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KNOWING OUR USERS AND RESPONDING TO THEIR NEEDS—THE IMPACT OF RESEARCH ON SERVICES IN TWO UNIVERSITY LIBRARIES

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Abstract. In an earlier paper¹ the authors discussed reference services in two university libraries and suggested changes to the services based on a user survey. They also quoted research into staff and student use of information resources. Although libraries have no difficulty in compiling quantitative data, the use of such qualitative research to delve beyond the statistics, in order to better understand user needs, perceptions and behaviours, is a recent development at Harbin Engineering University Library, China. However, at the Library of the University of Northumbria in England there is a long history of using research to evaluate services. This paper gives a very brief introduction to the value of qualitative research in evaluating services and providing a sound basis for management decisions about staffing and service delivery. Some of the methods used at the two universities are outlined. Finally, two case studies of research projects, one from each university, will be described and the extent to which they have resulted in changes to policies or practices will be examined.

The Value of Qualitative Research

Quantitative data is easy to collect in libraries. How many books have been issued? How many users have come through the doors this week? How many enquiries have been answered? The data are very useful as an indication of how well the library is being used and vital for management decisions about budgeting, staffing levels and deployment of scarce resources. The purpose of qualitative research is to go beyond the statistical data to give a clearer idea of how well the library is serving its users. Are enquiries being answered properly? Do opening hours meet students' needs? Does the information skills programme have an impact on students' academic performance? Are students aware of the range of services available? Are the library staffs helpful? Do we understand students' information seeking behaviour? Properly conducted qualitative research will provide solutions to problems and an understanding of user needs, perceptions and behaviour, resulting in better management decisions, improved services to students and greater awareness of the training needs of library staff.

Although the use of qualitative research is a recent development for many libraries², it is a well-established practice at the University of Northumbria. Northumbria has had a Research & Planning Librarian before 1980 and has now a long history of using qualitative research, with experience in different techniques, the interpretation of research results and in using evidence-based practice as the basis for service improvements.

Using qualitative research to understand and respond to user needs is a more recent development in the Library of Harbin Engineering University. This could be because most decisions made by the librarians, based on their intuitive understanding of what was needed, did not result in complaints. Moreover, the students had not acquired a consumer culture and simply accepted the changes.

Research Methods

The most common methods of data gathering for qualitative research include user surveys, questionnaires, content analysis, interviews, case studies, action research and focus groups.³ In all cases the

research question needs to be carefully articulated and the research project meticulously planned. At Northumbria we regularly survey students to gauge the level of satisfaction with services or to evaluate the success of changes made. For example, do the longer opening hours meet student expectations? We use snap (without a capital letter is correct!) survey software from Mercator to design the questionnaire and analyses the responses. However, students in the University are surveyed so often that there is a danger of “survey fatigue” setting in, resulting in too few responses for the data to be reliable. Those who feel most strongly (and negatively) are much more likely to respond than users who are satisfied with the service. And because we send the forms to all students electronically we do not really know if the responses are truly representative. With general surveys, such as the user satisfaction surveys, we are looking for trends and trying to highlight areas of concern, For example, a general dissatisfaction with a service (opening hours) or general satisfaction (library catalogue). Other surveys (for example, use of ebooks) just have a link to them from the web page. This is not satisfactory because the only responses are from those people who use ebooks and can be bothered to fill in the questionnaire. We have concluded that this is not sound research. We also use focus groups in which the participants discuss in some detail the questions suggested by the facilitator. Finding students willing to give up some time to discuss issues such as information skills is proving more and more difficult and recently we have resorted to giving financial rewards to students who participate!

In HEU Library the use of research has not yet been developed in such a systematic way. We frequently use surveys and questionnaires to highlight questions. For example, should chat facilities be available in the electronic document reading room – a very sensitive question which students feel strongly about. We conducted a survey on the web. We know that students online would be likely to take part in the web survey. The students who dislike chat might not know about the survey. To some degree the survey was unbalanced and unfair but it is the easiest way to gather data directly without any cost. Before we make some important decisions such as which journals should be cancelled we used questionnaires. It takes time and energy to collect and analyze the answers. We found we did not attract the response we expected. Some researchers did not really care about which journals were cancelled! The data we collected from such questionnaires has to be used with caution – a point of reference.

Northumbria Case Study – Development of an Information Skills Programme

User education has always been a major activity for the subject librarians at Northumbria. Now, teaching information literacy – how to find, evaluate, use and reference information - is more challenging than ever. Firstly, the number of students has risen dramatically. Northumbria had 13,285 students (9,126 FTE) and 1680 FTE academic staff in 1988/89; in 2003/4 it had 23,912 (19,316 FTE) students from 90 countries. This expansion has resulted in changes in teaching methods, with more group learning and an increasing emphasis on student-centred (or self-directed or independent) learning - students acquire knowledge and understanding for themselves with limited guidance. Secondly, the development of the Internet and the World Wide Web, together with a VLE (Blackboard), has enabled the development of distance learning and the distribution of learning materials and information resources to remote students. Many of our students live in other parts of the UK or live abroad, studying at a distance. They rarely, if ever, visit Newcastle but they do need to know how to access and use the resources we provide. Thirdly, as numbers have increased so access has widened – there is a great diversity of social and ethnic groups and students with a variety of needs, For example, a significant number of dyslexic students. Fourthly, the variety and complexity of the resources themselves (print books and journals, electronic books and journals, electronic databases, some with links to full text, and a range of other electronic resources) can be overwhelming. No wonder Google is so successful!

To try to meet these challenges we constantly evaluate what we teach and how. We really need to know whether our teaching is effective. This case study describes our most recent evaluation of the information skills programme. We had developed an information literacy programme, Skills Plus, for the 2004-5 academic year. It was designed as a self-learning programme delivered in Blackboard, a virtual learning environment, although the subject librarians introduced the campus-based students to the programme through seminars and demonstrations.

An extensive evaluation was made possible because several subject librarians successfully bid for two Applauding & Promoting Teaching Awards (small grants to support innovation and good practice) and because two subject librarians completed a project as a requirement of a course they were studying.⁴ It is very difficult for subject librarians to find time to carry out qualitative research. The staff development budget and APT awards funded additional staff time, including technical expertise, and paid the Open University licence fee and the payment of students.

The first phase consisted in the development and testing of a user-friendlier interface for the Skills Plus programme, together with more attractive learning materials. The project produced five types of learning materials, which would address different learning styles. The learning materials focused on aspects of the Library Catalogue, TalisPrism. They were a .pdf guide, a video produced with Camtasia software, a Blackboard quiz incorporating a Camtasia video, instructional web pages and an interactive guide using software called INFORMS (available at <http://inhale.hud.ac.uk/perl/jump.pl?115-1410-inhale>). During the research many problems were identified, such as the size of the files of the videos, the difficulty of surveying both staff and students in the available time, the skills limitations of the researchers and so on. Of course that is why we carry out the research – to test the feasibility of a development within the available staffing resource.

There were two methods of evaluation. Firstly, Library Staff received training in the use of the Library Catalogue. This training comprised a live demonstration followed by exercises to test comprehension. Each trainee was asked to answer a questionnaire after this training, to gather evidence of learning styles and preferences. Secondly, fifty library staff from different teams and a range of salary grades were asked to test the products and to make comments on which they preferred and why. What were the strengths and weaknesses of each? Respondents were asked to rank the products according to ease of use, quickest to use, best learning format and a number of other factors. A points system was used to determine the order of ranking.

The results indicated that participants liked to use a variety of learning methods, that the Informs guide ranked most highly among the products, that the preferred method for training library staff was a combination of a demonstration with an Informs guide and that in the opinion of library staff, the most effective method of teaching students would be through workshops, with Informs guides in second place. At this stage it is worth remembering that we have few staff and many students and workshops for all students may not be an option. However it is important to follow the debate about the effectiveness of online learning compared to traditional teaching methods!

Bearing in mind that this stage of the research was part of an e-learning course, the authors concluded, “the major outcome of our project is a deeper appreciation of the planning required to produce elearning materials.” (Balfour & Pears, p.18). Work on redesigning and rewriting Skills Plus had begun before the research project had finished and the feedback was analysed by the Library’s Elearning & User Education Development Group, which was reviewing the content of the Skills Plus Information Literacy Programme. As Balfour & Pears noted: “In particular, the teaching theory and course design materials... will be used to make the content of Skills Plus into a course that students can follow to develop key skills.” (Balfour & Pears p. 17).

The aim of the second phase of the research evaluation exercise was to obtain students’ feedback about Skills Plus, in particular its usability, format, amount and level of content and relevance to their skills development. At the same time it was decided to compare student perception of Skills Plus with MOSAIC, the well-known information skills course produced by the Open University. This would enable a comparison to be made identifying preferences for design, interactivity and relevance of Skills Plus content. This section of the paper quotes directly from the draft report with the permission of the authors (Bailey et al, op.cit.).

The project used questionnaires and focus groups to gather information from students, who were asked to attend a four-hour evaluation session. Students were given a financial incentive to attend and were recruited by the distribution of flyers at both campuses. (Northumbria has two campuses, one in the city centre and one about three miles away). Those initially recruited were sent reminders to their mobile phones before the sessions. A total of 27 students attended 2 sessions. The use of mobile phones instead of email as a method of communicating with students was a wise choice, with a 100% response rate!

Students at each session were divided into two groups for the first activity, which was a focus group to determine students’ attitudes and understanding of information literacy and information literacy training. This focus group was followed by two hands-on activities in which participants were asked to work through a section of the Skills Plus package and a section of the MOSAIC package. After completing each section they were then required to complete an online questionnaire about the packages.

To supplement the questionnaire a second focus group was then carried out to gain more qualitative data about the participants’ views of the two training packages with which they had just engaged. The purpose of Focus Group 2 was to establish how relevant students thought Skills Plus would be in relation to their studies. Students were also asked what they thought about the design and to compare Skills Plus with MOSAIC in order to establish the features they preferred. Finally they were asked to discuss the key motivational factors that would influence them to study these modules.

The final activity, Focus Group 3, was an idea generation session in which the participants were divided into groups of four and asked to contribute ideas on post-it notes about how the Skills Plus package could be improved and how to take forward the information literacy agenda at the University. The latter point is of great significance because subject librarians are working hard to encourage academic staff to embed information skills into the curriculum.

Conclusions

Information literacy

Reassuringly, the students identified that they required information literacy skills, but were confused about what the term actually meant in relation to their need to find information to complete assignments. The majority of students felt that they had some level of information literacy skills, with second year students believing they were more information literate than when they started at the University.

University support for information literacy: A wide variance exists in the support received by the students. Some students had received formal training by academic and/or library staff whilst others had received none. A repeated comment from students was that academic staff assumed students would know how to access the eLearning Portal (Blackboard). Students' lack of awareness of available support was also a significant finding. There was strong agreement that the beginning of the academic year was an inappropriate time to receive information skills training, and the current format of the sessions, using PowerPoint lectures to large cohorts, was considered to be ineffective.

Skills Plus

Although the majority of students were unaware of the existence of Skills Plus, they still felt that it was relevant to their study needs and would aid them in completing their assignments. Given the lack of awareness of Skills Plus, much thought must be devoted to its promotion and innovative ways to motivate students to undertake the course. The students felt the most effective method would be to embed Skills Plus into the curriculum and for it to be strongly promoted by the academic staff. The consensus of opinion about Skills Plus was that whilst there was too much information and navigation was difficult, the friendly and informal language was a positive feature.

Mosaic

The formative feedback and navigation in Mosaic was well received. The fact that it was broken down into manageable chunks was very appealing to the students. There was also praise for the design and the interactive exercises and the fact that the exercises were interspersed throughout and closely connected to relevant sections of text. Respondents claimed that this made MOSAIC more interesting than Skills Plus and helped them to learn.

For both programmes, it was difficult to identify any consensus on the level of the material, with opinion ranging between feeling it was too basic and patronising to giving a good explanation.

Learning styles

Students were asked how they would prefer to be taught information literacy skills. A clear majority favoured hands on workshops (as predicted by library staff in the first evaluation), with significant numbers keen to have staff available to offer support. The idea of follow up workshops on specific resources, or as refresher training, was also popular with several students. Students liked the quizzes as a way of evaluating and reinforcing their learning. It was also felt that Blackboard could be used as a source of refresher training. Lectures to large numbers of students were said to be ineffective.

All the students enjoyed the focus group activity and agreed that they had benefited intellectually as well as financially from attending and they made many useful recommendations.

The researchers concluded with a list of recommendations for the development of Skills Plus. For example, change the font and font size; use relevant examples within the text; integrate interactivity closely with text; "chunk" information into small sections so that it can be more easily absorbed; improve the navigation; provide formative feedback; keep the language friendly and informative – and many more!

The results offered valuable insights into students' views of the level, usability and effectiveness of the programme and made a significant contribution to its revision. The revised Skills Plus was introduced at the start of the 2005-6 academic year and incorporated many of the features recommended by

the researchers, including greatly improved navigation, a much improved appearance, use of Informs interactive software and so on.

Harbin Case Study – A Digital Reference Service:

In June 2005 we investigated fifty academic libraries through their web sites. The purpose was to see if they offered a virtual enquiry service and what platforms they used. We knew about OCLC's Questionpoint and wanted to know how extensively it was used and how other platforms compared to that used at HEU. 81.7% of academic libraries in China offer a virtual reference service. The Virtual Reference Desk (VRD) has become increasingly important in all libraries, although there are many different platforms available with various levels of technical support.

HEU Library opened its VRD in 2002. The VRD platform was built by our own technician on the Library's own web page so it was a totally free development other than the staff time involved. At the beginning it was just like an open forum. All users could leave their complaints, comments, suggestions and questions. Any users could answer or reply to any of the others. Several reference librarians took an interest in the new service and checked the questions posted by the users. They gave serious, considered replies. Two years later, in April 2004, the service was accepted as one of the routine tasks of the reference librarians. All the reference librarians have to attach their names to the answers to ensure the quality of the service.

Between 9th April 2004 and 9th April 2005, 2364 items were posted on to the service. The author of this article supervised the VRD during this time and directed the research analysis. All logs were entered on to an Access database in order to analyze the data and review the contents of the VRD. The analysis yielded vital information about the service.

Content analysis

Our principal responses to users are to explain how to use our information resources; communicate with our users about library rules and regulations; answer complaints; and introduce library services. After one year we found there were seven categories of content: 14% of the content was about library management issues. 18% of the content consisted of questions about digital resources or other reference questions. 48% of the content was complaints or suggestions about library rules or management. 8% of the content complimented the library on its services. 2% of the content criticized the librarians. Even though we have a separate form just for recommendations 5% of the content recommended information resources, which surprised us. Finally, 5% of the content consisted of comments or questions not related to our library services and we advised the students who to contact.

Place and times analysis

2364 items originated from 293 different IP addresses. 284 of the IP addresses belong to our university and this is a quarter of all the campus IP addresses. Of the University campus IP addresses, 53% of content came from OPAC computers which can be used free of charge. 487 questions and comments (21% of the total) originated in the electronic resources reading room. In total 74% of content originated inside the library whilst 26% originated outside the library. 112 IP addresses were used at least twice which convinced us yet again that once a student starts to use the library service they will continue to do so and will be more likely to use new services than those students who have never made use of the library. 18% of the users would like to receive our responses through email. Around 10 o'clock in the mornings and 4 o'clock in the afternoons are the peak periods for use of the VRD.

Quantity trend

Apart from the summer and winter holidays, the trend during the year was for use of the VRD to increase. In the first month, April 2004, there were 1.18 items per day. In December 2004 the average had risen to 13.42 per day. In April 2005 it was 9.78 per day. The statistics reinforced our confidence in the value of the VRD and in its future as an integral part of our services.

Difficulties with the VRD

The VRD is used as more than a simple reference desk. 48% of the content consisted of complaints or suggestions about library rules or management. Some complained strongly about the librarians. As reference librarians we are not authorized to deal with these affairs so we are in a dilemma. Another diffi-

culty is that some students cannot explain their questions clearly. We needed to communicate with users further to clarify the questions but due to the limitations of the platform we could not do this in a timely fashion. Based on our experiences a better VRD platform is necessary to deliver an excellent reference service. We are convinced of the need to import a commercial VRD with greater functionality.

We are gaining experience in using VRD services. Users are gradually becoming used to this kind of service. Even in the electronic resources reading room, where the librarians are ready to help users face to face, some students still leave their questions or suggestions on the web. From 70 to 90 users in the library have chosen not to ask for help because they are or expect to be dissatisfied or embarrassed or don't believe librarians are ready or willing to help them⁵. Now the students are used to the web environment. They have had a good experience on the VRD. It is not surprising that more and more students tend to use the VRD instead of the face-to-face reference service.

In order to offer good services to users in the library we must collect feedback from users. The VRD helped us in this respect. Firstly, we collected complaints and suggestions from users which helped us to identify weaknesses in the service and make improvements. Secondly, we have built a stable bridge between librarians and users. 48% of the content is suggestions about library policies or management. Such a high percentage is beyond our expectation and suggests that the quality of service is far from users' expectations. On the other hand, users still care about the service and expect some improvements to be made.

Here are some points from users of the VRD which were mentioned more than five times:

- Some books were said to be available on the OPAC but could not be found on the shelves.
- Some information resources are old and dated.
- Some books are badly vandalised.
- Tapes and cds are missing from books.
- Opening hours, particularly of the Circulation Desk, are not suitable.
- The study environment is not of a high standard. It is too noisy; desk and seat heights do not match; there are rarely free seats in the reading areas and strong sunshine makes studying difficult.
- Newspapers and journals are not updated on time.
- Internet access is too slow to work properly.
- There are insufficient computers in the library.
- The "Renew a book" function could not be used on the Web.
- The location of some books is confusing.

Focusing on these problems we took measures to improve services or explore possible solutions as quickly as possible. Our policy is to listen seriously to the views of the users and to respond positively. That in turn results in more frequent usage of the VRD. Now, the VRD has become one of the main communication channels in the library of Harbin Engineering University. We have clearly benefited from the introduction of the VRD. Excellent customer service at any library results from interaction between librarians and customers.⁶ Such a high percentage of complaints about the level and quality of service forced us to take action!

Foundation work

Traditional services such as circulation or reading room services are still popular no matter how many digital resources and electronic services we have introduced. On the other hand more and more users try to locate what they want through the OPAC. "Some books can be retrieved on the OPAC but could not be found on the shelves". It is unavoidable in any library but how many or how often are acceptable? During the SARS crisis when our library was closed, almost 40,000 books were removed from the shelves to make space for new books. We did not alter the location in the LAS. That is why so many users complain that they cannot find the books on the shelves. A management decision has resulted in inaccurate data and a problem for users, which we now have to resolve. In fact, such problems can and should be avoided if we are attentive to our basic services. Keeping accurate data in the LAS is basic library work. It is a lesson for us given by students using the VRD. It was easy to mess up the data but will take considerable time to clean it up! Taking precautions after suffering a loss is not too late but in order to keep clean data all the time we need a suitable management policy. Better quality of services depends on better quality of data in the LAS and better management in the library. Unfortunately this basic work does not receive enough attention in many libraries.

Publicizing library statistical data

“Some information resources are old and dated. Some users could not find what they needed”. It is a common enough complaint in most libraries. Is it true? Some users just have a quick look at the library and complain. We should publicize statistical data about the collection to disclose the facts. Some libraries do this (Northumbria publishes its collection management and circulation data on the Web).⁷ We have not done this. Actually it will not only make users clear about the information resources on their subjects but will also make library and university managers aware of the real situation. This would be good scientific management and could lead to a decrease in this kind of complaint. Of course reference librarians, students, staff, library managers and university managers would each be interested in different data. We should deliver different data to each group through various channels.

Responsiveness to users' concerns

Some users were concerned about opening hours and the reading environment. The reference librarians who responded to these comments had some sympathy with the students but sometimes we explained our problems to the students without telling them what we would do next. The opening hours issue is related to money for staffing and other facilities etc. Opening hours in HEU are unreasonable to some extent. For example the circulation desk opens from 8:00am to 11:30am and 2:00pm to 5:30pm. The reference librarians could not do anything to solve the problem except to refer it to the relevant library managers. Although the cost of extending hours is not great some library managers may not take action for the benefit of the students and may not be as concerned about them as students expect. The solution lies in continually referring these concerns to the policy makers and for them to be responsive to users' concerns!

Surveys on the web

Sometimes feedback or suggestions from the VRD do not provide enough evidence to support actions. Some complaints were received because we had taken unsuitable measures based on feedback from the VRD. Taking opening hour in the reading room as an example, the reading room is closed during lunch time but suggestions received via the VRD urged us to open at lunch time. We did as suggested. Just one day later complaints appeared in the VRD that students need to have a rest at lunch time and they could not find a seat when they came back to the library in the afternoon! Practice proved that we were right to do it. But it showed us that combining a web survey with some other investigations would be useful to enhance decision-making. Maybe we cannot meet everybody's needs all the time but more investigation is necessary to establish what those needs are.

In universities more and more students depend on computers and networks to accomplish their learning. Our study shows they like to use the VRD to get help from librarians. Both the library and its users have benefited from the VRD.

Conclusion

Comparing these two very different pieces of research demonstrates some fundamental differences between the two institutions. Firstly, research projects at Northumbria Library are commonplace and many are built in to the working practices and the library budget. However, the research project, which we have described in this paper, was time-consuming and costly and would not have been possible without additional funding. In HEU there is no regular evaluation of services. Most of the managers judge library services by intuition. In fact, the judgments are often accurate if the situation is not very complicated. Secondly, the customer care focus is now well-developed in libraries in the UK. Even academic librarians often refer to their users as “customers” and students refer to themselves as customers. These culture changes, together with the realities of the competitive market, results in pressure to respond to demand (and to be seen to respond!). In HEU some managers have begun to listen to student concerns although there isn't any pressure from the students. On the contrary, most pressure comes from the Evaluation Centre of the Ministry of Education. Next year we will have the first evaluation of undergraduate education by the Evaluation Centre. Now, from the chancellor down, all staff is doing their utmost to meet its standards of excellence, which include students' perceptions of the library. Thirdly, at Harbin, issues raised by students are referred to the appropriate managers and students are told that the issues have been referred. However what happens next is a matter of chance and actions depend on situations. There is no formal feedback mechanism. At Northumbria the issues are

forwarded to the appropriate manager. If necessary it will be taken upwards for consultation and decision. There are formal feedback mechanisms, which must be used to answer issues raised by students.

The case studies demonstrate the usefulness and effectiveness of qualitative research. The first is an example of evaluating a current service (the information skills programme) and gathering evidence for its improvement using a combination of research methods. The second yielded vital information about student attitudes and concerns covering a wide range of issues. In both cases the research has had practical consequences – changes in services and policies.

Notes

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