PERSONALISING LEARNING THROUGH THE USE OF TECHNOLOGY

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Abstract
In March 2005, the Department for Education and Skills (DfES) published its e-strategy, Harnessing Technology. Within this, two of its key objectives were: firstly to transform teaching and learning, and help to improve outcomes for children and young people, through shared ideas, more exciting lessons, and online help for professionals. Secondly, to engage ‘hard to reach’ learners, with special needs support, in more motivating ways of learning, and give them more choice about how and when they learn.

This paper reports findings from a research project, funded by Becta, which formed part of Becta’s broader role in shaping and delivering the government’s Harnessing Technology e-strategy. The project ran for seven months, from September 2007 to April 2008. It aimed to find out how learners and their representatives have influenced schools’ decisions to introduce, support and grow opportunities for personalising learning through the use of technology.

The paper focuses specifically on the key facilitators and barriers, from both staff and learner perspectives, which influence the level of personalised learning activities using digital technology in schools. The development of facilitators for pupils using technology within primary, secondary and special schools is complex and varied. Throughout this paper particular attention will be paid to ways in which specific groups, in some cases, hard to reach pupils, have benefited from digital technologies being used to personalise learning.
Introduction

The aim of the project was to find out how learners and their representatives have influenced schools’ decisions to introduce, support and grow opportunities for personalising learning through the use of technology. Thus, the project sought to find cases where learner demands, in terms of their use of technology, have had an impact on school planning, influenced school decisions about resourcing, and affected teaching and learning methods. Pivotal to the study was gaining an understanding of how learners’ demands about the ways they want to learn have shaped their school experiences. Throughout this paper we focus on empirical findings from the study and highlight factors which facilitate and restrict learners leading and influencing their learning through the use of digital technologies.

The project ran from September 2007 to March 2008. During this time research was conducted in 10 case study institutions, comprising of four primary schools, three secondary schools, one sixth form college and two schools with special educational needs (SEN) provision. Of the schools with SEN provision, one was a secondary school for pupils with moderate learning difficulties, with a large percentage of learners on the autistic spectrum; the other was a hearing impaired unit attached to a mainstream secondary school.

Methodology

A major challenge for the project was the selection of suitable case-study institutions. The chosen schools and colleges included a mix in terms of size, geographical location; socio-economic circumstances; urban / rural; percentage of SEN learners; and percentage of ethnic minority learners. The headteacher or contact teacher in these institutions expressed an interest in the project and in addition letters were sent to learners informing them about the project and asking if they would like to be included. All learners who received a letter expressed a willingness to be included.

Within each of the case study institutions documentation was analysed, learner activities identified by the institutions were observed and in-depth interviews were conducted with a range of staff, some learners and, where possible, governors and parent governors. The aim of the interviews was to help gain a clear picture of ways in which learning has been transformed through the learner-led or learner-influenced use of technology for personalising learning. In addition, the interviews allowed information to be gathered from staff and learners, in terms of specific examples of their involvement in this type of learning.

When interviewing learners from the schools and colleges we included an activity which we called the ‘Diamond 9’ (O’Kane, 2000). This was aimed at exploring the kinds of technology learners felt were important in helping their learning. Eighteen groups of learners participated in the Diamond 9 activity, they were asked to look at nine cards with pictures of a range of technologies (Mobile phone, Digital camera, Digital Video camera, Computer, Networking websites, PDAs (Personal Digital Assistants), Games console, Chat programs, Portable Music Player e.g. mp3) and to rank them in order of how much they supported their learning both in school and at home on the ‘diamond’ card. The main purpose of the activity was to encourage discussion amongst learners about how and when they used these technologies, rather than provide a clear and comprehensive rank order based on hardware and applications. Digital photos were taken of the finished results. The learner interviews and discussions which took place during and before and after the Diamond 9 activity were audio recorded and partially transcribed. In most cases, either one of the learners in the group or
the researcher videoed the activity. The audio and video recordings allowed the research team to re-visit and closely analyse the discussions which took place during the activity.

Below is an example of a completed Diamond 9 activity from one of the case study schools.

![Diamond 9 activity example]

**Methodological cautions**

Within the case study institutions, it was common for the headteacher or other senior member of staff to identify the interviewees. Thus, the findings reported are based on data from a limited number of selected staff and learners.

In order to maintain some consistency amongst learners in the group interviews, we invited participation from learners in Years 3 and 5 in primary schools and learners in Years 8 and 10 in secondary schools. In reality, not all schools could accommodate our requests and in some cases we spoke to learners in other year groups. We also suggested to the institutions that a mix of learners in terms of ability would be preferable, however, it appears that some of the learners involved were amongst the more able and articulate, or those more familiar with digital technology initiatives.

Our report relies significantly, though not exclusively, on the accounts of the teachers, other adults and learners interviewed. In all of the schools we were able to interview each of these
groups separately, thus, gaining the specific viewpoint of each of these groups. These accounts were supplemented by direct observation of activities considered by the school or college to match the focus of this project and in some cases, by documentation. Examples of additional practice relating to the ways learners and their representatives have used technology to help personalise learning were described to us through interviews, but we are aware that accounts can be problematic because they can tend towards idealism - though learners’ perspectives sometimes mitigated this.

Personalising Learning

Previous research into personalised learning by Sebba et al (2007) found that ‘participation’ was key to understanding personalised learning. This is emphasised in the writing of Ainscow (2006, 2) who suggested:

…learning is a personal process of meaning-making, with each participant in any activity ‘constructing’ their own version of that shared event. The implication is that even in what might be seen as a rather traditional lesson, with little apparent concession being made by the teacher to the individual differences of members of the class, each pupil defines the meaning of what occurs in relation to their previous experience. In this way, individuals do inevitably personalise the experience and, in so doing, construct forms of knowledge that may or may not relate to the purposes and understandings of the teacher.

This view of personalising learning has two implications. First, that in order to increase the opportunities to personalise learning, teachers need to draw out and build on prior experiences – this is not a new idea but it can be challenging to implement effectively. Secondly, this view implies the need for more formative assessment which draws out the diverse knowledge and understanding that individual learners may acquire during a lesson. This suggests that there is a need for higher order questioning (e.g. Baumfield et al, 2005) and assessment for learning (Black et al. 2003).

The national policy on personalised learning in England was launched at the North of England Conference in 2004 where Miliband stated that personalised learning could be described as:

*High expectations of every child, given practical form by high quality teaching based on a sound knowledge and understanding of each child’s needs. It is not individualised learning where pupils sit alone. Nor is it pupils left to their own devices - which too often reinforces low aspirations. It means shaping teaching around the way different youngsters learn; it means taking the care to nurture the unique talents of every pupil.* (Our bold, Miliband, 2004, 3).

Students might experience personalising learning while working individually, in small groups or in the whole class. Thus, personalising learning cannot be equated with individualised learning but it may include it. Underwood (2007), drawing on some of the wording of the original Miliband speech, defined the personalising of learning as:

*The tailoring of pedagogy, curriculum and learning support to meet the needs and aspirations of individual learners irrespective of ability, culture or social status in order to nurture the unique talents of every pupil.*
Thus, in this research we have sought examples that appear to create learning opportunities in which teaching is shaped around the way different youngsters learn. It is not about the identification of predetermined ‘learning styles’, but rather about teaching being responsive to the ongoing direction and feedback from learners. In this sense, learners are influencing and sometimes leading their own learning, which in the context of this project is sometimes enhanced by the use of technology.

Examples of learner decision-making in their use of digital technologies were of varying levels of importance. When asked what decisions they made, learners in one of the case study schools talked about being able to change the font colour and add a background to PowerPoint presentations. At the other end of the scale, some learners were given opportunities to choose which technologies best-suited the researching, recording and presentation of their work.

In order to understand more fully the sort of activities in which digital technologies were used to help learners manage and lead their own learning, some examples from the research are outlined below. These examples are divided into two types: learner-led and learner-influenced. We found relatively few examples of learners being involved in actually leading learning activities using digital technologies. Instead, it was more common to find digital technologies being used to support personalising learning where it had been initiated by staff and further developed by learners. For this reason we adopted the term ‘learner influence’ as it more accurately described the role learners played in personalising their learning using digital technologies.

**Examples of learner-led activities involving the use of technology**

In one of the case study institutions a Year 12 learner was not able to attend college for one lesson but was able to actively participate in the lesson, at her own request, from home via the learning platform. This learner asked a friend to text her when the lesson started, she then joined in the lesson through the learning platform. During the lesson she submitted work to the active online forum and uploaded a resource to ask other learners what they thought of it. The class teacher described the situation as follows:

> I was able to send [the student] a response from the forum to say thank you for your contribution now you need to do ...so I was able to interact with this student who wasn't even in the class and she was taking part in what was there but it was her instigation.

This learner therefore initiated her involvement in the lesson, even though she could not be present physically. This was not common practice at the institution but the teacher concerned responded in a positive way, making the student’s contribution to the lesson welcome.

There were further examples of learning platforms enabling learners to manage aspects of their learning. For example, at one of the schools the English department supported a Year 8 learner who set up an initiative for all Year 8 learners to encourage them to read more. This learner decided on the content for the learning platform. A teacher describes the initiative as follows:

> He’s put some Flash animation in there; he’s actually put links to websites that review certain books that they’re studying this year. And he’s also written his own reviews on books that students are reading this year, and I think he’s in the process of inviting other
students to submit their book reviews as well. So he’s created that quarter himself, he’s created the content…

The learner involved confirmed that it was learner-managed and that the content was not checked by staff.

Although the use of learning platforms has great potential for allowing learners to access work as and when they want to, a tension arises between, on the one hand developing more flexible systems in order to encourage personalising learning, and on the other giving learners more influence which may also result in additional pressures. Concern was expressed that the flexibility developed in the ‘any time, any place’ element of learning platforms might lead over-conscientious learners to spend a disproportionate amount of time on school work at home.

In one of the schools learners were instrumental in making the decisions about which technologies to access in order to personalise their learning. The head describes this as follows:

> We set up a homework club which I run … and it started in the community room downstairs and teachers can send kids there if they want to, if they’re not doing their homework. … And then one of the kids said … ‘I need to do a PowerPoint for my World War Two research’ and I just said, ‘I’m sorry, we’re in here and I can’t just let you go into the IT suite because you’re unsupervised, just in case something happens’. And then a kid asks me the week after and I just thought, why are we sitting in here? Why can’t we just sit in there and do it in there? So… now kids do their homework in there.

Where learners lead their own activities and take on aspects of the teacher’s role such as leading others, they were reported as remembering more about the activity. However, examples such as these occurred in only a small number of the case study schools. More often, decisions about the use of digital technologies were made by members of staff.

**Examples of learner-influenced activities involving the use of technology**

An example of staff using their knowledge of what interests learners as a basis for making decisions about the technology to use is outlined below by a teacher from one of the case study schools:

> Our head, he looks at what the kids wants and works from there, it's very much a case of would the children enjoy it? Excellent, right, how can we then make it meet what we’re supposed to be teaching?

Similarly, another teacher’s perceptions about learners’ interests played a major role in the development of activities with favourite software (e.g. Sketchy, a simple Pocket PC [personal computer] animation program), exploiting PDA capabilities (e.g. for voice recording) and using games consoles such as a Nintendo DS (a hand held games console) for peer-to-peer testing in maths. In one primary school a class teacher developed a series of activities using the children’s cartoon animations to extend classwork based on their interests. The children recorded interviews about events in school and then edited them for the school radio so that the wider school community could access them.
There were cases of learners influencing the work they did within a broad remit decided upon by the teacher. For example, at one primary school Year 5/6 learners completing themed work on the Twentieth Century were given the opportunity to decide what work to cover and how to present it. One learner wanted to interview a local resident who was a World War 2 evacuee, and she recorded the interview as a podcast. Others chose to present work as a *PowerPoint* presentation and some chose to video their work.

In one primary school, learners undertook ‘learning walks’ in which they observed and video-recorded lessons in their own and in other local schools. The aim was to highlight what was liked about the schools and what could be reproduced at their own school. As one Year 5/6 pupil described:

*The learning group go to other classrooms in school and in other schools to look at the atmosphere in the classroom, what’s good about their displays and how children are working. [The learning group considers] what things help you learn better and what things you need to try and improve.*

Learners then feed back their findings to staff at their own school.

At several of the institutions learners self-assessed and peer-assessed work through the learning platform. Some learners were given the criteria for assessment and were specifically requested to comment on the strengths and weaknesses of the work and in some cases to grade it. Where learners self-assessed, they were asked to mark their own work and indicate why they have awarded themselves a particular grade.

There were several instances of institutions continuing to use, or increasing the use of, particular digital technologies as a result of positive feedback from learners. For example, the enthusiasm of learners from one of the primary schools about using PDAs ensured their continued use.

Thus, staff and infrastructure provide the framework through which learners are able to make relatively minor decisions, and it is often the teachers who instigate and see the changes through. It seems that in order for changes to be made, staff have to approve of learners’ suggestions. Learner decision-making appeared to happen more at the classroom level, where decisions had already taken place about the mode of technology to be used, although learners often had some say in how it was used.

If we are to encourage learners to be involved in leading and personalising their learning through the use of digital technologies, then consideration must be given to the factors which help to facilitate and restrict such learning.

### Facilitators and barriers to learner-led personalised learning activities using digital technologies

Findings from the research illustrates that the factors which influenced learner led personalised learning activities using digital technologies could be divided into two broad areas:

a) how easy it was to access the digital technologies; and

b) the support provided in schools to encourage the use of digital technologies
Access to digital technologies

Where software and digital technologies were available for whole classes, this tended to increase the teacher’s capacity to facilitate the personalising of learning and increase learners’ influence / demand. This may partly reflect the fact that the technologies were easily accessible on a regular basis. However, there were cases where access to digital technologies was limited either because the equipment had been damaged, staff lacked the confidence and skills in using the technology, or the booking systems or other organisational processes resulted in restricted access. This meant the resources were not readily and flexibly available to appropriately support the learning.

We found that digital technologies tended to be used more frequently to support learner-influenced personalised learning where staff felt some ownership over the technology. For example, where staff had access to interactive whiteboards in ‘their’ classroom, these tended to be used more regularly, since this gave staff opportunities to experiment and to become more knowledgeable about its functions, which in turn often led to increased use (Higgins 2003). Similarly, where learners were engaged with, and had ownership of, digital technologies, the capacity for learner-influenced personalised learning was often greater. Learners particularly liked the idea of ‘owning’ resources in school and ‘having one each’ rather than needing to share (McFarlane et al., 2007). This gave them the freedom to use a resource in the way they chose, rather than having to compromise and work with others.

It was acknowledged by some of the staff we spoke to that it would be beneficial to use a variety of digital technologies in school from reception onwards as learner led personalised learning can be facilitated when learners are given the opportunities to develop skills and confidence in using digital technologies progressively throughout their school career.

Some of the case study institutions were looking at ways in which learners can make use of their own digital technologies such as mobile phones (with their additional functionality). One secondary school teacher cited an example of learners using their mobile phone to help learning.

I had student who came away with me on a field trip to do geography, and a lot of them used their phones for photographs. When we came back to the classroom… I had one girl that said to me, ‘Do you mind if I use my phone?’ …she actually had it in the middle of the table and then she was Bluetoothing her photographs to other people on the table who have laptops. So all the students on her table immediately got her photographs.

Many learners are knowledgeable about a range of digital technologies which they use out of school and college. For example, the use of mobile telephones, mp3 players and iPods for digital recording were reported by learners to be commonly used out of school. Where schools acknowledged and built on such technological skills and confidence that learners bring with them, this was associated with increased learner-led personalising learning. However, these skills were rarely used to aid learning in school, and in many cases schools and colleges actively discouraged the use of such technology within their institutions.

If digital technologies are to be used to enhance personalising learning, staff need to have a relatively high level of confidence in the classroom, as well as being confident and knowledgeable about the digital technologies (Windschilt and Sahl, 2002). Where both of these characteristics are present, there is a greater chance of staff building the use of technologies into their teaching, and of them being relatively less prescriptive about the digital technologies learners used to complete and present work. In such cases, staff are
more likely to have the confidence to relinquish some control to learners, to give freedom of choice over content, and allow them to lead the class. Giving learners such freedom involves an element of risk in terms of classroom management and teachers need to be confident about their pedagogies in order for this to be effective.

There were cases, however, of some staff reporting that they did not have sufficient time to familiarise themselves with the available technologies, which resulted in them not being used in their classroom. A further barrier to learners being able to personalise their learning through digital technologies related to the restrictions placed on Internet access by either school, college or Local Authority imposed regulations. At times this resulted in learners having difficulty in accessing sites that they or their teachers felt they could benefit from using.

The purchase and upkeep of digital technologies required substantial initial and ongoing investments. Institutions tended to be able to find money to purchase resources to initiate development work in digital technologies; however, they experienced difficulty in allocating funding to sustain their current level of resourcing. This was particularly the case for consumables and repairs (McFarlane et al. 2007). In one primary school the cost of repairing and replacing Pocket PC screens was prohibitive and caused the use of the technology to be restricted (see also ITSS, 2007). In many cases institutions had the attitude that equipment was only purchased where there was a direct need for it. Thus the potential for investment in new digital technologies to be generated by learner demand was limited.

The increasing use of computers and the Internet and the development of online learning in institutions can lead to the assumption that learners have access to the relevant technologies outside of school or college and may serve to disadvantage those who do not have such access.

We came across cases where learners with specific needs influenced the digital technologies used in school, for example, at one school provision was made for learners who find writing at length difficult to record their work in different ways, such as on to mp3 players or digital video (DV) cameras. A learner with Asperger's who found writing difficult used podcasts to communicate his work. Another secondary school was considering voice recognition software to help learners with special educational needs take notes and become less reliant on support workers, for example, when homework is read out. This school was considering the acquisition of predictive text software for some learners. They believed it would be particularly useful for one learner with cerebral palsy for, although this learner could read very well, he could not find the keys on the keyboard, and as a result his typing was very slow.

At a school with provision for hearing impaired learners, where the teaching of these learners was integrated with that of hearing learners, laptops were used for electronic note-taking. Teaching assistants did note-taking in class for students, since hearing-impaired learners could not lip-read and write notes at the same time. Further integration into school-wide systems was also required to ensure that learners’ work was always printed out and passed to the teacher for feedback, or alternatively sent by email, a method which more and more teachers were reported as using. Computers also had the capacity for British Sign Language.

As well as digital technologies addressing pedagogic concerns, we also found examples of digital technologies being used to enhance personalising learning by providing learners and teachers with opportunities to focus together on reviewing records of progress as well as
planning. One of the case study institutions had recently implemented a personal online tutoring system. The development of this integrated electronic reporting and tracking system was a shift from group tutorials to personalised support. Learner records are available through the learning platform, which provides a mix of teaching and assessment resources such as: handouts; tests; previous attainment records; ongoing average grades and benchmarks; and ongoing attendance data for each learner. The staff section provides alerts about ‘at risk’ learners, for example: international learners; learners recently moved into the area; re-enrolled learners; early leavers / repeating year; and additional support needs. The alerts also highlight where there is concern over attendance / punctuality, disability, exams, personal / family circumstances and health. The wealth of data held on the system about each learner, and the fact that the system is used across the institution enabled the tutoring system to be implemented. Online tutoring involves learners having personalised, individual weekly discussions with their tutor about their progress across all subjects, and there is a section on issues arising. Although fore-grounding relational aspects of learning, technology played an important role in the system, as the online records allowed the personal tutor and the learners to have an overview of progress and issues. Learners influenced the shift to a personal tutor system as most welcomed it and made it known that they preferred this system to the previous system of groups tutorials.

To summarise:

**Learner-led / influenced Personalised Learning using digital technology is facilitated by:**

- Learners and Staff ‘ownership’ of DTs
- E-mature learners
- Learners given opportunities to use DTs throughout school career
- E-mature staff who experiment and explore
- DTs available for whole classes
- Networked systems exploited

**Main Barriers to Learner-led / influenced Personalised Learning using digital technology:**

- Lack of access to a range of Internet sites through School/ LocalAuthority imposed regulations
- Lack of access to DTs outside school for some learners
- DTs that can provide support outside school are discouraged/banned in school

**Support provided in schools**

The role of the headteacher was crucial to the allocation of funding for investment in digital resources that could be used to enhance learner choice, for example, they supported
initiatives proposed by staff and funded professional development courses for staff. Examples of headteacher support were found in the encouragement of staff to fully engage with digital technologies that are new to them. This is considered to be an essential ingredient of personalising learning (Williams et al. 2000). As one assistant head commented:

*We’ve worked quite hard to create an innovative curriculum so that staff feel quite free to take risks and try new things...there isn’t a blame culture... it’s made a difference to the way people feel... they feel they’re trusted to run with things, try things which are new.*

Our findings demonstrated that where support systems for digital technologies had been developed in-house to address the specific needs of staff (and learners) in the school, this led to staff feeling relatively more confident about using them.

At one of the schools for learners with special educational needs, staff training in the use of digital technologies was a regular feature in staff meetings for teachers and support staff. Additional support was also given to groups of staff when requested. As the head commented:

*We all get a little package telling us how to use it. And because we’ve got so many computers now they [the staff] take it away and they can try it...And consequently, it seems the staff are confident and keen to use new ICTs (Information and Communication technologies). ...I suppose because the training is in-house, it’s created specifically towards the needs of the children here.*

Once digital technologies were up and running in institutions, it was essential for technical support to be adequate to deal with problems as they arose and to keep the resources in regular use. There were examples of activities being abandoned due to technical difficulties with the equipment rendered unusable. One of the secondary schools enlisted some learners to help others learners when they experienced technical problems with their laptops. The laptop helpers, known as e-technicians, were allocated a desk space in the library next to the IT (Information technology) technicians, who gave the learners some training on the hardware and software and supported the helpers when requested.

In addition to having the support of the school, for digital technologies to be used to personalise learning, and for this to be learner influenced, staff also needed support from parents and from outside agencies such as Ofsted. Where these were lacking, teachers felt there were limitations in how the school could develop technology for personalising learning. For example, in one school where parents were not in favour of their children using digital technologies in school, this was found to discourage schools from personalising learning in this way. In another school, parents indicated caution not only about the use of technology but also with the notion of personalising learning and allowing ‘learner choice’. As one parent commented:

*He shouldn’t make a decision on which way he is learning …there are other people far more skilled to do that, so ...you shouldn’t give him a choice …it should be a fixed curriculum of what he should be taught.*

One school felt that they had received insufficient support from Ofsted when developing their use of digital technologies. In a recent inspection report, although the use of ICTs in school
was noted as an improvement and the school was now leading in this area both locally and nationally, the inspectors believed that the overuse of computers for writing had had a detrimental impact on the quality of handwriting and learners’ presentation of their work. The report further indicated that, while the use of ICT has considerably enhanced the skills of learners and teachers, it had made demands on staff which in turn had meant that other priorities were overlooked.

### Conclusion

We can conclude that genuine learner-led personalised learning using digital technologies was relatively rare in the ten case study institutions in which we conducted our research. More usually, activities were learner-influenced after staff had suggested, set up or initiated activities, and then tried to give learners more responsibility for making decisions about further developments within the confines of these activities. In general, the primary and special schools (only one special school and one unit) showed slightly more innovative practice. This seems to be a reflection on the greater organisational constraints in secondary schools and colleges such as the departmental structures and assessment requirements. The National Curriculum and associated assessment led teachers to perceive it necessary to follow tightly scripted programmes of study. In particular GCSEs and key stage tests were a concern to both teachers and learners. Teachers expressed criticisms that curricular and assessment requirements reduced their capacity to personalise learning (See also findings from Underwood et al, 2008):

Such pressure on teachers to teach learners information that they are likely to need in order to perform well in tests serves to restrict the development of learner-influenced personalised learning as there is a reticence to transfer greater control to learners when the content
perceived to be necessary for 'high stakes' testing might not otherwise be covered adequately. There was also resistance from some learners about the extent to which they wanted to personalise their learning. In some cases, learners wanted teachers to decide what has to be learned in order to be able to achieve high grades in national tests, thus moving away from any form of learner-led or learner-influenced personalised learning.

A further barrier to learners leading their learning through the use of digital technologies was the restriction in Internet access imposed by schools, colleges and Local Authorities which sometimes. It was mainly older learners who complained that their school / college work was restricted when websites were blocked. The recent Byron Report (2008) recommends that a more consistent approach should be adopted for Internet availability and access. In addition, an emphasis should be placed on equipping learners with the confidence and skills needed to enable them to navigate the Internet safely. Underwood et al (2008) note the need to see learners in this context as ‘discerning consumers not naive victims’ and this is strongly endorsed in Byron’s references to the need to support children’s resilience.

Despite efforts made by some staff to encourage learner-led or learner-influenced activities using digital technologies, for some groups of learners the degree to which their learning can be personalised through the use of digital technologies is limited. For example, learners on the Autistic spectrum at one of the schools found it difficult to process ideas and information, and as a result couldn’t be given total freedom to choose activities or ways of presenting their work. This resulted in class teachers refining the choices available, based on their perceptions of learners’ preferences. Limited literacy skills also restricted access to computer programmes and software for some learners. Others, who for example cannot spell their name, had problems logging in and the poor motor skills of some learners made the use of digital technologies difficult, for example, the process of clicking and dragging.

Thus, our findings conclude that those learners who are most likely to be in a position to lead their learning are those who possess good digital technology skills, and whose teachers also possess high quality digital technology skills, have an interest in technology, and who allow their students to be actively involved in deciding what and how to learn and assess work. If learner-led personalised learning through the use of technology is to become commonplace in schools, work with Ofsted and other national agencies will be necessary to ensure that a shared vision for learner-influenced personalising learning is developed and communicated to schools and colleges. Where there is evidence of learner-led personalised learning using digital technologies, examples of ways in which such practices can be ‘transferred’ to other institutions should be made available for others to learn from.

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