Supporting both learning and research in a U.K. post-1992 University Library : a case study

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Abstract

Nationally there has also been debate on the role of research within higher education and increased interest in the research/teaching nexus. A team of Academic Liaison Librarians at Anglia Polytechnic University were awarded funding to investigate the extent to which learning resources overlap with research resources, whether researcher/teachers encourage their students to use the resources they use themselves and how far electronic resources have affected the relationship between learning and research materials.

Semi-structured interviews were carried out with 21 academics who are both teachers and researchers. They proved to be committed to using research in their teaching. Students are encouraged to engage with research through the recommendation of resources, seminar discussion, recommending their own work for reading and using their research to illustrate methodology.

Our respondents claim to be making significant use of the APU library website, online databases and journals. The majority of them are also recommending the same resources to their students. Convenience, speed and variety of information sources are quoted as some of the advantages of the new e-environment. However a loss of relationship with librarians and the physical library are cited as examples of negative effects.

The purpose of the paper is to report on a project carried out in 2004 by a group of Academic Liaison Librarians (ALLs) at Anglia Polytechnic University (APU). The group was in receipt of a University Learning and Teaching Award which helped to fund the exercise.

The project was prompted by management changes within the University in relation to the role of the academic and by government inspired discussions within the broader educational community about the role of research in universities (Department for Education and Skills 2003a). For libraries, discussion about the prime purpose of a university provokes questions about the types of resources users may need.

The role of the University library at APU has traditionally been to support the learning and teaching of undergraduates. As the University has developed there have been additional demands for it to support more extensive research. As librarians our thoughts therefore turned to the kinds of resources which the library should be purchasing in order to support both undergraduates and the needs of increasing numbers of researchers and research students. We therefore decided that we needed to investigate what resources researchers use, how they obtain them, whether they also used these resources in their teaching, and the importance to them of electronic resources. We found that in the process this also led us to discuss the larger

context of the role of research within universities and the extent to which teaching is research-led and students are involved in research.

Contexts

The *Support for research : support for learning* project, as it was known, took place within a number of contexts. Immediately it was carried out from within the library of a post-1992 University. The project was funded by an APU Learning and Teaching Fellowship which meant that it was looking at issues relating to student learning, specifically how researchers obtained their resources and whether they directed their students to these same resources in their teaching. It was anticipated that researchers would gather their information from a range of sources. Our primary concern was the resources which they obtained through the library. Some of these would be obtained directly in the form of books and others would be acquired through electronic means. The Library and its users are working within environments of profound change in relation to the generation, acquisition and dissemination of information. The University itself operates within national debates around the nature of Universities and the relationship between teaching and research.

The University Library: The University Library at Anglia Polytechnic University seeks to support the teaching of undergraduate students. However the University is also looking to expand its postgraduate and research portfolio and to support academic staff in their research activities. The Library has to provide resources to support both the learning needs of students and the requirements of researchers within the financial limitations of its budget.

The University: APU was created in 1992 as a consequence of the abolition of the binary system of higher education in the UK. As a 'new' university its clientele tended to be more mature, more likely to be following part-time study and vocational courses. The creation of this new tranche of universities provoked further discussion about what a University should be. The Dearing Report (1997) on the future of higher education maintained a view that both research and teaching should be carried out in a university. More recently the Roberts Review of the Research Assessment Exercise (Roberts 2003) and the government white paper of 2003 have proposed that research funding should be concentrated in certain institutions while others which might pursue a narrow teaching portfolio could still call themselves universities (DFES 2003a, 2003b). Although not popular with many academics the government planned to go ahead with developing 'teaching universities' (Lightfoot 2004).

Teaching – research relationship: Opposition to teaching-only universities is founded in beliefs about what a university is and that there is a direct link between research activity and the quality of teaching that universities can deliver. The empirical evidence for such a direct link is at best ambiguous. A meta-analysis of 58 studies of the literature on the teaching – research nexus indicates that teaching and research can relate in many ways but that the impact of one upon the other is minimal (Hattie & Marsh 1996). Coate, et al, (2001) identified six possible relationships : Integrated (overlapping), positive inter-relationships, Independent (neutral) and negative inter-relationships. Jenkins, in a more recent review of the literature, confirms this view, indicating that even to use such a term as the 'research – teaching nexus' overstates

the relationship, that "there is not a *single* teaching-research relationship, there are many relationships" (2004, p. 30).

Curricula context: In the same way that research relates to teaching in many ways it is also expressed in the curriculum in a variety of forms. Students may simply become aware of research as a concept or specific activity of their teachers, they may be taught methods of research or be involved in research-based activities, a module assessment may be a form of research, or they may be engaged as research assistants. The demands that these activities will make upon a library service will obviously vary.

Methodology.

This paper describes an exercise in inductive practitioner research. It was prompted by discussion within the University library about how the library could respond to increasing interest in research within the University. A small amount of funding was allocated to the project by the University's Centre for Learning and Teaching. The project was managed from within the team of Academic Liaison Librarians, though no extra time was allocated specifically for it. The project would therefore need to be a small scale exercise. If it proved valuable it could be treated as a pilot for a larger project.

It was decided to carry out a number of short semi-structured interviews across the range of the institution's academic Schools. Each ALL, including the present authors, identified at least two participants, people who were known to be engaged in research, from the Schools with which they worked. A range of possible questions was discussed. One ALL carried out a pilot interview with an academic colleague and reported back to the rest of the

group. The consequence was to reduce and focus a set of questions which could be used by the rest of the team (Appendix A).

Over the first six months of 2004 a total 21 interviews were carried out at both of the University campuses, Cambridge and Chelmsford. The School / subject areas represented were Arts and Letters (3), Law and Social sciences (5), Design and Communication Systems (2) Applied Sciences (2), Health and Social Care (2), Education (1) and Business (6). 19 out of the 21 had teaching responsibilities at undergraduate level, 20 are teaching or have taught at Masters or postgraduate level and 7 are or have been engaged in PhD or Professional Doctorate supervision or development.

The interviews lasted between 30 minutes and an hour, were tape recorded and transcribed. Nine different librarians carried out the interviews. Although all were operating to an agreed standard set of nine questions, the number of different interviewers, the range of subject disciplines, follow up and probing questions and even interview settings may have affected the way that conversations developed. Transcripts were analysed in order to identify common phenomena and patterns in the beliefs and activities of our interviewees.

Many factors affect the way that researchers operate - the attitudes and values of the individual, the departmental and institutional context and, not least, the subject discipline. The responses gathered can only relate exactly to

their specific situation but may well be relevant to libraries and academics in "post 1992" universities similar to APU.

Role of Research

We began our interviews by asking about individuals' own research interests. We also asked about the relationship of research to higher education generally and to APU in particular. We did not ask our interviewees to give us definitions of 'research' but it becomes clear that research can mean different things to different people.

Since all of our interviewees are engaged in research it is hardly surprising that they see it as important, with words like 'essential' and 'vital' being used. Several indicate that it is at the heart of what a university is.

> *…The University cannot exist if it is not a research-based institution. Otherwise it's just a college. (Arts 9)* [1.]

> *I don't see how you can claim to be a university if you don't have academic research going on within the University. (Arts 10)*

They see research as important to academics, a term which at least one person wanted to identify as something more than being a teacher. Research can be viewed as a professional requirement of the job but it also helps to keep lecturers interested, informed and up-to-date. It helps them to remain at

the forefront of their field and this knowledge can be used with students, though it is not uncommon for people to be teaching on courses about topics other than their research interest.

> *…for me research is about being at the forefront … of the topic that is being taught (Business 15)*

In their general discussion of the importance of research several respondents mentioned the value of research to students, mainly in the sense that lecturers would pass on their own 'new' knowledge. In turn the tutor gains respect or kudos for being up-to-date or the 'expert'. Research can also be seen as a selling point, which contributes to university rankings.

> *…I think they have to invest because university is about research, it's about academic research and that's important to the ranking of our University. (Business 16)*

Students look at such things and expect their tutors to be doing research, which might contribute funding which might go directly to, for example, library stock. Some students may be encouraged to go to a particular University where their special interest is being researched.

Research is also credited with pushing forward the frontiers of knowledge, and where it can be applied and passed on to students, improving professional practice.

The main objective of research is pushing forward the barriers of knowledge and application and practice … HE would be static if it didn't have research links…(Business 20)

… like a renewal, a continuous cycle, you develop it yourself and then develop it in others. (Business 17)

Only three respondents wanted to differentiate between research and scholarly activity, though it seems that others were using the terms interchangeably. For example some talk about publications as a means by which research can be integrated into teaching whereas others might see such dissemination as an essential part of the research process. This is an area where libraries can be of importance in gathering, organising and giving access to the products of research activity in general.

Research at APU

General discussion of the nature of research often led naturally, even if not prompted, to discussion about its role at the academics' own institution. Most of our respondents spend most of their time teaching. Research may be important as part of their job but it is often something done in addition to what they see as their main task or for their own development, perhaps linked to PhD study.

I get the impression that I am doing some research in spite of everything else, not because of it (Social Science 13)

The University has encouraged research over many years, holding an annual research conference but is not always seen as being practically helpful.

There are pockets of support, but there are other parts of the University which actively, in my experience, put obstacles into people's way …(Arts 6)

With recent management changes there is a perception that research is now being seen as more important, though many of our respondents gave the impression that they would believe this when they could identify specific examples of it.

… it would be nice to think that whoever makes the decisions on these things see the importance of research, not just as an entity in itself, although that is important, but in terms of its links with teaching and with student developments… (Arts 5)

The School has changed, and there is more pressing towards research … but then other parts of the University haven't changed, or have a different understanding of what research is or where the funding is and what we should do with it. Sometimes we are at loggerheads. (Arts 6)

The perceived lack of support for research may also be because as a 'post-1992' University and despite the efforts of some within the University, APU does not have a tradition of research. Some of its largest student groups are studying vocational courses, such as teaching or nursing, which historically, and again notwithstanding the efforts of some members of the respective professions, were less concerned with research and a fact which prompts one of our interviewees to question whether so many skills-oriented staff and students allow APU to be a 'proper university'.

…prevailing culture is that this is a teaching university…(Arts 6)

It is this view of what the University is that senior management seek to change. As one speaker said, research is " extremely important for recruitment", particularly for international students but also for UK based students. Another commented:

Masters recruits do ask what research has been undertaken in the department. Senior managers want to come to a place that has a research flavour, has a bit of kudos. (Social science 12)

Relation of research to teaching

Only one of our interviewees seems explicitly to state that using research improves their teaching, though this is implicit in its inclusion by others. The

impression is that it does this through enabling the tutor to keep an interest in their teaching and by enabling them to convey enthusiasm to students.

> *It's so much better to be able to talk about the process of collecting and analysing data from the standpoint of someone who is doing it, not in an abstract way. (Arts 10)*

Some are able to include their research knowledge directly in their teaching. A few admit to offering modules which will enable them to use their research expertise. This in turn can encourage some students to choose the tutor's research interest as an area for their own dissertation study.

> *I do now teach one module which has to do with my research but that is for the first time at this institution…I pushed for it. (Arts 6)*

Students may be attracted to areas of new knowledge, which can be particularly relevant in technological studies. Researchers can also use student discussion to trigger new ideas or clarify their own. The teaching / research relationship becomes an iterative one. Some researchers find the mere fact that they are doing research helps to build their confidence in their general work with students.

> *…it gives me the confidence to stand up in front of the students … and answer their questions - like doing a viva (Business 16)*

From a lecturer's point of view it is also very sensible to incorporate their research work into their teaching simply because it may allow them more time to prepare subject matter they are less knowledgeable about.

Encouraging students to engage with research

Our question about engaging with research was as much to do with getting students to engage with the results of research as with the process itself. The library represents a place where these results are stored. The work of librarians is concerned with facilitating the access to this information. We were therefore interested in how our researcher - teachers sought to engage their students with research.

> *I found it difficult to engage students in my research since I am teaching accounting and doing my research in [X] (Business 16)*

As one respondent pointed out there are some courses or modules which are general or introductory to their subject and into which it would be difficult to integrate research. One of our respondents claimed to introduce her research interest into a general module, however. Others say that their research is too difficult for undergraduates, though they may use it with postgraduates. A few say their work is of limited applicability to their teaching.

On some courses research can be broadly integrated.

> *Research is an integral part of all the modules that they undertake on the M.A. … the Masters programme at least gives the in-service teachers an opportunity to acquire certain understanding and knowledge of methodologies and data collection methods, data analysis, and all the problems associated with them (Social science 11)*

Students may not know what research is when they start their courses or they may be worried by the mystique that they perceive to surround it. Though undergraduates are not necessarily expected to engage in research they are introduced to its methods and techniques. This may take place through different types of assignments. They may be asked to produce a research proposal, to do a literature review, to construct a bibliography or to identify and critique a research article. These activities, while not research in the sense of collecting primary data, more the realm of the postgraduate, do serve to introduce them to elements of the research process. Some courses do allow students to pursue independent study modules, which might include the possibility of primary research. There are also modules on research methods, which may be compulsory for some students in some areas.

> *I think we need quite a number of these sorts of modules … that get the students really involved in research, because a good research method is a good learning method. I don't really see that there is a difference (Sciences 1)*

You should leave, as an undergraduate, with some basic knowledge of how to collect and analyse data. (Arts 10)

…at level M [postgraduate] *it is not a problem because it is part of their learning outcomes and … their work, their dissertations, their essays have to be grounded in research an at level M we do encourage people currently to do small scale research projects (Social science 12)*

Postgraduates can also be expected to take their work through to the publication stage, something not unknown for undergraduates who have produced a particularly good dissertation.

We have just been reading some dissertations, a couple of them are really good and we are going to encourage the students to try … and get their own work published. … Last year one student did that and he had an article published, he reshaped his dissertation (Arts 5)

Students can also be recommended to the results of research in the form of named journals, specific articles, classic works or particular authors. They may also be prompted to use databases to identify sources of information. Some lecturers may encourage students to go to the library to speak to subject librarians

> *I set the same kinds of books and chronicles for my undergraduate*
>
> *students, particularly the third years, that I am using in my research …*
>
> *(Arts 7)*

One lecturer indicated that promoting the library as a source of research information helped students to appreciate that research was not a mystery which was barred to them but that it produced information that is relatively easily available.

> *I think there is a great enigma, a mystery almost, a fear of the unknown*
>
> *about research, so any contribution that can be made to lessening that*
>
> *mystery, I think is helpful (Social science 14)*

In broad terms some researchers see themselves as trying to inculcate a spirit of enquiry, a research approach which should stand students in good stead in a range of situations. This approach may include the identification of research sources beyond the traditional, such as television (*Big Brother* or other 'reality' shows for students of psychology or group dynamics), newspapers and the Internet.

Some of our respondents talked about using the teaching process itself to generate interest or enthusiasm for research. This might be through lectures, using their own or other people's research as examples or for discussion. One indicated that in his field some of the actual work of research could be delegated and students could take part in research themselves.

There is very rarely a lecture when I haven't … incorporated

something. (Arts 7)

They do like to be able to talk about things that happened recently …

the findings of recent research (Business 20)

You bring twenty minds together … and the ideas flow (Arts 7)

So they are very interested. They want to know. They actually ask me

what have you worked on? What have you published? Where are you

going for your conference? (Arts 9)

This latter quote also indicates that some lecturers relate to their students

through the process of research itself in the sense that dissemination is part of

the overall research activity. Others seek to empathise with what their

students are going through, indicate to them that they know the difficulties of

gathering material and writing it up. One described it as students appreciating

that they had been at the chalk face and got their hands dirty (Social science

14).

When asked if they explicitly cited their own research to students most said

that they did, either through books, articles or conference papers. Examples

of how this was done included giving students case studies, chapters from a

book before it was published, empirical data or articles in draft form for

discussion.

> *And they do like it when they realise I have made mistakes. They like*
>
> *to question what I have done …(Business 20)*

> *[I can] say I'm the researcher that did it and this is why I did this and*
>
> *they can question me. They can say "I've had a look at it and it's a bit*
>
> *ropy, really, and there's one or two problems".. and many students*
>
> *come to me and they want to question me and this seems good to me.*
>
> *(Social science 21)*

One of the difficulties with lecturers using their own information was that

students, contrary to the quotations above, might be inhibited in being critical

of it or they will assume that it is all that is required and not read anything

else.

Not all of our respondents recommended their own work, some because it

was not at an appropriate level for the students (e.g. a book that was included

in a postgraduate reading list but not an undergraduate one), or not relevant

to the subject they were teaching or because they felt students might be

intimidated by it or deterred from reading around the topic.

> *…if I am talking about something and I want to explain, I might use*
>
> *some research I had done to explain the point I am making. But I*

wouldn't actually show them the article and say you must use this.

(Business 20).

What resources are used

Having established that our interviewees were using information sources we asked them what they used and how they accessed them. 20 of the 21 claimed to use the APU Library website. This would be possible though there may be some over-reporting with respondents telling their interviewers what they thought they would want to hear. This project was being carried out under the auspices of the APU Library and interviewers were APU Library staff, known to the interviewees. Some of the group were aware that the APU Library saw its primary responsibility as being towards its undergraduate students.

> *I would be quite happy with the library being seen primarily as a*
> *resource for students, rather than for staff research activity. (Arts 10)*

Several other libraries were mentioned. About half of our interviewees were based in Cambridge and Cambridge University Library (or one of its many specialist collections) was mentioned as a source 9 times. One claimed "I would quite happily spend the rest of my life there … Cambridge University Library, that's one of the best for research" (Arts 10).

The British Library was mentioned 5 times. It is not clear whether this means that respondents had visited the library though one interviewee mentioned visiting the Library's Boston Spa site because he lived nearby. The business school interviewer had the impression that at least some of her interviewees were actually visiting the British Library in London. Since APU obtains inter-library loans (ILLs) from the British Library some respondents may have been referring to this service. 10 people mentioned ILLs as an information source.

10 said that they used the Internet. Again it is not always clear what this meant because all of those accessing the APU Library website would have used the Internet to reach it.

13 respondents said they used databases, mainly bibliographic, though there was hardly any overlap where specific services were named. 16 said they used journals and 10 specified that they used electronic journals. 3 respondents mentioned use of e-mail as an information source.

> *…journals is always a bit of a knotty subject in my subject area because there's a very sentimental attachment to maintain a good stock of journals (Arts 10)*

> *e-journals have become very important (Social science 11)*

> *I am sure there are things that I am not aware of that are available to*
>
> *me. To be honest when you are teaching you haven't got the time.*
>
> *(Sciences 4)*

The research project was also interested in other sources of information and 15 respondents mentioned getting information from colleagues, networks or various professional institutions; conferences and writing groups are mentioned specifically and one person mentioned libraries as part of the scholarly research community.

> *I use books, periodicals, websites, in terms of the written word, but*
>
> *apart from that I think for me it is important to have situations where*
>
> *there is an exchange of dialogue and I get that either at conferences,*
>
> *or in fact, with my students. There is a lot going on in the common*
>
> *room. (Arts 9)*

A couple of respondents mentioned recommending books of speakers they had heard or met at conferences to the extent, for one, of making a book a core text for a course, "a great success".

17 of our group recommended students to use some or all of the sources which they used, particularly the resources of the APU Library. Those that did not were either not teaching in the area of their own research or felt that the sources they were using would be too difficult for most undergraduates.

For the undergraduates we perhaps look more at published articles in the professional journals … rather than having them look at the research journals … going into such detail in a very finely focussed area is not necessarily appropriate for undergraduates to do that (Sciences 1)

Use of electronic resources

Having spoken generally about the types of resource used and where these resources were obtained from, interviewees were next asked explicitly about their use of electronic resources and how they felt this had changed the relationship between the library and the support of research. Researchers saw many conveniences of electronic resources. Ease of access, speed and convenience were most mentioned. There was a perception, true or not, that almost anything was available.

It has certainly affected the way I work, simply by being able to access libraries. I think it has made it much easier to get at things … you don't have to know the author name or even the title. Keywords will do so you can find a whole lot of stuff much faster …I find I am sitting there and the book will mention some obscure text. I will Google it and there it is (Arts 6)

I think the existence of the internet and electronic resources … has changed the whole research enterprise (Social sciences 14)

> *It's quicker to access electronically and print out rather than going to*
>
> *the library and photocopying things … it's all about time saving, and*
>
> *time consuming. (Business 16)*

For some what was important was quick access to what would otherwise entail a visit to the library, e-books and e-journals for example. Others mentioned material which would otherwise not be so easily available to them, such as online statistical material or government press releases.

> *[It is easier] …to look at research on the Home Office website than it is*
>
> *to get a book out of the library. (Arts 10)*

> *I get a lot of empirical data from the internet (Business 19)*

There was also the ease with which contacts could be made with fellow researchers overseas. Not only was the range of material important but, for some, the quantity.

For others this was a drawback. Sifting through large amounts of information was seen as time consuming, since quantity was not always associated with quality. A major downside of digital access for some was the loss of contact with the library. Not only do researchers have less need to visit the library, the same is true of students, who can use the internet for a quick information fix.

Several of our interviewees expressed concern that students were not always aware of the need to evaluate the material they find on the web.

Academics may lose links with their libraries. One respondent mentioned that in the past her librarian would do literature searches for her. Now she works more at home "you've just got to get on with it". A friendly and close relationship with the librarian seemed to have been lost. Said another:

> *No, I am not coming in, because if it's journal based, then it's mostly on-line for me (Business17)*

Several interviewees commented on the fact that the introduction of the internet and electronic journals was serving to distance librarians from academics.

> *They [academics] use the library less and less (Arts 7)*

> *I think what's online … is making me less likely to come into the library, only to get books, … or maybe just to make an enquiry. But my visits are fairly infrequent because I am accessing so much electronically (Social science 11)*

> *I remember how tedious it was going to the library (Social science 12)*

Consequences of this are both positive and negative. When they do visit they may well plan their time and demands better, while the library may need to promote itself more and make users aware of what it can do.

I think it will make the use of the library a lot more efficient …you can maximise the value of the time that you spend in the library. So I don't think it is actually going to mean … that libraries have less use … but that they don't waste so much time (Arts 9)

There are still some that valued the library as a place:

My own natural inclination is to go to a library, to sit in a library, to use a library. [I still get] a buzz from being in libraries (Social sciences 14)

If I want to look up things quickly, I'll do it on the web, on my own but I do find that if I do want to think differently, coming into the library makes me do that … I hope we never get rid of the library as a place (Business20)

How the library can support researchers

Being aware that the advent of electronic resources was likely to have influenced how researchers gather their information, the closing questions of our interviews revolved around how the library could support students, in

terms of improving their research skills, and how it could support the research community at APU generally.

Most of our interviewees thought the library was doing a reasonable job in relation to training of students in library use, particularly in relation to inductions and help with dissertations.

> *…the library is doing a lot to support research students at the moment. I can't think of anything more we could ask for. … I think that the library has contributed to the RAE ratings indirectly, we have higher ratings because of the help the research community gets from the library staff. (Sciences 2)*

Some also saw a role for academics in encouraging students to use the library more. This could be done by linking library use to assessment, recommending students to take skills training that is offered or even setting an example by using the library themselves.

> *… we are all basically here for the same purpose, we are not growing potatoes, we are a research centre (Arts 9)*

Several commented on the need for the need to promote library resources and services, to expand them in certain areas particularly more academic journals and further electronic access.

… the library remains absolutely crucial in terms of resources that you have here, that we have access to (Arts 5).

…make sure that the lecturers know what the library offers. I didn't find out about the positive changes that were being made, which is a shame (Arts 9)

I think support for individual researchers is limited by the individual researchers not knowing what help they could be having (Business18)

Inter Library Loans, current awareness services and bibliographic software (e.g. Endnote) were also specifically mentioned. There were comments about how effective links between individual librarians and researchers were valuable, or how they could be better. As already noted there was a sense for some that increased electronic access was distancing some academics from the library. Some probably saw the library as distinct from their activity while some others favoured closer links between academic and library staff.

… the library should not sit outside the academic community but should be central to it and should be subsumed within the academic community (Business18).

Comments were also made about the library environment, whether too hot, too cold or too noisy. Some also thought library communications were too jargon laden and a few claimed to find the library intimidating.

Discussion

The purpose of our study was to discover something about the relationship between the resources which researchers use and the extent to which students are encouraged to use these in their learning. We tackled this by carrying out a series of interviews with teaching staff who were also researchers. The discussions ranged over the subject of their research, how they saw it relating to their teaching, the resources they used and the extent to which they recommended students to use the same resources. We also talked about the use of electronic resources and ways in which the library could facilitate student research skills.

All of our interviewees thought that research was an important if not essential element of a University's activity. They may simply be reflecting the sort of attitudes indicated by members of the American public when asked about the respective qualities of 'research universities' and 'teaching universities', that the former are academically superior (Fram and Lau 1996, p. 30). Most of our sample felt that, where they taught in the subject area of their research, it added to their teaching by keeping them up to date. Some felt there was a tension between the time needed to carry out research and that needed to prepare for teaching.

Although research may have a positive value, the ways in which it impacts on teaching are difficult to measure. Hattie and Marsh's work (1996) has shown that there is a 'slightly positive' relationship between teaching and research, that time spent on research was not directly related to the quality of teaching, that time spent on teaching was negatively related to publication outputs and that the 'common belief that research and teaching are inextricably entwined is an enduring myth' (p. 529).

While APU values research and encourages teaching staff to undertake it there is not a general requirement that all teaching should be research led. However, as we have seen, many staff obviously do utilise their own or others research in a variety of ways. These broadly reflect the two main pedagogical models identified by Zamorski (2002, p. 415) whereby academics saw 'research-led teaching and learning' "as teaching that is heavily informed by their or others' recent research, or where research with or by students forms part of the pedagogy or content of a course". Whichever of these is used, the library can be central. Students can be directed to it for access to content resulting from research, specific sources describing research or material describing research methodologies. These elements can be accessed in physical or electronic forms.

One approach which is encouraged within APU is that of Inquiry Based Learning. This seeks to introduce students to the idea of disciplined enquiry which is at the root of research. They may also be expected to identify and use resources for themselves on particular topics. The library will be one of the information sources they may need.

Zamorski's study is also interesting for us because she describes ways in which students perceive research and some activities similar to those described by APU academics. For example one student describes a teacher's presentation of his research:

> … he brought his manuscript in, plonked it down on the table and he was really excited because he'd just finished it and it was ready to go to the publishers, or something. … you knew it was really important. Mind you, he didn't really tell us what was in it. I would have liked to have known how you go about doing something like that. (p. 417)

Some of our interviewees noted that students expected Universities to be engaged in research, though they might not always be directly affected by it or really aware of what it is.

Although our discussions centred around research, no attempt was made to define the term. The interviews do indicate by implication some differences between individuals and disciplines about what 'research' means. What seems to be common in discussions about the relationships between research, scholarship, teaching and learning, is that it should result in some addition to the body of human knowledge and that it should be publicly available for consideration, discussion and correction. Libraries have traditionally been one of the major channels for these activities.

In their use of the library our interviewees, though only a small convenience sample, are also fairly typical of the ways researchers work in relation to libraries. Larger scale studies in the USA (Marcum and George 2003) and the UK (Education for Change 2002) also show that most researchers (80+%) think that their home library satisfies most of their information needs. There tends to be a relationship between the level of attachment that researchers have for their local library and the researcher's age, the length of time they have been at the institution and the level of expenditure on resources (see also Cluff and Murrah 1987). APU interviewees expressed strong allegiance to the resources of their home library but most also mentioned ease of access to either the British Library or Cambridge University Library as important.

Like other researchers, our APU group use a range of non-library resources, such as colleagues, conferences and research networks, though printed resources in the form of books, journals and printed electronic resources are still most highly valued (see also Borgman, et al, 2005, p. 645). Inter library loans are rated as essential by 74% of British researchers (RSLG 2003, p.14). However with some exceptions most are also comfortable in using electronic journals where they are available and over half are likely to use a search engine like Google or Yahoo before using library databases. Scientists are more likely to use e-resources than arts or humanities researchers, mainly because there is less material available for the latter groups, though the amount of historical material digitally available is increasing and they see their usage as likely to go up. Medical and bio-scientists are heavy journal users, humanities, arts and social scientists value access to books and those

working in area studies or languages are more likely to use manuscripts or images. However, to quote another large scale UK study (British Academy 2005 p. 58) "[t]he idea that STM researchers are up to date and HSS ones are stuck in the non-electronic age has no substance in reality". The different relationships with resources no doubt reflect the different meanings and practice of research activity across the disciplines and the attitudes of individuals. The majority of researchers do not feel that they need training in library use.

Many researchers state that they use the physical library less than in the past. Several in our APU sample commented on losing touch with the library. Library visits usually occur in relation to the need for specific information or assistance. Arts and Humanities researchers are more likely to use a physical library because they value the serendipitous nature of browsing. They are also more likely to journey to other libraries in order to use unique primary resources.

While wishing to draw parallels with the activities of researchers in general our sample is a selective one even within APU. As a modern University many of the staff and students are working in vocational, less academically traditional subject areas. This may affect both their attitudes to research and its integration into teaching. As Griffiths indicates in relation to built environment disciplines but which might also be true of, say, social work or business, advances in practice are more likely to be driven by developments in the workplace or government policy than by 'discovery research' (2004, p. 723).

Professional bodies may place greater emphasis on the need for curricula to cover content rather than adopt enquiry based approaches. Conversely consultancy in workplaces and student practice settings can be more effectively integrated into teaching than 'research' activity (Griffiths 2004, p. 724). Indeed, a broad definition of 'research' may incorporate consultancy. Other professions, such as nursing, have long advocated an evidence- or research-based approach to practice.

Conclusion

One reason why library-held resources are of importance to the research - teaching relationship is that they are both the tools and the product of scholarship and enquiry. As one of Zamorski's students put it:

> …if they didn't do research, they'd have nothing to teach us would they? I mean, every book you pick up and every, like, journal article you look at is based on somebody's research (2002, p. 417).

The idea of dividing library materials into 'research' and 'non-research' may be a subjective one. Our study did not explicitly ask about how academics found information for their teaching. The study of a group of geographers by Borgman, et al, (2005, p. 645) did so and found that "[i]nformation seeking for research and teaching are interdependent, and seeking information for research is more likely to yield teaching resources than vice versa". However, insofar as libraries do store or facilitate access to the whole of human

knowledge they also affect the ways that universities relate to their communities, both external and internal. Teachers and students still expect universities to engage in research and they expect libraries to support that activity.

The extent to which individual academics use research materials in their teaching depends on their approach to teaching, the discipline they are working in, the level their students are at and whether they use research as a source of content or as a process in which students need to engage. 19 of our 21 interviewees were recommending students to look at databases and / or e-journals. They do not all see themselves as expert searchers of these sources. In fact, though they may be willing to suggest that students use libraries they may be less keen to use them as their main research source (Price 1999, Wise 2003). They will encourage students to seek help in searching, but, like students, they tend to want personal assistance with specific problems rather than general help in information skills.

The Research Support Libraries Group report (2003) identified the fact that no library could any longer hold all the needs of all the researchers it might have to support. However, the advent of the digital age means that almost any library can gain access to any electronically available material, assuming it can afford it. So while digitisation of material democratises access to research resources up to a point it may also raise expectations which cannot be met. "The combination of expensive licences and budget constraints causes problems of unavailability for researchers in smaller institutions, particularly

where the number of researchers to whom a specialist resource is relevant is small and where its licence costs are high" (British Academy 2005, p. 42). Hard copy materials can often be made available through local or regional collaborative schemes and the British Library's document delivery services. The issue for librarians in the digital age is to promote themselves as the access point to, and navigators of the flood of electronic information (Hanson 1995, Austen 1998, British Academy 2005, p. 97).

How will this study assist the APU Library in supporting research? The very act of carrying out the study has helped to promote the library as a source of information, to raise awareness of what it can provide. The project has been written up internally and presented at APU Learning and Teaching conferences. For the first time this year it has been recommended in a course approval document that tutors utilise their research materials and publications as a way of enhancing quality. In terms of digital resources the library is seen to be meeting the needs of its research community while also providing for its undergraduate students. The findings of this study have implications for the role of 'research' and the ability to support it, within teaching-led institutions.

Libraries are still physical places and their resources serve to provide the material evidence for a research based environment. Despite the upsurge in disintermediated searching, researchers still value their 'home' libraries. In this sense if research is central to what a university is about, then a library is central to the University, to paraphrase one of our interviewees, not outside the academic community but central to it. The outputs of research are

changing and although the information world is increasingly anarchic they will probably have to be stored, and ordered and even catalogued if they are to be of use to future scholars - "traditional discovery mechanisms will remain a vital and fundamental part of the research process, and an essential part of the national and international infrastructure needed to support it" (British Academy 2005, p. 47). The librarian, however, cannot be complacent about their role. They must keep in touch with the needs of their users and be proactive in meeting them in an environment where the researcher does not have to enter a library building. The library, at least at the moment, remains the place, real or virtual, through which much of the knowledge base is stored, organised and accessed and, by virtue of that fact, the place where research and learning meet.

[1]   *In order to protect anonymity of our respondents they have been identified by a broad subject category and an individual number.*

References

Austen, G. (1998) What is my core business? The academic librarian as partner in the teaching and research process. *International Conference on new missions of academic libraries in the 21st century* 84-87, Beijing : Peking University Press

Borgman, C. L., Smart, L. S., Millwood, K. A., Finley, J. R., Champney, L., Gilliland, A. J., & Leazer, G. H. (2005) Comparing faculty information seeking in teaching and research : implications for the design of digital libraries. *Journal of the American society for information science and technology,* **55** (6), 636-657

British Academy (2005) *E-resources for research in the humanities and social sciences: a British Academy policy review*. London: British Academy.

Cluff, E. D. & Murrah, D. (1987) The influence of library resources on faculty recruitment and retention. *The Journal of Academic Librarianship,* **13** (1), 19-23

Coate, K., Barnett, R., & Williams, G. (2001) Relationships between teaching and research in higher education in England. *Higher Education Quarterly,* **55** (2), 158-174

Department for Education and Skills (2003a) *The future of higher education Cm 5735*. Norwich : TSO

Department for Education and Skills (2003b) *Consultation on proposed new criteria for degree awarding powers and university title*. Available at www.dfes.gov.uk/consultations/ [accessed 11 May 2005]

Education for Change Ltd (2002) *Researchers use of Libraries and other information sources : current patterns and future trends*. HEFCE

Fram, E. H. & Lau, G. H. (1996) Research Universities versus teaching universities – public perceptions and preferences. *Quality Assurance in Education,* **4** (3), 27-33

Griffiths, R. (2004) Knowledge production and the research-teaching nexus: the case of the built environment disciplines. *Studies in Higher Education*, **29** (6), 709-726

Hanson, T. (1995) The role of academic libraries in supporting research. *New review of information and library research,* 1,197-206

Hattie, J. & Marsh, H. W. (1996) The relationship between research and teaching: a meta-analysis. *Review of educational research,* **66** (4), 507-542

Jenkins, A. (2004) *A guide to the research evidence on teaching-research relations.* York: Higher Education Academy

Lightfoot, L (2004) Labour's two tier university system to go ahead. *Daily Telegraph,* July 17, London.

Marcum, D. B., George. G. (2003) Who uses what? Report on a national survey of information users in colleges and Universities. *D-Lib Magazine,* **9** (10), http://www.dlib.org/dlib/october03/george/10george.html [accessed 21/3/2005]

Price, G. (1999) User education in higher education: helping academics join the library environment. *IATUL proceedings (New series),* **9**, http://www.iatul.org/conference/proceedings/vol09/papers/price.html [accessed 23/3/2005]

Research Support Libraries Group (2003) *Final report*. HEFCE.

Roberts, G. (2003) *Review of research assessment*. Joint Funding Bodies: available at http://www.ra-review.ac.uk/reports/roberts.asp [accessed 9/6/2005]

Wise, Alicia (2003) Are digital library resources useful for learners and researchers. *Serials,* **16** (1), 23-26

Zamorski, B. (2002) Research-led teaching and learning in higher education. *Teaching in Higher Education,* **7** (4), 411-427

Appendix A.

University Library L&T Fellowship 2004

Questions for semi-structured interviews

1. Briefly outline your area of research interest and any teaching responsibilities.

2. How do you see research relating to the role of a) HE generally and b) this University in particular ?

3. How do you believe your research relates to your teaching?

4. How do you encourage your students to engage with a)research generally b) your research? What part do any published findings (your own/other people's) play in this? (Undergraduate/postgraduate levels?)

5. What types of resources do you use for your research? (Particular databases/journals?) Do you recommend the same resources to your students?

6. How do you access these resources? (Membership of research communities here, UK, abroad?)

7. How does the use of the internet and electronic resources affect researchers? How does this affect the relationship between research and libraries (as place and resource)?

8. How should the library contribute to improving students' research skills?

9. How should the library contribute to the research community at APU and further support individual researchers here? (Impact of RAE?)