



UK website<sup>1</sup> had a chat service visibly available on their library's web pages. Literature from UK institutions on their experiences of using IM/chat reference is scarce, with only two recent articles (Hvass and Myer 2008; Haynes 2009).

The relative 'newness' of this type of service in the UK is also demonstrated by the existence of the Virtual Enquiry Project 2008–2009, a collaboration between staff at Edinburgh Napier University and Carnegie College, partly funded by the Scottish Library and Information Council. The project 'aimed to look at the practice of virtual reference, or live chat support in the British academic library sector, and produce information for academic libraries considering starting a virtual reference service' (Virtual Enquiry Project 2009). The website offers a range of help and advice on establishing chat reference and includes case studies of some academic libraries which offer such a service.

In order to provide a snapshot of current activity among UK HEIs, a survey of 15 institutions with chat services was undertaken by the author in November 2009 and their experiences are reflected throughout the chapter. The longest running services had been instigated in 2006 (two institutions) and some services were very new, having been started in the early part of 2009 (four institutions); the rest fell somewhere in between. Eight used OCLC Questionpoint (subscription required), four used Meebo/Plugoo (free), two used LivePerson's LivePerson (subscription required) and one used Altarama's VRL Plus (subscription required).

Reasons for introducing a chat enquiry service were many and varied, although none of them unexpected. Respondents cited:

- the need to engage with students using the social media they were accustomed to using on a day to day basis;
- flexible support for distance and partner students;
- equity of service;
- providing a route into library services for individuals who may feel intimidated asking library staff;
- support for users who may find verbal communication difficult;
- an experiment in exploring the use of web 2.0 technologies;
- immediate interaction with a student (as opposed to advice via email).

One respondent summed up thus:

The benefit that live chat can offer to off-campus students is huge. Queries that may have taken a week to resolve by multiple emails can now be answered in a few minutes and desktop sharing removes the need for long complex two way email/phone communications regarding how to navigate online resources.

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1 <http://www.universitiesuk.ac.uk>.

## **Instant Messaging vs Chat**

When choosing a chat product the issue of cost versus functionality arises. Can the cost of a (chat) subscription service be justified when free (IM) products are available which many students already use? It really depends on the amount of 'back-end' functionality required by the library and how staff want or need to be able to interact with its users.

## **Instant Messaging Services**

Free software includes IM services such as AIM (America Online Instant Messaging), Google Talk, Yahoo! and Windows Live Messenger. These services typically offer text chat, the ability to 'file transfer' and URLs to be typed as means of directing users to other web pages. Individuals must have an account with these services to use them. In the early days of chat it was an inconvenience that users either had to create an account and download software in order to use the same system chosen by the library, or the library had to create multiple IM accounts. More recently, free chat aggregator software such as Meebo and Pidgin let users create a single 'buddy' list irrespective of which IM service they have an account with. This is a useful feature as it allows a library's customers to contact the library via IM using the service they already have an account with. Meebo and Plugoo bring together all of the major IM platforms: AIM, Google Talk, Yahoo! and Windows Live Messenger (Meebo also includes Myspace IM and Facebook chat).

In addition, Meebo and Plugoo offer the functionality of embedding a widget into a web page (in this context a small window for users to type in their query), allowing any and, crucially, anonymous visitors to initiate an IM session. Free software offers quick easy access to a library's enquiry service for users but usually provides no helpful context for staff operating the system such as a user's identity/email address or course/faculty/school. IM systems do not provide a sophisticated means of gathering statistics or recording session transcripts.

## **Commercial Chat Products**

Software designed for use by libraries has lots of useful behind-the-scenes features such as statistics logging, a record of session transcripts and sometimes a 'news management' feature that can be used to disseminate important information to staff working on the enquiry service. Virtual enquiry service managers are able to analyse exactly who queries are coming from and discover whether certain queries reflect widespread issues or pertain just to particular groups. Queries that crop up at certain times of the year can be pre-empted by posting relevant information on

the library's web pages, on the Virtual Learning Environment (VLE), blogs and all the usual outlets for student information.

Subscription services are configurable, giving an institution the freedom to add appropriate branding and gather whatever data are required from the user at the point they ask their initial question. When the service is busy messages can be displayed to students in a queue asking them if they want to continue waiting or choose another option such as searching FAQs. Staff can follow up a query if a student 'disappears' as their email address is logged by the system. Certain chat products allow satisfaction surveys to be presented to a user after a transaction. Usually neither staff operating the service nor users have to download any software in order to use the system and staff can converse with more than one student at a time.

The chat transaction itself has greater functionality and is much richer as a result. It offers the ability to use scripted replies (including an initial 'welcome to our service' type message which allows staff breathing space to take in the question), add bookmarks, push web pages to customers and 'co-browse' (i.e. screen-share). In fact commercial services lend themselves to showing a student information in context rather than giving them a quick answer, so a chat session (as opposed to IM) can veer more towards the 'instructional'. Staff are able to take advantage of so-called 'teaching moments' (Desai and Graves 2008; Devlin et al. 2008) where users are effectively taught how to find the information they are looking for. Commercial products also come with the security of technical support and are more often than not hosted on the supplier's server, negating any need for input from local IT departments. At the end of a chat session the user has the option to view/print/email the transcript for future reference, which is particularly helpful for the student if they have been guided through a complex research question.

Subscription services can offer a degree of interoperability with other university systems, e.g. email, which is advantageous if a question needs to be transferred to another member of staff. This can be done within the chat system but the email will arrive in the recipient's normal inbox. It ensures that any loose ends can be tied up if an 'out of office' reply is received by the person transferring the question, and enhances the timeliness and quality of service given to the user. A chat service offers the opportunity to have a joined up approach to virtual advice – popular chat queries can be turned into FAQs on externally facing web pages or scripted replies within the system if the query requires a complicated or in-depth answer.

On a day to day basis, the immediacy of the chat medium ensures that the library obtains feedback very quickly on electronic services (for example) that are not working, as it is much easier and quicker for the user to send a message via a highly visible widget than finding an appropriate email address to report problems to.

### **Staffing and Running a Chat Service**

A good user experience will be the best marketing tool. (Zino 2009)

The way in which a chat service is operated and staffed and the quality of the answers given to users are not to be underestimated. As a method of quality assurance (to guarantee staff buy-in and expertise) it has been suggested that a chat service should be staffed by keen volunteers from amongst the staff (Coffman 2003), but this is a luxury many libraries could not afford. On a purely pragmatic level, who staffs the service will depend on how many hours the service needs to run and the number and grade of staff available to operate the service. It also depends on the depth of help the library wants to be able to provide and whether the chosen chat software offers a robust means of transferring questions to others if necessary.

It is likely (and this is borne out by the survey respondents) that members of staff currently working on information or enquiry desks would constitute the core team for service delivery. Whether the service is run from a public enquiry desk that also deals with face-to-face enquiries or from a separate desk 'behind the scenes' will depend on local staffing structures and the opportunities or constraints these present. It is generally recommended that chat is run from a separate desk (Hvass and Myer 2008). However even if a public service desk is too busy to operate a chat service during core hours, it may be able to deal with queries during evening opening hours for example. The library should bear in mind the public relations aspect of their service: it is better to deal with queries in a timely and efficient manner for fewer hours per day than to offer a longer service but keep customers waiting for long periods. If a customer has a negative experience they will probably not use the service again.

Survey responses indicated that services with longer opening hours were staffed at times from public enquiry desks that also dealt with face-to-face enquiries. There was a trend for services with longer opening hours to be staffed from a separate point during core hours (sometimes used to receive telephone calls as well) but reverting to cover from a public desk in the evenings and weekends. Services with shorter opening hours tended to be staffed only from separate desks 'behind the scenes'.

Service models, in the form of staffing, set-up, opening times and usage figures varied quite widely between institutions. In fact, the few things that virtually all institutions had in common and agreed on were the difficulties experienced in relation to successful operation of the service. These overwhelmingly reflected staffing issues:

- staff buy-in;
- cover for sickness;
- not having enough staff to provide longer opening times;
- confidence in using the software;
- the fear of being 'monitored'.

Types of staff operating the services varied as follows:

- professional only (five institutions);
- professionals and paraprofessionals (five institutions);
- professionals, paraprofessionals and library assistants (two institutions);
- paraprofessionals only (two institutions);
- IT helpdesk advisors (one institution).

It is important to consider whether staffing a chat enquiry service amounts to extra duties for staff or whether it sits within an established level of public service. The way a new service is sold to staff and the effect on their workload will influence motivation and buy-in. It is important to get staff to view the service as a core activity rather than an adjunct to their regular day to day work, particularly if staffed from a separate point. Staff may feel resentful if they see the service as taking them away from an already heavy workload, especially if they are unable to continue with their normal tasks and particularly if they perceive that the service is underused and/or 'gimmicky'.

As staffing is an issue, either having enough staff simply to cover 'normal' operation or when under pressure from sickness, it has to be decided whether the service is peripheral or central to the enquiry portfolio. Which services 'give' when short staffed? Virtual or face-to-face? It is worth considering that 'virtual reference users do not perceive virtual reference as a novelty or as a marginal service, but see it as a significant service option' (Granfield and Robertson 2008). It is crucial to ensure that staff are online when the service is advertised as open. If operation has to be curtailed for any reason, an explanatory note should be added to the access points of the service. It is irritating to a user if the service is advertised as open but no-one is online, and furthermore it appears unprofessional. 'How libraries will staff both in-person and virtual reference services given the economic realities in an era of shrinking budgets' (Naylor et al. 2008) may be of concern, but a chat service can be delivered flexibly from staff's own PCs rather than a dedicated 'enquiries' computer, and delivery of the service can be switched to public desks if necessary.

### Training Issues

Some staff may have already used chat software socially and some will not have done. Inevitably, as staff will also have differing comfort levels with IT, group training sessions are a good way to foster an inclusive atmosphere and offer peer support to those who are less confident (and they can be fun!). They work well when staff are able to pair up, one person acting as the 'customer', and one acting as the staff 'operator'. Staff should be encouraged to practise asking and answering questions with their training partner outside of official training sessions.

Using a small number of staff as ‘key’ or ‘expert’ trainers means that extra support can be given to others as and when required. It will also help reassure staff when a service goes live if an expert trainer is able to sit with them through their first few transactions.

Staff may have concerns about their answers being recorded as part of the session transcript with the fear of being monitored or picked up on an ‘incorrect’ answer (a fear reflected by the survey). The fact that transcripts are recorded brings into sharper focus differing levels of expertise in answering enquiries and reflects gaps in staff knowledge. This undoubtedly also exists during face-to-face transactions, but goes largely unnoticed. It also reveals good and not-so-good customer service practices.

Taking this into account, transcripts can be used as a positive tool for further staff training (Haynes 2009). After all, it is commonplace in the commercial world to record phone calls or transcripts for training purposes, but this must be done with sensitivity. ‘Incorporating trust in a working environment is a significant factor affecting buy-in for a new service. A non-threatening, non-judgemental workplace encourages staff to be more accepting of change and receptive to new services and changes in workload’ (Ogbaa et al. 2008, p. 31).

The analysis of transcripts may also reveal the need for more scripted replies, especially if the topic is complicated or unusual. A chat service actually has the potential to increase the knowledge base of staff due to the scripted information available and could therefore be particularly useful for a weekend or less regular workforce.

It will help to reassure staff if there is a robust system for transferring questions to colleagues if they are unable to answer a question themselves. Staff should be empowered not to feel scared or apprehensive about trying to help a student but also recognise that a query should be passed on as and when appropriate – in the same way as a face-to-face query might be. There must also be guidance and protocols for staff on what to do if they receive offensive comments or complaints via the service.

When it comes to dealing with enquiries, exchanges via a chat service tend to be much more casual (from both parties) than if a student were asking a librarian for advice face-to-face. This is surely one of the reasons why the medium appeals to students, particularly those who might feel too intimidated or embarrassed to ask a question in person (Hvass and Myer 2008; Granfield and Robertson 2008). ‘Text’ speak and abbreviations are commonly used and it is ideal if the service can be personalised with the name of the librarian on duty rather than a generic ‘librarian online’ persona. One survey respondent described how students repeatedly addressed them with a dubiously shortened version of their first name, much to their annoyance! Presumably the latter would not happen in a face-to-face encounter; in fact both parties might not even be aware of each other’s name. It can also be liberating for staff to interact with students in a very informal manner and helps to break down the perceived image of the ‘stuffy and boring’ librarian.

Students have expressed surprise and delight that the library is offering a means of communication that they are accustomed to in a more social context.

As described above, the use of scripted replies can help to overcome some of the staff confidence and ‘monitoring’ issues and are undeniably useful when used appropriately. However, staff should be encouraged not to over-rely on scripted replies and to be sure to respond to the user’s exact questions rather than feeling pressured into sending out the automated response that seems to be the best match. There must be a balance between the use of scripted answers and friendly spontaneous interaction; in fact ‘librarians should not hesitate to use conventions that express the feelings and emotions that they would express in a face-to-face transaction’ (Breitbach and Demars 2009). The use of emoticons or text symbols (e.g. to denote a smiling face) can help with this. There is no point in having a more casual system for communication if staff on duty do not interact like human beings; Zino (2009) observes that ‘the first step to improving [virtual reference] is for librarians to stop acting like computers’.

The challenges of conducting virtual reference have been documented (Luo 2007; Jane and McMillan 2003). In particular the absence of eye contact, visual clues and the difficulty of perceiving ‘tone’ in the written word have been noted as potential barriers to communication. However, in important respects, dealing with a virtual customer is not really very different to dealing with someone face-to-face or on the telephone. Staff still need to get to the heart of the question using reference interview techniques in the same way as if the customer was physically present. Pressure to handle a transaction quickly may result in a poor or non-existent reference interview (Breitbach and Demars 2009) which will in turn result in an unsatisfactory experience for the user.

## Flexibility

Provision of a chat service offers flexibility and choice to students in the way they contact the library, but it also offers an element of flexibility to staff and staffing structures. We have seen above how this is reflected in the different ways the HEIs surveyed have chosen to staff their services.

Web-based services can be delivered and accessed from any computer with an Internet connection, thus having the ability to serve multiple user groups simultaneously. Rather than staffing enquiry points at multiple campus locations, a chat enquiry service can serve all locations from one point. Although often perceived as a service aimed predominantly at distance learners, it is interesting to note that users of a chat service may not be off-campus, but may just be on a different floor of the library, reluctant to give up the computer they are using or to interrupt their work to ask for help at a physical enquiry point.

For instance, as a result of ‘public service coverage reductions’ at Ohio University library, Booth (2008) describes a pilot project involving setting up a



‘Skype video kiosk’, i.e. a dedicated virtual reference desk, using Skype and a webcam as a means of assisting users on-campus:

we anticipated that patrons engaged in research or unable to locate library materials would use the Internet-ready, interactive kiosk for both directional and reference assistance, and that Circulation staff ... would refer patrons to the kiosk in the event of an information need.

While this approach may be a step too far for UK institutions, within a strategic context a virtual advice service allows a library to offer an enhanced student experience and increased access to enquiry services without additional staffing, or, alternatively, to offer an equivalent level of service with fewer personnel.

An additional advantage of a completely web based system is that it can be used as part of an institution’s contingency or disaster planning. One of the HEIs surveyed had recently written the operation of a chat enquiry service from staff homes into their contingency procedures in the event of university closure, and this plan was actually put into action during recent bad weather conditions in the UK. A weekend virtual advice service could also be provided from anywhere even if the library was physically closed. A chat enquiry service also offers the potential to be used by other departments in the university, e.g. careers, disability support, placement support, international office, a central enquiries team, or by converged services as a first line enquiry point. Many may already be using Skype or similar for student support. In some subscription chat products customers can be referred to different ‘virtual desks’ as appropriate within the system.

### Usage and Publicity

One of the things libraries have been concerned or surprised about are the low usage figures of chat enquiry services (Naylor et al. 2008; Radford and Kern 2006). Radford and Kern (2006) describe the circumstances surrounding the closure of nine chat reference services in the US as long ago as 2006; the six major reasons for closure were funding problems, low volume of enquiries, low volume of enquiries from target population, staffing issues, technical problems and issues surrounding institutional culture. Indeed, some early adopters of IM and chat services in the US became disillusioned with their experiences: ‘in the past few years, the tone of articles on [virtual reference] has shifted from giddily optimistic to cautiously optimistic to neutral. Much of this change has been due to the relatively small number of users’ (Vilelle 2005).

However, the availability of newer free or low-cost and more flexible technology now allows libraries to position their services more effectively and take the service into the students’ world. It is clear that offering help at the point of need is key (Meier 2008). Wells et al. (2003) observe:

If patrons are attempting to use the OPAC or a database and get frustrated, they won't take the time to back out, i.e. go to a previous page, then click on the chat button and ask for help. They are more likely to settle for what they can find or just quit.

It is essential that a chat service is marketed and positioned properly. The more the service is publicised, the more it will be used, and in this respect the visibility of the chat service itself is the best publicity. Widgets (provided by IM aggregators and commercial chat products) come into their own in this context as they allow a chat 'presence' to be embedded strategically into any web pages, including VLEs.

In the HEIs surveyed, the average number of queries varied, from hardly any (4–5 queries per month) to high use (250 per week). So why did uptake differ so much? In some cases where usage was low, it was because opening times were fairly short. It could also have been the case that opening hours did not coincide with when users wanted to use the service, or it was not clear when the service was open (Radford and Kern 2006).

The relationship between service opening hours, number of chat enquiries received and entry point to the service was interesting. It might be expected that institutions with a low number of opening hours<sup>2</sup> would receive a low number of queries and institutions with a high number of opening hours would receive a high number of queries. However, this was not necessarily the case. The important elements in the equation appeared to be how many entry points to the service there were and perhaps even more crucially, where these were placed.

Take the example of Institution A and Institution B. Both had relatively low usage figures when the only entry point to their service was via their library home page. Institution A embedded their chat service within their VLE in September 2009 and since then, despite only being open for four hours a day Monday to Friday, received over 100 chat enquiries per week as a result.

Institution B received 263 queries during the whole of the 2008–2009 academic year but on introducing a chat widget to the library tab of their VLE in September 2009, they received 831 queries during the Autumn term alone. There is a salutary lesson here – libraries cannot take it for granted that students will use services just because they are provided – libraries must take their services into the student world and integrate with other systems they use on a daily basis.

A similar situation is evident if Institution C and Institution D are compared (both used the free software Meebo). Institution C was open Monday to Friday 09.00–22.00 with variable four hour slots on Saturdays and Sundays, making

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2 For the purposes of this survey, a low number of opening hours per day was defined as less than 09.00–17.00, Monday–Friday, i.e. less than normal office hours. An average number of opening hours was defined as 09.00–17.00 Monday–Friday (or the equivalent eight hours per day) and a high number of opening hours was defined as more than 09.00–17.00 Monday to Friday, plus any weekend hours.

a total of 73 hours per week. They received 'over 50 [chats] per week' during October but 20 or less during quieter times, a fairly modest number taking into consideration the long opening hours. Institution D, with a service open for only 20 hours per week received 30 queries on average during that time. Institution C had the entry point to their service on the library home page only whereas Institution D had entry points to their service on the library home page, the VLE and their Facebook page.

It may seem obvious, but the more wisely chosen places libraries have an entry point to their service, the more queries will be generated. The earlier work of Wells et al. (2003, p. 135) upholds this view,

having the [chat] button only (or primarily) on the home page does not act as ... a deterrent to asking a question, but if the chat button is on other pages, people will take advantage of its availability ... the more pages where chat access is provided, the more the service will be used.

If a service is visible, easily accessible and positioned in lots of prominent places, then usage will be higher than if chat is hidden under an 'Ask a Question' type link on a library's web pages.

Feedback received by institutions from users had been overwhelmingly positive. Only one institution reported that the service was not popular with their users; this HEI only received five queries per month but the service was only open for two hours a day. One other HEI had not explored feedback as they felt the software they were using was not appropriate for their requirements.

### Co-browsing

All software, including free IM programs, allow URLs to be sent as part of an answer. Commercial packages also offer the ability to 'push' web pages to users, i.e. the member of staff can navigate to a web page on the right of the screen and 'push' this to the user so they can see the information. Certain commercial packages also offer the ability to 'co-browse' or 'desktop share' with users so that they can be guided through electronic resources in real time, seeing the same screens as library staff. However, co-browsing within chat software can cause problems if the web pages accessed via this route are 'secure', i.e. are licensed electronic resources such as databases, e-journals and e-books. IP recognition and other methods of authentication are not successful due to the configuration of the chat software and the fact that the secure resources are essentially being accessed via a third party server, not that of the home institution.

Some survey respondents commented that co-browsing did not work properly in their current product. A way of overcoming this is the integrated use of webinar or online meeting software within the chat product (LivePerson, which was not designed as a library-specific product, has this functionality built-in). This gives

operator and user the freedom to screen-share/desktop share in its truest sense and look at subscription e-resources together unhindered. A product used by one HEI, Altarama's VRL Plus, allows the chat software to integrate with third party desktop sharing software to provide a solution to the authentication problem.

Another important issue surrounding co-browsing or desktop sharing during a chat session is ensuring (as far as practicable) that the user is a bona fide member of the institution. It is not uncommon for users to enter a chat service using their non-university ID so need to be questioned further to ascertain their student status. Other considerations include the time taken to conduct a co-browse session initiated within a chat. If the service is busy, would the operator have time to do this and still attend to other users asking questions? If desktop sharing is initiated within a chat session, what happens if another user submits a question to the service? Would a third party viewing the staff member's desktop be able to see another student's question and personal details?

It may be the case that true co-browsing or desktop sharing sessions are better conducted outside of the timetabled chat enquiry service where the member of staff can devote more time to the exchange under less pressure, and access to subscription e-resources is not restricted. However this is achieved, using chat in a more exciting and creative way should definitely be pursued. Breitbach and Demars (2009) argue that creating more interactive content for use in virtual advice sessions can enrich the user experience far more than using text alone. Videos (either created in-house or via YouTube), images and web annotation tools can be utilised to make transactions more engaging, appealing and helpful, whilst using the fuller potential of web based services; what begins as 'chat' becomes 'look', 'watch', 'listen'.

### **Virtual Advice by Appointment**

Let me show you how it's done! (Glassman et. al. 2009)

So far chat has been discussed within the context of an ad hoc enquiry service where users contact the library with queries as they arise. However, a chat service can also be used proactively to offer virtual one-to-one (or one-to-many) advice appointments, with varying degrees of sophistication depending on the product used.

A user could be invited to connect to a chat service at a certain time to be steered through a problem by a particular member of staff, either with text chat only, co-browsing or using a telephone whilst screen sharing. In this guise a chat service does not have an impact on staffing in the same way that a timetabled public duty does; rather virtual advice sessions/drop-ins are scheduled into an individual's workload in the same way that a face-to face appointment or group teaching session might be.

If a library is using ‘webinar’ software such as Adobe Connect, WebEx, GoToMeeting, or Megameeting, then a very sophisticated virtual advice session can be run. This type of software allows full desktop/application sharing, online white board functionality, text chat, voice-over-IP (VOIP) and a webcam to be used. Glassman et al. (2009, p. 303) describe supporting medical students in the US via a product called ‘Glance’ using a ‘combination of PowerPoint presentation and live demonstration.’ Sessions on topics such as database searching and using bibliographic software were offered.

Few, if any, university libraries in the UK are currently using this technology to support students. Of the 15 HEIs surveyed none had offered library training via their chat service or used it with VOIP where this feature existed. However, three stated that this was the next step in enhancing their virtual advice services and that they were planning to offer appointments or scheduled sessions in the near future, either via their existing chat product or other webinar software.

### **The Mobile Campus and Beyond**

The mobile phone as a communication device beats all other devices in one significant way: portability. (Buczynski 2008)

The popularity of smartphones in recent years (O<sub>2</sub> has sold a million iPhones in the UK – Mintel 2009) means that students are increasingly accessing information and services via this route. According to Mintel (2009) those in the 15 to 34 age group, encompassing the traditional student age, are ‘the most likely to purchase and trade up to more expensive phones.’

The 2010 launch of the iPad in the UK, along with the Windows 7 phone and Google’s Android operating system will no doubt excite more interest in developing services compatible with smartphones and mobile devices. Libraries will need to assess their services, chat and others, for compatibility with new and emerging technologies. Free IM services are ahead of the game in this respect – there is a Meebo app for the iPhone and an interface customised for mobile web browsers used by smartphones (e.g. WindowsMobile; Symbian; Blackberry). A recent example of such work was the JISC-funded project, ‘Mobile Campus Assistant’, led by the University of Bristol, which created a prototype to:

[make] time and location sensitive information available to students via their mobiles and location-aware smart phones. For example, where is the nearest available PC? Where is the nearest wireless hotspot? What events are happening today? When is the next bus to the hall of residence? Which library is open now? (Jones 2009)

The company oMbiel is now offering this type of service commercially with its CampusM application and the tagline, 'bringing together on their mobile, all of the university services that students love using' (oMbiel 2010).

The irony will not be lost on librarians to see the shift in status of the mobile/cell phone from a device threatening the more traditional aspects of library decorum to a piece of technology essential to a student's social and academic life. Buczynski (2008) comments on the move from 'managing phone use behavior' to '[engaging] ... users via ... audio tours, text message reference service, text message alerts, and mobile library collection search engines.'

In Australia, the Curtin University of Technology has a pilot web presence 'Curtin Library Mobile' which aims to provide access to key library information and services. It also offers a well-established SMS reference service. SMS reference services are typically only useful for simple questions requiring short answers, as text messages are limited to 160 characters. Much less has been written about SMS reference than chat but the service provided by Curtin features in two articles (Hill et al. 2007; Profit 2008). None of the UK HEIs surveyed were using an SMS texting service for enquiries although two reported that they were considering it for the future.

Beyond the university campus and on a decidedly more ethereal plane there has even been comment on the potential of reference services within Second Life, virtual reference within a virtual world, (Gerardin et al. 2008) and so-called 'embedded librarianship', i.e. library skills instruction as part of 'distance learning courses taught within virtual environments' (Davis and Smith 2009). It remains to be seen whether such practice is 'gimmick or groundbreaking' (Buckland and Godfrey 2008).

## Conclusion

It is clear that there are exciting times ahead for virtual advice services and it will be challenging for libraries to meet their customers in the worlds they want to inhabit. Virtual advice services, as part of a suite of help for students, can only enrich the student experience and enhance the perception of the academic library as an adopter of new technology and provider of services at the point of need. The growth of mobile technologies will bring this into sharper focus still, as we strive to keep up with our users' expectations of a personalised, flexible and collaborative learning experience. Some proprietary databases and e-journals already have apps designed for mobile device access and others have mobile web versions of their products. As quality information becomes easier to access on the move, students will expect greater and greater immediacy with answers to their queries. In addition, libraries will need to think hard about the way they deliver mobile-friendly information on the web and 'redesign with information structure in focus, not graphic design' (Greenall 2010). Users will not necessarily want or be able to see information within the context of a traditional website, and

information/advice will need to be disaggregated into bite-sized chunks. However, it does offer libraries the opportunity to experiment with the delivery of virtual advice services in media-rich formats which are perhaps better suited to mobile devices than text-heavy content.

As we have seen from the examples of chat reference services within the UK, there is room for different and flexible approaches, and certainly no 'one size fits all'. It seems appropriate to give the last word to a survey respondent whose comment sums up the current position of many UK HEIs:

At present we are very much 'dipping our toes in the water' but the further potential that the technology offers is very exciting – increasingly it becomes apparent that live chat will be a vital tool for us to fulfil our aim of providing equitable support to customers no matter where they are.

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