

University of Warwick institutional repository: http://go.warwick.ac.uk/wrap

This paper is made available online in accordance with publisher policies. Please scroll down to view the document itself. Please refer to the repository record for this item and our policy information available from the repository home page for further information.

To see the final version of this paper please visit the publisher's website. Access to the published version may require a subscription.

Author(s): Donna Carroll

Article Title: Fostering a Community of Scholars at the University of

Warwick: The Wolfson Research Exchange

Year of publication: 2011 Link to published article:

http://dx.doi.org/10.1080/13614533.2011.547820

Publisher statement: 'This is an electronic version of an article published in Carroll, D. (2011). Fostering a Community of Scholars at the University of Warwick: The Wolfson Research Exchange. New Review of Academic Librarianship, Vol. 17(1), pp. 78-95. The New Review of Academic Librarianship is available online at:

http://www.informaworld.com/smpp/content~content=a935766 899~db=all~jumptype=rss

FOSTERING A COMMUNITY OF SCHOLARS AT THE UNIVERSITY OF WARWICK: THE WOLFSON RESEARCH EXCHANGE

Donna Carroll

Academic Services Development Manager

Academic Services

The Library

The University of Warwick

Coventry

CV4 7AL

Email: donna.carroll@warwick.ac.uk

Tel: +44 (0)2476 5 23251

Fax: +44 (0)2476 5 24211

Abstract: This paper focuses on the University of Warwick's Wolfson Research Exchange which opened in October 2008. It describes the varied environment that the facility offers to Warwick's research community, and explores the service model provided. The new approaches to learning space design and the students' expectations which informed and influenced the Research Exchange's creation (as well as its ongoing service development) are also discussed. This case study provides an overview of the Research Exchange's developments, successes and lessons learnt which could be applicable to other institutions exploring dedicated spaces and support for their research communities.

Introduction

In 2008 the University of Warwick Library launched the Wolfson Research Exchange to offer essential support to

the University's researchers as well as a flexible space where researchers could work independently, meet and

collaborate. The Research Exchange's dedicated nature and prominent location on central campus makes its

services and support readily accessible and highly visible to its target community. We take advantage of this to

offer a range of support to researchers as well as advertising other services or events relevant to them, and

referring them to sources of assistance from elsewhere across the University campus.

The facility provides a number of technology-rich environments to meet different needs: an open-plan collaborative study space, quieter and more formal study accommodation, social and break-out areas, and three bookable seminar rooms (which can be reconfigured to provide one large conference room to take up to ninety delegates) for research-focused workshops, conferences and other events.

This paper describes the Research Exchange space, its service model and takes a look at its successes so far, along with more recent Library developments aimed at supporting the University's strategy which is designed to drive the University towards becoming an 'undisputed leader in research and scholarship' (University of Warwick, 2007). The development of this facility is also set within the context of the wider international emphasis being placed on academic learning spaces and more specifically library learning environments (Shill and Tonner, 2003) including those for researchers. The development of libraries as third places, which provide an arena for the academic community to come into contact and socialise within a work context away from their home and work environments is a growing field (Lawson, 2004) and we aim to show how the conception of the Wolfson Research Exchange at the University of Warwick meets the changing expectations of users not only at this University but also of those more widely reported in the literature.

A history of innovation

Learning spaces that offer students variety and flexibility are becoming increasingly popular across the higher education (HE) sector (JISC, 2006) and these trends see many libraries now developing social learning spaces, learning cafés and collaboration spaces (Black and Roberts, 2006). We operate in a world where national significance is placed on new learning spaces (HEFCE, 2005) and where students have diverse needs and increasingly expect social, experiential and connected learning environments (McDonald, 2006, 2010, Lomas and Oblinger, 2006). In this context, over the last 6 years the University of Warwick Library has undergone vast changes away from the more traditional, quiet, independent workspaces that used to dominate its floor space.

In 2004 the University of Warwick opened its Learning Grid in a separate building from the main Library, aimed at providing students with greater autonomy in the way they learn by offering a totally flexible, student-centred, 24/7, technology enriched, social learning environment (Edwards, 2006). The success and popularity of this space helped inform the remodelling of two of the five main Library floors in 2006 which were first constructed and little changed since the 1960s. Another of these floors was remodelled during the summer vacation of 2010. These redevelopments have seen the University Library move away from almost exclusively traditional independent silent reading spaces, to offer a range of different environments which now include group work spaces, social areas, a coffee bar and more study spaces with access to multimedia resources.

Much positive feedback has been received in response to these changes and the footfall within the Library building subsequently increased by 60 %. However, the Library has always been – and continues to be – predominantly used by undergraduate students. To broaden its appeal and utility to a wider range of the University community, the Library began developing targeted facilities and support for specific sections of the University body. The first of these facilities was the Teaching Grid which opened in early 2008. This facility offers information and pedagogical support to University teaching staff through its team of advisers. It has a collaboration and meeting area (where many demonstrations of new teaching technologies are presented along with discussions aimed at sharing good teaching practices) and an experimental teaching space which teaching staff can book to test out new and innovative methods in their teaching.

Following the success of this space, the Library's Research Exchange was established, part-funded by the Wolfson Foundation under its CURL/RLUK libraries programme and formally opened by Sir Brian Follet, chair of the UK's Training and Development Agency (TDA) from 2003-09, in February 2009.

Vision and purpose

Plans for the Research Exchange were conceived at the start of the 2007/08 academic year although the initial idea for a dedicated space for researchers at the University of Warwick was prompted by various initiatives which

began in 2006. The first of these was a Library commissioned survey exploring University staff and student library needs as part of its policy of improvements to the quality of the service provided. The survey was conducted as an online questionnaire during February 2006 and received a total of 880 responses, including 41 from academic staff, 32 from research staff and 50 from research postgraduate students. Results from these initial questionnaires gave rise to suggestions for dedicated postgraduate space and a more flexible provision of environments including areas which were 'more relaxed' and also allowed food and drink. Following this survey, the Library began to collect feedback specifically from members of its research community to explore and identify how their needs differed from other users and what more we could be doing to support them. Face-to-face interviews were conducted throughout April 2006 with 43 members of the University's research community from across fifteen different disciplines and at different stages of their research careers (from PhD students through to established academics). Feedback from Warwick's researchers as well as discussions arising from a 2006 CURL-SCONUL seminar¹ which brought together library professionals and academic researchers to consider the changing library space needs of academic researchers, again highlighted researchers' desire for appropriate social and academic environments within libraries that facilitate the research process.

The Research Exchange arose as a direct consequence of these discussions as well as in response to the Library's wish to provide greater support to the University's research community due to the new University strategy (University of Warwick, 2007) and the national emphasis being placed on targeted support for researchers (clear from the work by the Joint Information Systems Committee (JISC) Support of Research Committee, the Higher Education Funding Council for England (HEFCE) and Vitae who are supported by Research Councils UK (RCUK)). A space within the Library was identified and cleared ready for the build to commence during the summer vacation of 2008 and a project group was formed consisting of Library and estates staff to work alongside MJP Architects who we had contracted for earlier Library developments (including the Learning Grid and the Teaching Grid). This group not only ensured that the wider institution's mission, ethos and strategic aims were considered during the planning stages (classed as essential in the development of new library environments by McDonald (2006, 2010) and Freeman (2005)), but also took a people-centred approach to

¹ CURL-SCONUL Research Spaces Seminar on 9 June 2006, at the University of Birmingham.

planning (Wu, 2003) by building on the previous survey and interviews completed in 2006 and conducting two more focus groups with twenty-four potential users, as it is our learners who can offer a legitimate perspective on what works and what does not (Lomas and Oblinger, 2006). These consultations with the target community and with other stakeholders involved in the project group also enabled the Library to make the planning process a more transparent one (Freeman, 2005).

In the focus groups and the earlier interviews, researchers stated that while their research into new and novel areas brings them independence, the nature of their work can often be isolating. In fact, this feeling of social isolation reported by researchers at Warwick is also prevalent in the literature. It is clearly evident from surveys completed at the University of Oxford (Trigwell and Dunbar-Goddet, 2005) and research by Pilbeam and Denyer (2009), Gardner (2009) and Janson et al (2004), which outline results and opinions from student researchers which are mirrored by results of the New Zealand University Academic Audits (2000a, 2000b), also reporting widespread feelings of isolation among postgraduate researchers. Consequently, academic staff and research students alike are increasingly requesting spaces and facilities which support interaction and thus foster the generation and sharing of new and creative ideas, which could potentially be developed in ways that cross traditional discipline and institutional boundaries. These researchers however still value traditional private study environments but also recognise the benefits of interaction, collaboration and targeted support, and therefore desire a blended and flexible space which can be adapted to their needs. This preference for a single, convenient location offering differing (sometimes even conflicting) requirements which researchers can use, adapt and develop over time was clear from discussions with researchers. This was a provision unavailable elsewhere at the University of Warwick except sometimes on a small-scale within academic departments (which was not exposing researchers to others outside their fields) or within the students' union (which offers a social rather than academic environment).

Most researchers, as quoted from the focus groups, agreed that the provision of a 'flexible space that's easy to redesign' would be ideal for them, where they could 'decide for [themselves] what do in the space'. They also requested a 'comfortable', 'interdisciplinary' and 'community' environment and expressed a clear desire for a

dedicated space to help foster a community of research scholars, emphasising their need for a 'range of ways to collaborate' and 'opportunities to present work to one another in a seminar environment'. They unanimously agreed that their needs were distinct from those of the undergraduate student body and as such would value their own dedicated space within the Library where they felt they could work in a more 'mature' manner.

These desires are not dissimilar from those of our other user groups including the University's undergraduate students, which is not surprising as our researchers were once undergraduate students too. As libraries and universities have continued to adapt their learning spaces, today's undergraduates are used to studying and learning within social learning spaces situated within their libraries and elsewhere. It was therefore important that in creating a space for our current researchers, that we were also providing a space which is suitable (or at least adaptable) for future users and if Warwick (and other institutions) are providing current undergraduate students with more autonomous, group-focussed environments such as our Learning Grid (Edwards, 2006), then we must ensure we are meeting their expectations throughout their university journey as undergraduates of today will be the researchers of tomorrow.

Feedback from our focus groups mirrored other studies which have shown that students in general require a mix of more formal academic environments with social learning spaces (ranging from personal seclusion to group study) and that fostering a sense of community amongst students can provide the community members with additional strength derived from their peers (Bennett, 2005). As Dowlin (1999) eloquently states 'the magic of libraries is in connecting minds' and students' social characteristics and the value they obtain from being amongst other people means that libraries should be promoting these connections (Oblinger, 2005). In response to this, the main aims and vision of the Research Exchange became to:

- Meet the changing needs of researchers in terms of space and support.
- Provide a place for researchers to work and meet with colleagues to discuss and explore their research.
- Support the University's strategy by providing an innovative focal point for its research community thus
 improving the researcher experience and supporting the enhancement of research at the University and
 beyond.

We believed we would achieve this through the provision of a number of different spaces within the environment offered, including group work areas, access to expert support, a variety of tools and multimedia resources, flexibility, comfort and a work-conducive ambience, all highlighted in other studies as preferences for today's learners (Van Note Chism, 2005) and becoming increasingly common characteristics in learning, research or information commons (Lippincott, 2005).

The space

Learning and research are social processes, requiring spaces where users can meet, collaborate and work in groups (McDonald, 2006, 2010) without neglecting the provision of quieter, contemplative and independent working areas which many users still crave despite the more social characteristics that many students appear to portray (McDonald, 2006). As stated by Freeman (2005), 'we must never lose sight of the dedicated, contemplative spaces that will remain an important aspect of any place of scholarship'. To provide researchers with an environment which would improve sharing, networking and awareness of research taking place across campus while serving as an arena for researchers to meet and discuss ideas as well as work and study independently, the Research Exchange needed to provide a variety of spaces to cater for different activities. The floor plan shown in figure 1 shows the general layout of the space created. As you enter the access-controlled main door (on the left-hand side of the figure), you enter an informal area with a refreshment space to the far left and nearer to the entrance there are found groups of sofas and coffee tables to encourage discussions and informal meetings. These spaces are also used to host networking 'coffee mornings', drop-in sessions with invited speakers and other small group activities.

As you continue further into the space there are a number of free standing round tables and chairs followed by a bank of twenty networked PC workstations along the right-hand side of the room, bordered by windows along the exterior wall. At the very far end of the facility are more 'traditional' study areas with desks, dividers and desk lamps which offer a naturally quieter area as it is away from the main entrance and more social areas.

Freeman (2005) states that 'it is important to accommodate the sound of learning, lively group discussions or intense conversations over coffee — while controlling the impact of acoustics on surrounding space'. To enable users to assume ownership of the space, rather than labelling or designating the noise levels expected within the facility, the layout of the space was naturally graded to encourage a more conversationally conducive environment towards the entrance and sofa areas, which gradually quietens as you move away from this area through the PC work zone to the 'reading area' at the back. This gives the users a choice in the type of environment they use but if researchers do require a quieter working environment there are many other places within the Library dedicated to silent, independent working.

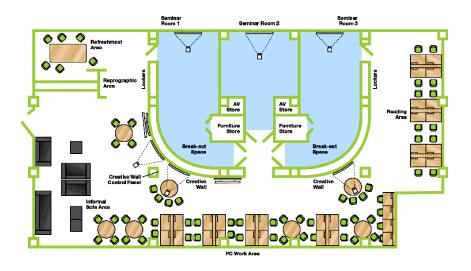


Figure 1: Research Exchange schematic.

Within the day-to-day working spaces are offered a range of multimedia technologies and other resources to assist users with their work. The entire facility is wireless internet-enabled throughout and there are a number of issuable lockers where researchers can store their belongings on a long-term basis which also include mains sockets to enable users to charge their laptops, mobiles and other electronic devices. The facility provides whiteboards, flipcharts, electronic SMARTboards and mobile plasma screens which researchers may help themselves to within the Research Exchange and much of the furniture is also mobile so that it can be moved around to suit the needs and activities of the patrons. Along the interior curved wall (labelled as creative wall on

figure 1 and also visible in figure 2) there are also a number of plasma screens and projectors which project directly onto the white surface of the wall. These screens are used to advertise events or news relevant to our researchers and our users can also use these facilities for projecting their work to facilitate any groupwork taking place. The surface of this wall is also magnetic and as such there is a small range of magnetic furniture including poster holders and book shelves, which can be transposed on its surface. The layout of the room along with part of the creative wall can be seen in figure 2.



Figure 2: The Wolfson Research Exchange as viewed from the entrance.

In addition to the general Library workspace offered within the Research Exchange (which has a capacity of approximately one hundred people), the facility also has three bookable seminar rooms (one of which is shown in figure 3). Each of these rooms holds between twenty and thirty people depending upon the furniture layout required and they are bookable online for research-related events by anyone registered with research status at our University (staff or students). All rooms come with a laptop connected to a projector with a screen and we have a bespoke system which connects the projector to an in-built DVD player, VCR, and document visualiser. It is even possible to project from these onto the creative wall outside the seminar rooms. There are more whiteboards, flipcharts, electronic SMARTboards and plasma screens available in these rooms and the central room also has an IP video conferencing system. The facility has a variety of mobile furniture so a range of different room layouts can be offered for events and catering is often hosted within the space for bigger or longer

conferences or workshops. The walls between these rooms are also retractable so that we can offer users the option of three, two or one room for their events, holding up to around ninety participants in total.



Figure 3: An event in one of the Research Exchange seminar rooms.

The support and activities

Underpinning the Research Exchange's successful service model is the support provided by its team of Research Exchange Advisers. We have a team of four staff members (one full time equivalent), one of which is on duty within the facility every weekday to offer a range of support to our users. The team is responsible for taking all event bookings, liaising with event and conference organisers to help host their activities, offering technical support and running demonstrations, inductions, tours and skills advice to our users. To ensure this peer support model is successful, it is a prerequisite for the advisers to have a sound knowledge of the academic research process and an understanding of our users' needs. To this end all advisers are either current research students or have completed a research-based degree or PhD in the recent past. Having a team based directly within the facility allows us to help the users at their point of need, which was a model suggested to us by participants of our focus groups prior to the construction of the facility. Using this model the advisers can offer an effective referral service to other support staff within the Library or across campus and are able to foster a first-hand sense of community within the space. As the staff are also members of the University's research community, their roles are well respected and the everyday users know each other as well as the advisers on first name terms. This friendly atmosphere is key to the type of community building that the Library wished to achieve.

In addition to the support that the advisers can offer, the Research Exchange works in partnership with other Library teams including the Academic Support Librarians, and also works closely with other service departments relevant to the research community, in an analogous way to many learning commons (Lippincott, 2005). The service departments at Warwick have strong working relationships promoted by the University's main strategies to sustain the quality of the teaching and learning experience offered at the University, as well as enhancing the University's research quality, reputation and outputs (University of Warwick, 2007). The service departments that the Research Exchange team works with include the Warwick Research Student Skills Team, the Learning and Development Centre, Careers Service, IT Services, Graduate School and Research Support Services. Together the departments ensure that a coordinated range of services and support are offered, and members of staff from the other service departments use the Research Exchange facilities to advertise their roles or events, as well as running bespoke training in addition to regular activities such as skills workshops, drop-in sessions and training opportunities within the seminar rooms or sofa areas. The seminar rooms and informal areas are also heavily used by academic departments to stage a wide range of activities: for example, research-related staff meetings, inductions, academic conferences, summer schools, seminar series and poster presentations (see figure 4). The seminar rooms are also available to individuals or groups of researchers to use as work rooms, for reading groups or even to practice conference presentations.

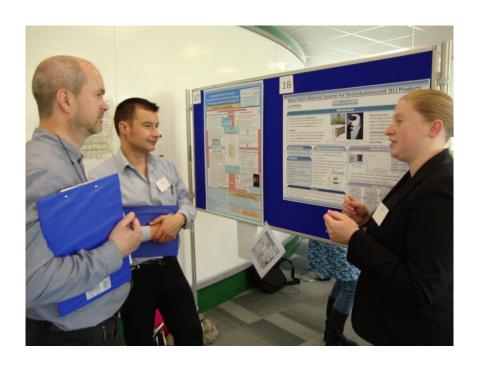


Figure 4: The University's annual PhD poster competition in the Research Exchange.

Many events are organised by research students themselves thus supporting knowledge transfer between researchers. The activities also provide a means of introducing new researchers into the wider research community from the very beginning of their careers at Warwick. When not booked, rooms remain available for researchers to use on an informal and ad hoc basis. Feedback regarding the facility includes the following comment from one of the University's Departmental Postgraduate and Research Co-ordinators:

'The facilities in the Research Exchange are a real asset, superb for developing presentation skills and hosting internal and external events.'

Since its official opening in term two of 2008/09, the Research Exchange has continued to grow not only in terms of its general occupancy but also in the number of booked events. Users stem from a wide variety of subject areas from across campus with high usage from the arts, social sciences and science faculties. The most frequent users include the Chemistry Department, History of Medicine, English and Comparative Literature, and the Law School. The Research Exchange seminar rooms currently see a term time average of fourteen room bookings per week and many of the events which take place are booked in for either a whole or half a day.

Higgins, Reading and Taylor (1996) explained that the university learning environment is made up of two elements, the physical (resources and surroundings) and the social (or ethos). We hope that with its growing levels of occupancy and the on-going programme of networking sessions, the Research Exchange is helping to foster the social element of the space in order to promote a strong sense of a research community amongst its regular users by bringing people together who may otherwise not have had the chance to meet and consequently encouraging potential future collaborative research. This is appreciated by our user community:

'The PhD life can be a lonely life and you can feel a little isolated. The Wolfson Research Exchange is a place I want to spend time in, a really useful space to be and to work with other people around me.' (PhD Student).

'Sometimes you need your opinions to be gently realigned by ear wigging experts ...in my case it led to new ideas for new sources of funding – that's a win-win as far as I can see!' (Departmental Postgraduate Administrator).

'The Research Exchange is somewhere I can confidently send researchers and academics to for use as a resource, a place to meet, or do work outside their usual environment.' (Departmental Postgraduate Administrator).

The Research Exchange team have been continuing to develop activities to promote this both within the physical space and through the services that are being developed online. Details of these developments follow.

Fostering a sense of community

'[It's] useful to know what's happening in another department within a similar field to mine.' (Researcher feeding back on a Window on Research session)

To provide greater opportunities for researchers to network with others outside their fields of expertise a new programme of events has more recently been initiated, designed to appeal to a broad range of researchers from different subject areas to give them a chance to share their ideas and experiences, or to promote their research activities to like-minded researchers from across campus. The Library worked with the University's Learning and Development Centre to promote these sessions as we wished to reach a broad audience to promote possible collaborations and bring a variety of perspectives together. These sessions offer the opportunity for researchers to:

- Develop a greater awareness of key research taking place across the University;
- Meet other researchers outside of their field of expertise;
- Share interdisciplinary research ideas;
- Debate, discuss and share information on current research issues.

As well as asking keen researchers to present at these sessions (either individually or in groups) we also organise a range of speakers on topics we feel relevant to a wealth of the research community including topics such as journal impact, bibliometrics, spinout companies, patents, data management, Web 2.0 technologies, funding opportunities and grant application tracking.

The programme has so far proved popular (with some sessions receiving over thirty attendees (up to our maximum single seminar room capacity)) and each term we have received numerous interested presenters from a wide range of subject areas. The start of the 2010/2011 academic year will see the third programme of these events.

Further developments

The informal working spaces along with the vast range of events taking place within the Research Exchange have provided ample opportunity for researchers to meet and network with others, although services are still being developed to enable a greater range of opportunities to do so.

One thing that has been learnt from our experiences of managing the Research Exchange so far has been the power of a user-led advisory group for steering any developments so that they are relevant to the community. We work closely with our regular users to generate feedback about the space and services to identify further areas for improvement in line with their needs by holding four community forum meetings per year and also hosting other more informal opportunities for people to feedback to us in the form of drop-in and discussion sessions within the Research Exchange sofa areas. These experiences have highlighted how important it is to strike the right balance in meetings with the users, between being organised enough for discussion to remain on task, but being sufficiently flexible and informal to encourage an unrestrained exchange of ideas and creative input from users where they feel comfortable voicing their honest opinions. From these, we have established good relationships with the users by demonstrating our consideration of their requirements and opinions about the space. These meetings have also generated ideas for new services. One such initiative was

the development of 'community profiles'. These profiles consist of PowerPoint slides displaying volunteered information from regular users including their names, departments, research interests and contact details along with a photograph. These are projected onto the creative wall near to the facility entrance and have not only created a talking point but make it easy for our researchers to get to know each other, their research areas and thus promote more discussion.

The Research Exchange currently uses its WebPages² to display information about the facility, link to its room booking page and promote its diary of events. Information is also pushed out to users through a termly electronic newsletter, Twitter and a mailing list, but to encourage interaction amongst our users we also host a blog and discussion forum.

In support of the University's strategy for research, the Library has also recently added a Research Support wing to its Academic Services Division where the provision of a growing range of additional services and support for University researchers are being explored and developed in conjunction with other University stakeholders including those from other service departments, academic departments and researchers themselves. The Research Support team is responsible for the physical space for researchers within the Library building and works with others in Academic Services in the provision of more traditional Library services such as enquiries, one-to-one appointments and information skills training courses, as well as investigating new research support activities. Current explorations are centred around supporting researchers in their role as producers of information and around facilitating a peer-to-peer support model.

Conclusion

The Research Exchange has attracted a wealth of interest from a number of other national and international institutions especially as other universities begin to reshape their learning spaces and their support for researchers. Many of the issues raised by our research community that the Research Exchange aims to address

_

² www.go.warwick.ac.uk/researchexchange

are universal concerns for researchers and we have not only learnt a lot from trialling different events, support models and services within our facility whilst responding to our users' opinions and feedback, we have also been able to pass on this newly found knowledge to other institutions who are embarking along a similar path.

As Finnigan states (JISC, 2006) 'You can't be sure how these spaces will be used. You are just creating the opportunities for things to happen' and the Research Exchange has offered exactly that – an opportunity. The flexibility of the environment and its dedicated team of staff who work closely with our users, allows us to continually learn and adapt our service and the support available to our researchers to ensure this is an opportunity they continue to make the most of.

References

- BENNETT, S., 2005. Righting the Balance. *Library as Place: Rethinking Roles, Rethinking Space*. Council on Library and Information Resources. Washington, D.C. 10-24. http://www.clir.org/pubs/abstract/pub129abst.html. (accessed 2 September 2010).
- BLACK, C., AND S. ROBERTS., 2006. Learning the Social Way: Enhancing Learning Spaces for Effective Learning. *New Review of Academic Librarianship*, **12**, 2, 83-93.
- DOWLIN, K.E. 1999 San Francisco public library. *Intelligent library buildings*. Eds. Marie-Françoise Bisbrouck and and M. Chauveinc. Proceedings of the 10th seminar of the IFLA Section on Library Buildings and Equipment, The Hague, Netherlands, August, 1997. München: Saur, 117-209.
- EDWARDS, R. 2006. A Library innovation to support learning in Higher Education. SCONUL Focus, 38, 4-7.
- FREEMAN, G. T., 2005. The Library as Place: Changes in Learning Patterns, Collections, Technology, and Use. *Library as Place: Rethinking Roles, Rethinking Space*. Council on Library and Information Resources. Washington, D.C. 1-9. http://www.clir.org/pubs/abstract/pub129abst.html.> (accessed 2 September 2010).
- GARDNER, S. K., 2009. Phase III: Candidacy. *ASHE Higher Education Report*, **34**, 6, 77-89. HIGGINS, C., J. READING and P. TAYLOR, 1996. Researching into learning resources in colleges and universities. *Practical Research Series*. London: Kogan Page.
- HIGHER EDUCATION FUNDING COUNCIL OF ENGLAND, 2005. HEFCE strategy for e-Learning. http://www.hefce.ac.uk/pubs (accessed 2 September 2010).
- JANSON, A., HOWARD, L and M. SCHOENBERGER-ORGAD, 2004. The odyssey of Ph.D. students becoming a community of practice. *Business Communication Quarterly*, **67**, 2, 168-181.

- JOINT INFORMATION SYSTEMS COMMITTEE, 2006. Designing spaces for effective learning: a guide to 21st century learning space design. Bristol: JISC. < http://www.jisc.ac.uk/uploaded_documents/JISClearningspaces.pdf (accessed 2 September 2010).
- LAWSON, K., 2003. Libraries in the USA as traditional and virtual 'third places'. *New Library World*, **105**, 1198/1199, 125-130.
- LIPPINCOTT, J. K., 2006. Linking the Information Commons to Learning. *Learning Spaces*. Ed. Diana G. Oblinger. EDUCAUSE. www.educause.edu/learningspaces (accessed 2 September 2010).
- LOMAS, C. and D. G. OBLINGER, 2006. Student Practices and Their Impact on Learning Spaces. *Learning Spaces*. Ed. Diana G. Oblinger. EDUCAUSE, 2006. < www.educause.edu/learningspaces> (accessed 2 September 2010).
- MCDONALD, A., 2010. Libraries as places: challenges for the future. *Envisioning future academic library services*. Ed. Sue McKnight. London: Facet, 31-54.
- MCDONALD, A., 2006. The Ten Commandments revisited: the Qualities of Good Library Space. *LIBER Quarterly: The Journal of European Research Libraries*, **16**, 2.
- New Zealand Universities Academic Audit Committee, 2000a. *Academic audit report: University of Canterbury*. Wellington, New Zealand.
- New Zealand Universities Academic Audit Committee, 2000b. *Academic audit report: University of Waikato*. Wellington, New Zealand.
- OBLINGER, D. G., 2006. Space as a Change Agent. *Learning Spaces*. Ed. Diana G. Oblinger. EDUCAUSE. < <u>www.educause.edu/learningspaces</u> (accessed 2 September 2010).
- PILBEAM, C. and D. DENYER, 2009. Lone scholar or community member? The role of student networks in doctoral education in a UK management school. *Studies in Higher Education*, **34**, 3, 301-318
- SHILL, H. B. and S. Tonner, 2004. Creating a better place: Physical improvements in academic libraries, 1995-2002. *College & Research Libraries*, **64**, 2, 123-150.
- TRIGWELL, K. and H. DUNBAR-GODDET, 2005. The Research Experience of Postgraduate Research Students at the University of Oxford, *Institute for the Advancement of University Learning*, University of Oxford.
- University of Warwick, 2007. *University strategy*. The University of Warwick, Coventry.
- VAN NOTE CHISM, N., 2006. Challenging Traditional Assumptions and Rethinking Learning Spaces. *Learning Spaces*. Ed. Diana G. Oblinger. EDUCAUSE. < <u>www.educause.edu/learningspaces</u> > (accessed 2 September 2010).
- WU, J. *New library buildings of the world*. 2nd ed., Shanghai : Shanghai Scientific & Technological Literature Publishing House, 2003.