonstrates the benefit of engaging with technology for learners.

- Having these can make a lot of difference to students success such as passing the exam that gets them in to university or just giving them the confidence and independence to manage their own lives.

- Huge impact on accessibility. Dragon NaturallySpeaking is used in examinations and can mean the difference between a ungraded and a grade A. Some students who have physical disabilities depend on it.

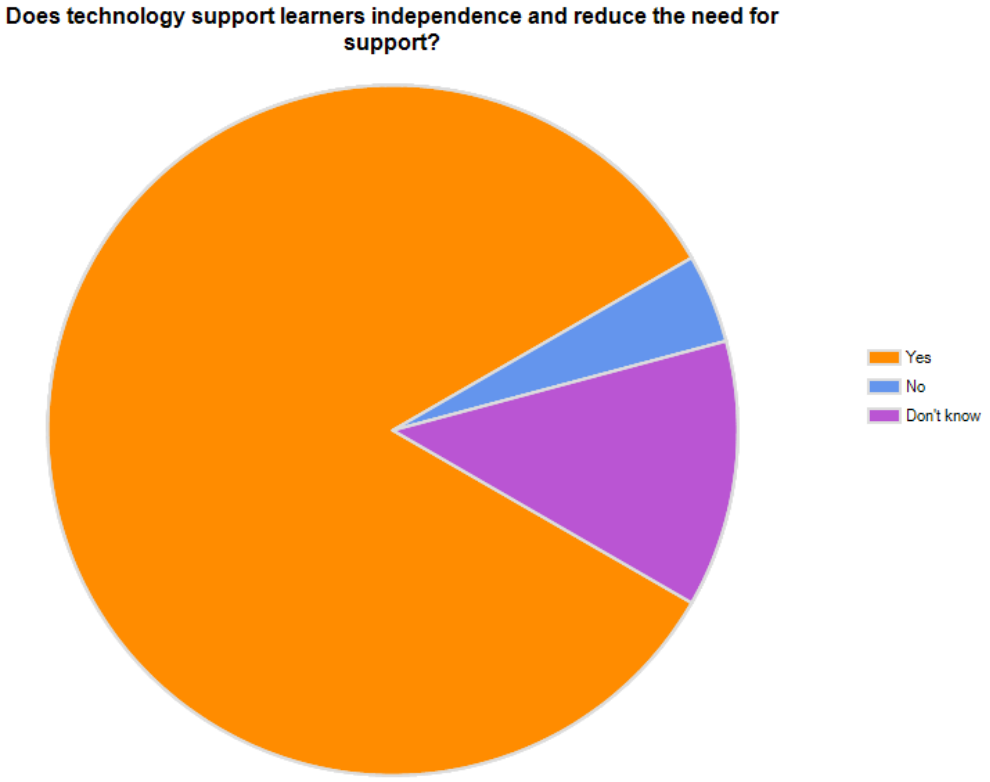
- Technology succumbs all barriers, makes learning fun & accessible therefore increasing achievement. I don't know of any learner who doesn't like going on a computer, having a phone, ipod, iphone or a lap top, they pick things up almost instinctively so can be like everyone else.

- Allows students to participate fully in class activities, and giving them learning independence outside of class to complete assignments.

- Ensuring their learning experience is as equitable as possible to other learners, engaging and all barriers possible are removed.
- Students find technology accessible - it is often their preferred method of working.
- Higher achievement levels. Provides a springboard into developing life skills beyond College / education. Raises employability.
- Able to support more learners with technology that would have previously been supported by a member of staff enabling us to provide more support for more learners.

Q8. Does technology support learners' independence and reduce the need for support?

Of the respondents, 83% said yes, 4% said no and 13% said don't know.



Q9. Do you have any examples of how technology supports independence and reduces the need for support?

Below is a range of answers that demonstrates how technology supports independence and reduces the need for support.

- Texthelp - helps with proof-reading Mind Genius - helps plan and structure their work.

- Being able to read text by themselves via text-to-speech applications or hardware, being able to take notes on an Alphasmart or laptop instead of having an LSA notetaker.

- Students using a braillenote are able to type up work quickly having been far slower using a ‘qwerty’ keyboard.

- Use of a laptop reduces the need for a scribe Use of accessibility software reduces the need for a screen reader.

- Voice recognition software helps students with writing difficulties produce assignments.

- Learners feel more self-confident and are willing to try new things out.

Q10. Is the use of technology working particularly well in any area? - if so, can you explain why you think this is so. Can you also briefly give an example of the technology and how it is used

Below is a selection of answers to the question:

- Dragon NaturallySpeaking for dyslexics and physical disability. Text help in lessons when students can cope with the vocabulary. Inspirations with planning and revision. Digital recorders for note-taking. Audio books for students to find reading difficult;

- I don't directory work with learners so am not aware of all technology used. However I am aware of the use of 'computers', Lap tops, Wii, the internet & e-mail which is a great communicator & works in all areas of formal teaching ie. English, Maths, ICT, Media & can also lend itself to other areas when required;

- Dyslexia- using the interactive whiteboard alongside inspiration to deliver multi sensory phonological lessons. These sessions have become increasingly active/interactive since I have been pursuing it, and because they can write in large letters on it, it increases kinaesthetic learning; and

- Simple things like the use of video clips in teaching and learning to promote knowledge retention Video teaching session so it can be played back over again for learners who have trouble grasping the key messages the first time.

Q11. What are your training and development needs for using technology to support learners?

Below is a selection of answers to the question:

- All staff need further training to help promote the technology - often forgotten in college;

- Want more training on smart board, more on moodle, podcasting, putting videos online, to create a bank of information that learners can easily access;

- I'd really like to use video more, but I've found it a nightmare saving files in the right format to play back. I've spent ages converting files, getting software installed etc. It must be easier than this, but I don't know how;

- How the use of hand held portable technology can promote engagement and learning;

- More training on a wider variety of technology available; and

- Need to learn how to work the software before trying to explain it to the students. Jaws in particular.

Q12. What CPD in-house training have you had in relation to technology? (please list)

The list was short with a mixture of the following: moodle, Jaws, text help, smart board, inspiration and Clait. Several respondents commented that they often train themselves on specific technology.

Q13. Any other comments about technology and its use with learners with learning difficulties and/or disabilities?

- We see technology with all our students regardless of their ability.

- The Department would be much less effective without the technology. Some students would not attend if it was not for the technology.

- This is an area we need investment, training & development, for teaching staff & learner assistants.

- The biggest issue in terms of using technology effectively is to raise staff awareness and remove any fear, therefore barriers to using technology. We would like to know more about what is available and generally acknowledged to be good.

- Using technology in LDD is proven to engage and stimulate learners. I use mobile technology whenever possible and have had excellent results but not many staff in our department use it. More training needs to be give to support lecturing staff on this topic.

This is such an interesting area, and I am really excited about how technology could make life so much easier for students with specific and general learning difficulties.