Supporting the learner and teacher online

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IN BRIEF

- Considers the need for both students and teachers to be well supported with adequate technical and administrative support when using e-learning.
- Outlines what type of support is needed and suggests how it can be provided.
- Concludes that support for the use of ICT in learning is the responsibility of both the 'parent institution' and individual teachers/tutors.

Whether on or off campus, all students need support if they are to successfully complete their studies. Although 'good teachers' should be 'good teachers' in any medium, their support is especially important when technology is involved. Previous articles in the series have shown that the advent of ICT has added to the complexity of the type and provision of this help and advice, not least because it now involves technical as well as pedagogical and pastoral elements. However, rather than being a problem, ICT, particularly through its online facilities, can provide levels of support over and above those required by traditional face-to-face teaching. This has implications for tutors as well as students as it places greater pressure on their time and requires them to have a new skills-set, a situation that needs to be resolved if the full benefits of online support are to be realised.

E-LEARNING IN DENTISTRY

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INTRODUCTION

In 1998, a report¹ into a dental school's new online course summarised learners' needs as:

- 'Personal support (counselling and mentoring)
- Academic support (advising and tutoring), and
- Materials support (coursework and equipment)
- All with feedback.'

As its author remarked, 'as part of this programme goes "online" it is clear that a shift – a change – in the type and mode of support will need to be effectively implemented.'¹ Support of this type is not just for the course alone, but also needs to be at a macro level from the parent

institution. This infers a cultural shift within a traditional teaching establishment so that e-learning is embraced as core to its teaching culture.²

FACING UP TO ONLINE

The advent of ICT has led to a debate as to whether support is best delivered face-to-face, or whether online tutoring should be the norm. In the 'sage-on-the-stage' model, the emphasis is on imparting knowledge and ideas mixed with a certain amount of hand-holding. In the 'guide-on-the-side' scenario, the tutorial role has to meet different demands.³ As one authority points out: '[With] the discussion of students' attitudes to face-to-face tutorials, we are faced with conflicting evidence. On the one hand there is indisputable evidence of their value to many students, both as a learning medium and even more importantly as a motivator and a steer for keeping on track.'⁴ Conversely, the same source also claims 'they [some students] are choosing flexibility over hand-holding and the convenience of online tutoring over the multi-sensorial impact of face-to-face contact.'⁴

The question then arises: 'Could this be an indication that the students who

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choose online courses in the future are the pioneers of a new consumer-centred approach?⁴ This theme that student expectations are changing is further expounded as 'the new breed of learner has neither the time nor the inclination for extended interaction and institutionalised affiliations – rather, ease of access, quality of information and tailorability of access are key concerns.'⁴

In acknowledging this change in students' demands, the need for a new support paradigm is reflected in the assertion that 'To be at its most effective, guidance and learner support should be tailored to meet the needs of each learner. The learner support service needs to be available at every stage of a student's career: at entry, during study, between courses and at the end of the study programme.'⁵

Tutor-lite or tutor-plight?

A 'tutor-lite' model has been outlined as one more suited to the online environment, and focuses on:⁴

- Personalised feedback to individual students on their assessed work
- Facilitation of online small group collaborative activities
- Options for various levels of tutoring at differing fees
- Streamlined support systems for both tutors and students.

Others see learner support as having a wider basis, covering 'everything from information and admission guidance prior to enrolment, through support for study at a distance, to support for academic progress.'⁵

Despite the 'tutor-lite' model, it should not be thought that the tutor's life is becoming easier, for as Kirkup and Kirwood⁶ have suggested, 'If there is one thing which researchers of online teaching agree about it is that interacting with students in this medium is more time-consuming than traditional campus lecture courses or print-based distance tutoring.'⁴ Supporting this view is the recent finding that tutors were 'expending increased amounts of time responding to student queries and giving feedback to students on their assessed work.'⁶ In addition, they found that the first of these activities caused an increase in the time

spent due to technology raising 'student expectations and the demands they made from their tutors.'

Indeed, the online environment places greater and different burdens on tutors, for as a recent survey suggests, students 'count on the lecturers to be aware of the content of websites and to recommend them for their value as learning tools.'⁷ At the same time, tutors are expected to be the early adopters and implementers of new educational technologies such as videoconferencing and to appear to be the 'experts' in such applications.

The question arises as to whether or not teachers have the necessary expertise to fulfil this role. Finnish and UK studies of higher education and school teachers suggest that staff did not, at the time of the studies, have training in the specifics of integrating online techniques into teaching.^{8,9} In the Finnish study, the majority of teachers 'felt that their own technical skills were not good enough for effective use of ICT in their education.'⁹ Even more frequently, school teachers expressed the view that they lacked the sufficient pedagogical expertise to use ICT as a tool in their education. They also claimed that there was not enough technical support at their disposal when they tried to apply ICT in their teaching.

There also seems to be variation between belief and practice, as another Finnish study found that '63% of teachers agreed with the principle of using ICT as a tool for co-operative and collaborative learning, whereas only 22% had implemented it in practice.'¹⁰

Problem or solution?

If technology is part of the problem it should also be seen as a major contributor to the solution, as it is a powerful and convenient communications channel between students and teachers and, as such, the access to help and advice. A positive view of this situation claims 'the application of ICTs will enable many of these [support] services to be delivered in different ways and in some cases services may be greatly enhanced and more accessible.'¹¹

Through these new facilities, such as email, the phone and computer conferencing, the required levels of support

can be delivered in a more timely fashion than waiting for a face-to-face session. This can be extremely valuable when dealing with personal problems, when a friendly voice on the telephone can provide immediate reassurance.

The typical uses of ICT for support purposes, as found by a recent study,⁷ are shown in Table 1. Asked to rate the usefulness of five methods of student contact (telephone, post, email, conferencing, face-to-face), respondents' first choice was email (76% rating it 'very useful'), followed by face-to-face (75%), and telephone (62%), thus illustrating the impact the more basic forms of ICT are already having. Admittedly this study was performed at an institution that only offers distance learning courses, but it is instructive that a more traditional university has developed a range of online student services which can be accessed by all students, whether they are campus-based, studying by traditional distance learning education, or online.¹²

TECHNICAL SUPPORT

We should not underestimate the stress that a 'technological meltdown' can cause to students. Commenting on a case study of students' attitudes to a web-based course, the authors said 'During interviews, some students reported frustration with technological problems and the absence of personnel to provide technical support.'¹² To quote one of the students: *'This computer is very frustrating. I would imagine it is like sitting in a class and only understanding some of what was said and then being asked to answer a question. I have felt it... panic... confusion... frustration... anger.'*¹²

There is obviously a need for technical support, as students have indicated that there was not enough technical support or resources available to enable them to make full use of technology in support of their learning.⁸ In the distance and e-learning environment, support, in relation to ICT, involves three categories. These are:

- 1) Assistance with using standard ICT systems and software such as PCs and the Office Suite; accessing and navigating the Internet; and fault identification and resolution
- 2) Help and advice with systems and

Table 1 Common uses of ICT for support purposes

Activity	Percentage of respondents
Feedback commenting on assignments	41
Student records, letters to students, tutorial handouts etc	81
Email/computer conferencing contact with students	65

Fig. 1 Tutor support using videoconferencing (Skype – <http://www.skype.com>) for a postgraduate undertaking an e-learning research project

software more specific to distance and e-learning (or indeed to a particular course), such as videoconferencing (Fig. 1), which may be less familiar to users

3) Dealing with the web as a resource for study and learning.

Teachers and students alike must be able to use ICT systems and services to at least a competent level. For this to happen, they, in turn, must have confidence in the reliability of the equipment and systems that they are using. As previously stated, in the event of a technical failure they should be able to call upon prompt support and assistance to rectify any faults. 'The technology should be reliable and robust in handling and maintenance with technical support available to keep it operational at all times.'¹³

Given that modern ICT hardware is generally reliable and supported by suppliers through helpdesks and maintenance contracts, we could be lulled into a false sense of security. Evidence from a report on a helpdesk for students showed that between February 2004 and February 2005, the desk received 1,600 calls.¹⁴ The

most frequent type concerned hardware queries (25%), followed by email problems, difficulties with anti-virus systems, and then general software problems.

The performance of the hardware may well not be the critical factor, given the plethora of ICT applications available. Using them to their full potential is probably more important, despite the assumption that the modern generation of students is *au fait* with technology and needs little further instruction. There have to be strong reservations about this assumption, even in the developed world, let alone in the less developed world, while it may be that mature students, some returning to studying after some years, may not be as techno-literate as their more youthful counterparts.

The types of applications involved have also to be considered, as they are not necessarily those with which users are familiar. Results from one study have shown 'widespread use of common IT applications such as PC and email.' By the same token, there was little use of online teaching and learning aids such as whiteboards.⁹ From such observations it can be surmised that the basic ICT

applications are probably well-understood, but as has already been suggested, there is a difference between 'office software and subject-based software,' and it is likely that only a few students have encountered a virtual learning environment (VLE).¹⁵

There is also the fact that e-learning introduces a new element – the web. Despite its apparent ubiquity, the web is a relatively recent phenomenon whose contribution to education is in its infancy. In this context it is worth noting the following observation from a recent netskills survey:⁷ 'Whilst the majority may have the necessary skills for using the web for recreational purposes, the idea of accessing this virtual setting for learning emerges as a crucial issue.'⁷ This despite the fact that over 65% of respondents to the survey claimed they had used the web for more than three years! The survey's observation is supported by the comment that 'Students are actively involved in arranging their sports and social activities, but not their learning environments!'⁷

These mixed outcomes are further highlighted by a study involving postgraduate students at a dental institute.¹⁶ As more mature students, this group might be perceived as less likely to have the basic IT skills. Nevertheless, the results of the study indicated that their abilities in this respect had probably been underestimated. The study concluded that 'computers are now ubiquitous for the postgraduate dental student in that 100% of this sample of graduates owned their own computers' and 'graduates reported high levels of general confidence with computer use and considerable levels of CSCFU [computer skill, comfort and frequency of use] in relation to word processing, email and internet usage.'¹⁶ The results were less positive for more complicated tasks such as the use of spreadsheets, presentation packages and dental management software, more especially amongst the over 30s. However, the authors felt that overall the respondents were 'well equipped to take full advantage of web-based teaching methods.'¹⁶

Thus, there is a need to understand that using the web is more complex than simply logging on to read emails.

The netskills survey⁷ concluded that the web is a valuable learning resource. 'Students are obviously aware of the academic potential of the material found on the web, but they are unsure of their skills to fully exploit it.'⁷ A further observation from this study was: 'The results revealed that certain students at times become "overwhelmed" by the "chaotic online environment" and feel strongly that they could benefit from some form of formal instruction in specific areas... especially using search engines effectively.'

To overcome this, 'students have high expectations as to the amount of support and help they wish to receive from staff members,' seeing the web as a 'whole new learning experience, which would facilitate an active and interactive communication between them and their teachers and which could centralise the information they need for a module [learning resources, module outline, past papers, class schedule, online tutorials].'⁷ This comment is supported by research into students' reactions to a purely online ethics course that showed one of its perceived shortcomings was that students liked to have a tutor at hand to answer questions.¹⁷

It does seem that the most important type of support needed by students is concerned more with realising the full potential educational value that can arise from the use of ICT, rather than instruction on how to use the equipment. As shown in Table 2, netskills (defined as 'the appropriate skills for online learning') was the most commonly requested topic in a recent study.⁷ This study also indicated the vital role played by teachers: 'They [students] count on lecturers to be aware of the content of websites and to recommend them for their value as learning tools.'

The study concluded that 'the key to successfully acquiring the necessary netskills will depend on the actions and attitudes of teaching staff, with the proposed technological solution becoming clear and obvious to the point of invisibility, taking a secondary role.'⁷ It revealed the issue of training as an important skill that must be acquired in order to exploit the web as a learning tool. Many students expressed the need for some kind of introductory course, at the beginning

Table 2 Most requested topic for web use in studies

Topic	Percentage of respondents
Netskills	85
Recommended sites	80
Online learning	65

Fig. 2 Screenshot of an introductory webcast supporting the learner in an undergraduate online course

of their studies, which could help them foster and develop the necessary skills when working in an online environment for students (Fig. 2).

THE RESPONSE

The need for help has been recognised.¹¹ Examples of how some institutions are addressing the problem include:

1. A general response: the development of a student toolkit to address the perceived need for generic learning skills material. At least two of the models are available online¹⁸
2. Specific to dental students at one London dental school:¹⁹
 - an IT helpdesk with online reporting and available through college library networks
 - an introductory session for undergraduates on the use of the virtual learning environment (VLE) for a course on ethics
 - recommended websites include

<http://www.vts.intute.ac.uk/he/tutorial/medic> for help in using the Internet

- for postgraduates studying, mainly via distance learning, for an MClintDent degree there is a helpdesk and a series of email support addresses are provided for both pastoral and academic support
- a study guide, distributed at the beginning of the first year of studies, which explains the use of three different course elements – CD-ROM, the web and print – and the structure of the course units.

Additionally the dental school also recommends a number of relevant websites to help students in the use of the Internet. There is no doubt that such initiatives will increase as e-learning and the web become more pervasive and

an essential, if not the sole, method for learning and teaching. Tutors can also hone their ICT skills via online resources, whether through taking the European Computer Driving Licence (ECDL)²⁰ or through facilities such as the netskills training service²¹ available via college websites. Its aim is to enable users 'to make effective use of both Internet and Intranet technologies for teaching and learning, research, administration, marketing and other business activities.'²¹

It can be concluded that support for students and teachers is a multifaceted subject and is obviously a crucial part of learning and studying. The use of ICT can facilitate this and add to the student experience. However, this new technology and, in particular, the advent of the web, has added to the stresses and strains of the support process. On a more positive note, ICT is providing a more flexible and rewarding methodology that meets newer, more liberating student needs. Support should be at both the macro and micro levels and should be provided or organised by the parent institution as well as by individual teachers/tutors. It may be perceived that e-learning is dependent on government policies and market forces, but academically led e-learning can ensure successful outcomes for all those involved.²²

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