Putting learning into the learning commons

A literature review

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> *The learning commons will have as its mission not merely to integrate technology, reference... and services but to facilitate learning by whatever means works best* (Remy 2004, p. 5).

Introduction

This report considers the learning commons as an environment for student learning and identifies general principles for the design and operation of a learning commons that includes the provision of student learning and language support.

The changing role of the academic library

In the last decade there have been significant changes to academic libraries. As King states:

> The key issue for academic libraries then, as now, included the need to reposition from custodian of locally held collections to the gateway to information from beyond the library walls; accommodating the rapid growth of information resources in electronic form; the investment and increasing dependence on information technology as the enabler in the delivery of library and information services; the changing teaching and learning environment and the converging roles of libraries and information technology providers'
> (King 2000, pp. 1-2).

For decades academic libraries have been seen as portals to information, print resources and more recently digital resources, but, as Demas states, 'we have reawakened to the fact that libraries are fundamentally about people:-how they learn, how they use information, and how they participate in the life of a learning community' (Demas 2005, p. 25). As a result 'Libraries today are in transition both as institutions and as a building type' (Hartman 2000, p. 112).

From teacher-centred to learner-centred

Another driver of change to academic libraries is the wider 'move in higher education away from a teaching culture and toward a culture of learning' (Bennett 2005, p. 10). In a learning culture the focus is on helping students become independent learners rather than on the passive transfer of information from teachers to students. In a learner-centred environment, attention is paid to the experience, knowledge, skills, attitudes and beliefs that learners bring to the university.

Weimer argues that a learner-centred environment requires five key changes to practice:

1. A change in the balance of power between learner and teacher away from teacher domination towards more democratic approaches;
2. A reappraisal of the role of content away from "coverage" towards using content to develop generic skills;
3. A change in the role of the teacher away from dispensing knowledge towards helping students to learn;
4. A shift in the responsibility for managing learning away from the teacher towards the student; and
5. A change in assessment purposes and processes away from examinations towards assessment that promotes learning, including self-assessment and peer assessment.

(Weimer 2002)

These proposals sound radical but they quite consistent with those advocated for many years by Paul Ramsden and John Biggs. In the recently updated edition of his influential text *Learning to teach in higher education*, Ramsden describes teaching as follows:

> Teaching is comprehended as a process of working cooperatively with learners to help them change their understanding. It is making student learning possible. Teaching involves finding out about students' misunderstandings, intervening to change them and creating a context of learning that encourages students to engage with the subject matter.
> (Ramsden 2003, p. 110)

Similarly, Biggs' notion of constructive alignment focuses on "what the student does", the sub-title of his book entitled *Teaching for quality learning at university*:

> What people construct from a learning encounter depends on their motives and intentions, on what they already know, and on how they use their prior knowledge. Meaning is therefore personal. What else can it be? The alternative is that meaning is 'transmitted from teacher to student, like dubbing an audio-tape, which is a common but untenable view.
> (Biggs 2003, p. 13)

Biggs places particular emphasis on the "backwash" effects of assessment in determining how students go about learning out of class.

The implications of the change in practice proposed by Wiemer, Ramsden and Biggs are profound. Its implementation requires a coordinated approach across the university and the development of a learning commons can be seen as an important component of this approach. One thing is certain – the implementation of a learning commons will have minimal impact on student learning if it is not part of a university-wide movement towards learning-oriented and learner-centred education. A learning commons that is not part of a more comprehensive move towards autonomous learning is likely to be not much more than a computer pit, an improvement in access to technology but with minimal impact on the quality of student learning. A learning commons will only reach its full potential in supporting student learning when it reflects and supports what teachers do in their classrooms and require of their students in assessment tasks.

The information commons

In the last decade many academic libraries have been re-framed as information commons or learning centres. Willis distinguishes between three types:

- Learning centres
- Information/learning commons
- Multi-complex (Willis 2004)

The information commons (IC) is the most popular example of the reinvigorated academic library. Remy describes the information commons as a 'conceptual, physical and instructional space that essentially reformulates the academic library to adapt it to a highly digital resource and service environment' (Remy 2004, p. 1).

The information commons commonly features:

> Large scale student computing facilities and support, state of the art computers and peripherals, attractive new or refurbished space associated with traditional library collections and services, teaching rooms for computer and information literacy, integrated service desk(s), cybernet café, collaborative effort between library and computing service.
> (Willis 2004, p. 4)

It is often likened to a 'one-stop shopping environment' where students have access to library resources, productivity software, space to work individually or in groups, reference assistance and technical support to research and produce projects all in the one location (Church 2005, p. 75). New patterns of service delivery are developed to better service the needs of students in this environment.

Most information commons are based on a partnership between the library and information technology services of the university with varying degrees of collaboration and integration between the two functional areas. In some cases multimedia services are also involved.

The learning commons

While the information commons integrates library and IT services for students and other users, the model is still essentially library-centric. The learning commons, on the other hand, is not simply a reinvigorated academic library, and its focus is not principally on technology. Remy describes the learning commons as the 'inheritor of the info commons legacy' but comments on the broader mission of the learning commons:

> its mission [is] not merely to integrate technology, reference... and services but to facilitate learning by whatever means works best. As a library service environment, the Learning Commons will enable students to develop a framework to understand and evaluate the impact of information technology on the choices they make as researchers and practitioners. As a bridge to the classroom, it will create the conditions in which students engage critically with information, see themselves as active participants in the production of knowledge, and continue that participation far beyond their university experience.
> (Remy 2004, p. 5)

The learning commons represents a greater functional integration of learning support than the information commons. In addition to contributions from library and IT services, the learning commons brings together other student services such as student learning support and in some cases academic staff support. The library becomes one of three or more educational partners in supporting students.

Beagle describes a developmental sequence from information to learning commons that includes stages of adjustment, isolated change, far-reaching change and transformation (Beagle 2004). The first stage of adjustment is essentially a computer lab with access to productivity software and electronic resources. The second stage of isolated change adds media authoring tools and coordinated service delivery to the mix. Beagle states that 'While it better aligns the library with other campus initiatives priorities, it is still not intrinsically collaborative with other campus initiatives'(Beagle 2004, p. 1).

At this point Beagle posits a transition from the information commons and the emergence of the learning commons. Far-reaching change includes the changes outlined above along with coordination with other units such as centres for staff and student learning. Beagle also notes the frequent 'inclusion of campus-wide course management system meaningfully linked to and integrated with library electronic resources and virtual reference services' (Beagle 2004, p. 1). The pattern of service delivery has been further altered by the integration of library and other functions. 'The service profile is no longer library-centric, and becomes essentially collaborative' (Beagle 2004, p. 2).

The stage of learning commons as transformational is even broader. Beagle states:

> The above carried out with reference to (or within a framework of) campus-wide schema and/or faculty innovation such as core curriculum revision, writing/authoring across the curriculum, cognitive immersion learning paradigms…
> (Beagle 2004, p. 2)

Monash University in its proposal for a learning commons describes it as an 'environment that is rich in technology and support services, providing information resources and collections (both print and electronic), technology (both software and hardware) and mixed study spaces for students to work in one safe and secure location with necessary support services and language and learning staff' (Burke 2004, p. 1). While this includes language and learning support services, there is more than a whiff of the information commons here.

According to King the 'learning centre focuses on the melding of curriculum support and student culture – gathering all components under one roof so that students are provided with a total university experience, through interaction with books, technology, peers and academic teachers and support' (King 2000). There is a danger illustrated here that the learning commons is being oversold – the aim of 'a total university experience' under one roof must be recognised as hyperbolic.

A further model is the multiplex complex which combines both the learning centre and information commons concept with additional services such as other student support services and retail outlets etc (Willis 2004). This model is more like a student precinct and typically focuses less on functional integration than on co-location of complementary services. An example is the Kate Edgar Information Commons at the University of Auckland.

Evaluation of the information and learning commons

In almost all examples, universities report that the new centres are a success with students. Generally success is measured by how busy the facility is, statistics on the number and type of user enquiries and number of logins and student satisfaction surveys.

The SPEC survey conducted by the Association of Research Libraries (Haas & Robertson 2004) collated data on 22 Information Commons in the United States. The survey found that 14 of the 22 libraries with ICs recorded statistics on the service transactions and/or users. In addition, the following techniques were also used:

Informal feedback from users	12
Formal paper-based evaluation survey	8
Computer-based survey	7
Focus group	2
Point of use computer pop-up survey	1
Other – included observation, feedback from staff and student assistants, and a multi-day paper based survey.	3

(Haas & Robertson 2004, p. 42)

There are a number of examples in the literature where universities have adapted services and design in response to evaluation studies. For instance the Information Commons at Leavey Library, University of Southern California, adjusted their staffing based on statistics on the types of user enquiries. Other examples include the provision of more computers and changing the location and number of services points in response to student feedback.

There is however very little analysis of how well the facilities support and impact on student learning. Bennett notes the lack of evaluation of student learning in 240 library construction and renovation projects between 1992 and 2001. He states, 'We need to understand that the success of the academic library is best measured not by the frequency and ease of library use but by the learning that results from that use' (Bennett 2005, p. 11).

It is apparent from the literature that the information and learning commons are an evolving approach to supporting student learning. As Hartman comments, there is 'no agreed-on paradigm for the library of the future' and 'every library that embarks on a building program is in a sense on its own' (2000, p. 112). More than anything this highlights the need to collect rich data on the impact on the educational experience and achievements of our students and to be responsive to changing needs and innovations in learning centre design.

Learning support services

The way learning support services are provided to students in different models of the information/ learning commons varies although there are some common features. A feature of the information commons is the service desk which provides one-to-one IT and reference support. Some models have integrated service desks while other models have multiple service desks with separate functions. Information commons staff often provide roving assistance in the service area and are identifiable by badges or uniforms (Haas & Robertson 2004). Most information commons also provide some type of virtual support by email and phone. In addition many information commons run regular workshops for students on a range of topics including computers applications, research skills and information literacy.

The Kate Edgar Information Commons at the University of Auckland provides student services in a number of ways. The Information Commons help service includes an electronic Campus Helpdesk service, the customer service arm of the ITSS Net Account department and the University Library's learning services. The Information Commons help area provides walk-in support for students and an open consultations space that can be used by staff members from different student support departments, e.g. subject librarians. Another aspect of the service are the Information Commons consultants providing first tier roaming support.

As Beagle (1999, p. 86) puts it 'the problem is to provide a continuum of service that provides users with skilled staff consultation...'. In most information commons students have access to support in IT and library research. The learning commons, however, seeks to provide services beyond reference and IT support. Most provide student language and learning support in one form or another. Willis describes one model as providing both 'student learning support [and] academic staff teaching support'(2004, p. 4), but for most learning commons teacher support is peripheral as the space is "owned" by students.

For those models that extend beyond the information commons model, there is considerable variation in the types of learning services offered and the models used to provide support. A range of support services can be integrated into the commons itself, co-located with the commons or provided as satellite services. Often a combination of these models is used. For instance the Kate Edgar Information Commons provides integrated IT and library services but offers student language and other services through co-location. The University's Student Learning Centre and English Language Self-access Centre are located in the Information Commons building along with other student functions such as retail, health, counselling and student administration.

Another model is described by Church as a satellite facility (Church 2005). The Information Commons in the Leavey Library at the University of Southern California in partnership with the University's Writing Centre provides access to a writing consultant for a couple of hours a day four days a week during semester. Lied Library at the University of Nevada, Las Vegas also ran a pilot of the Writing Centre as a satellite facility in their information commons open during mid terms and finals (Church 2005). The satellite approach can be seen as a weaker version of the co-location model.

A variant of the co-location model is the one-stop shop. This type of centre is staffed with people from various support services who come together in a geographic location but still retain their separate administrative identities. This model is used at Loyola University in their Academic and Career Excellence Centre (ACE), which is located adjacent to the reference room in the library. While fundamentally ACE is a 'word processing lab', 'its mission is to be a highly visible, one stop student resource for referral to the appropriate academic assistance; counselling, tutoring, career guidance, academic assessment, disability services, as well as research and reference services' (Orgeron 2001). These services retain their respective identities but come together to create an environment 'where old

geographic boundaries are blurred and activities move smoothly across multiple departments' (Orgeron 2001).

The information/learning commons is first and foremost a student space. Bennett observes that 'Classroom and office space design typically underscores the authority of the teacher, just as library space often reinforces the authority of library staff' (Bennett 2005, p. 19). There is therefore a danger in expecting a learning commons to serve as a staff space as well as a student place if it is to provide staff development activities. Most centres that include the staff development function do this by co-location rather than integration so that students perceive the main space of the learning commons as a space for them.

Self-access approaches to language learning

Self-access approaches to supporting language learning have a long history and an established literature. They are examined here because the experience gained with this form of learning support is directly relevant to the learning commons and because such self-access centres are often included in a learning commons. Not only is the literature on self-access centres informative in terms of the operation of such centres, it also examines important concepts such as the development of learner autonomy and independence, accommodating different learning preferences and needs and accommodating learning beyond the classroom. These concepts underpin a learner-centred university.

Autonomous learning

As Gardner and Miller (1999) highlight, self-access is an approach to language *learning* not to teaching language. The self-access approach along with supporting students' language learning aims to develop the capacity of learners to learn autonomously. Dickinson highlights the dual benefits when she stated that the reason she has for using self-access includes 'both language learning and learner training' (Victori 2000). While Fitzgerald et al (2000) argue that 'Preparing the learner to study autonomously is an essential part of the philosophical and pedagogical framework of a self-access environment'. Gardner and Miller (1999, p. 8) also note that self-access is a way of 'encouraging students to move from teacher dependence towards autonomy'.

Dam et al define learner autonomy as a 'readiness to take charge of one's own learning' (Dam et al. 1990) while Gardner and Miller define independent learners as those 'who initiate the planning and implementation of their own learning program'(Gardner & Miller 1996, p. vii). It is worth noting Nunan's comment that 'it may well be that the fully autonomous learner is an ideal, rather than a reality' (1997, p. 193). Nunan argues that there are degrees of autonomy that are influenced by a whole range of factors including personality, learners' goals, institutional philosophy and cultural context (Nunan 1997). In addition Gardner and Miller observe that an individual's ability to learn autonomously may fluctuate over time and vary according to the skill area (Gardner & Miller 1999).

In a self-access environment, the role of learners changes:

> They have to learn to take an increasing amount of responsibility for their learning. They have to learn about the importance of reflection on their learning and how it can help them to redefine their goals to make them constantly relevant to their needs and wants. The changing role of learners requires an increase in learner training…
> (Gardner & Miller 1999, p. 13)

Preparing learners for self-access

The literature on self-access also highlights the varying expectations of learners regarding education and their readiness for this approach to learning. For many learners self-access is a new and unfamiliar concept. Some argue that students need assistance 'throwing off a life-time of directed schooling, to plan and work effectively by themselves' (Victori 2000, p. 169).

There have been studies of the reaction of different cultural groups to the concept of self-access. For example Ho and Crookall (1995) suggest that for Chinese students working autonomously is a challenge both emotionally and intellectually because of the hierarchical nature of Chinese society and the respected position of the teacher. As Watkins and Biggs (1996) point out, there is a danger of stereotyping in such claims. The need for an orientation or induction process for students before working in a self-access centre has also been highlighted (Fitzgerald, Morrall & Morrison 2000; Gardner & Miller 1999).

Accommodating different learning needs

The proponents of self-access approaches argue that the centre must be more than a physical place with a collection of self-instructional resources. A successful self-access approach requires attention to a number of elements: resources, people, management, system, individualisation, needs/wants analysis, counselling, learner training, staff training, assessment and evaluation (Gardner & Miller 1999, pp. 9-10). The same elements deserve attention in the learning commons. Gardner and Miller comment:

> Self-access is very flexible. It can be used on a large scale or a small scale. It can be conducted in a classroom, in a dedicated self-access centre or elsewhere….It can function at all learning levels. It allows for different levels of independence among learners encompassing both teacher directed groups of learners and virtually autonomous learners. It allows individualisation but also supports groups. It is not culturally specific.
> (Gardner & Miller 1999, p. 11)

Gardner & Miller provide a typology of self-access that ranges from high levels of guidance and structure to support the learner to low levels of guidance and structure. However they highlight the difficulty of assigning categories to self-access systems and point out that 'very often a single system may simultaneously be used in different ways by different people' (Gardner & Miller 1999, p. 57). One example of the type of multi-system dimension of self-access that does this is 'an open access centre which is also used for directed work when teachers take their classes there during English lessons to complete specific tasks' (Gardner & Miller 1999, p. 57). Despite the typology Gardner comments that ultimately self-access needs to be flexible and be capable of changing as the needs of users change.

As with the self-access approach, a learning commons aims to accommodate a range of different uses as well allowing for the varying capacity of students for independent learning. The self-access literature highlights the importance of having a flexible system so that learners can use it in varying ways to suit their own circumstances. In addition it needs to accommodate changing users needs and behaviour.

The literature on self-access provides a "framework for diversity" and highlights important themes. In particular, it reminds us of the critical issue of developing the skills required for independent learning and doing so in a way that meets the needs of individual learners.

Evaluating self-access

The difficulty of measuring the quality, effectiveness and quantity of learning is highlighted in the self-access literature (Gardner and Miller 1999; Victori 2000). To do so by counting the number of learners using the facility reveals little about how students are using the facility and what impact it is having on

their learning. Miller comments that we need to 'investigate ways of presenting qualitative reports to administrators about self-access. …We need to find ways to get students to talk about what they do in self-access and then report on these comments'(Victori 2000, p. 170). This applies equally to the learning commons.

Staffing the commons

Both the information and learning commons requires new service models that are more seamless than those provided in a traditional academic library. In a survey (Haas & Robertson 2004) that collated data on 22 information commons in the United States, respondents reported a number of approaches to establishing and staffing the information commons, including redefining job descriptions of existing staff, creating new library positions, reassigning staff from other areas and employing students.

Collaboration between organisational units

Both the information commons and the learning commons are based on collaborative arrangements between several areas of the university. Collaboration between different services is probably the most challenging aspect of the commons approach. As noted above, collaboration may be based on full integration, co-location, satellite models or a combination of these.

The differences in the service culture of the library and IT department and the challenge of merging them is frequently addressed in the literature on information commons. The literature highlights the difficulties of merging distinct service cultures and warns of a tough period of transition (Crockett, McDaniel & Remy 2002). Most commonly the people involved cite different reporting lines, different work culture and lack of knowledge of each other's areas as challenges. In addition, librarians often find it difficult to see the learning commons as a joint facility, especially if it is physically part of the library.

While there are undoubtedly challenges, members of information commons staff do report benefits. At the Emory University Information Commons reference staff report that changing their approach to providing a service to users resulted in improvements in the quality of that service (Halbert 1999). At the Undergraduate Library at the University of Washington the librarians report expanded opportunities for "teaching moments" at the new integrated service desk (McKinstry & McCracken 2002). The literature also highlights that the process of developing new collaborative service patterns takes time. Differences in culture need to be addressed and expertise pooled to develop new practices and systems that are oriented towards supporting both learning and learners.

When student language and learning support services are added to the mix, a culture that is quite different to that of both library and IT services must be included. While the employment arrangements for these people vary from university to university, the orientation of staff in this area is essentially academic and, as such, they add a new dimension to the library and IT work cultures that are represented in the information commons.

Staffing models for collaborative service delivery

There is an extensive literature on how staffing is managed in information commons. Crockett et al report three different staffing models for collaborative service delivery: separate facilities, joint staffing and integrated staffing (Crockett, McDaniel & Remy 2002). To some extent, these reflect the integrated, co-location and satellite models referred to above. In many cases the preferred model has been for different providers to operate from the same service point with some differentiation of activities (Church 2005; Crockett, McDaniel & Remy 2002). The separate desk model was tried at Lied Library at the University of Nevada, Las Vegas but was later converted to a single desk. They reported

less complaints after the integration of services. The preference for the one desk model is that 'a student often does not know if he or she has a technical, productive or informational question' (McKinstry & McCracken 2002). In addition staff at separate desks tend to isolate themselves and this isolation may increase over time (Crockett, McDaniel & Remy 2002).

The integrated service desk is based on the notion that many of the traditional divisions in our services, e.g. IT and Library, are no longer appropriate. Mountifield describes the key to the success of the Kate Edgar Information Commons as 'an integrated help desk and support service that is pro-active, clear and intuitive to the students' (Mountifield 2003, p. 715). In an integrated model our focus is not on administration but on creating a seamless service that is logical to students.

An integrated service requires the development of effective referral systems and substantial cross-training and cross-skilling of staff. Crockett et al comments on the high value placed on informed referrals at the Leavey Library Information Commons. 'A process of continual cross-referral occurs at the information commons desk, with student navigation assistants passing complex research questions to the librarians and the librarians handing over many software questions to student navigation assistants' (Crockett, McDaniel & Remy 2002, p. 185). In many examples of the information and learning commons a combination of real and virtual referrals can be made.

Training

A common theme is the need to develop multi-skilled staff through cross training. Church notes that 'Staff must be open to retraining and willing to redefine their roles. There must be a positive attitude regarding innovative approaches to library services that are based on user needs' (Church 2005, p. 80). Often staff are provided with *basic* training in another functional area to ensure they can answer basic questions and provide effective referral to specialists. The need for cross-training largely depends on the degree of integration of the services. In some information commons where there are multiple service points that respond to different user enquiries, cross training is not considered necessary.

At the University of Nevada's Lied Library, cross training was provided for several months before the services were merged.

> The ability to have all students and staff provide at least fundamental service support in both areas is critical to the proper functioning of the new desk. Computer help staff needed training on basic reference skills while reference staff required skills to answer the most commonly asked computer questions. Some of this training was classroom based and some was "real world" acquisition of skills.
> (Church 2005, p. 79)

Orgeron describes the training of the tutors at the ACE centre at Loyola University: 'The tutors must go through an intensive period of cross-training. Tutors learn the main points of each service and more importantly they understand that the centre is a point of referral to the home bases of various services' (Orgeron 2001).

McKinstry and McCracken (2002) highlight the need to constantly review the training to ensure currency.

> During the planning stages, for example the, we had developed inventory of competencies for librarians and computing staff, but we found that, given the rate of technological change, the list was outdated almost as soon as it was created.
> (McKinstry & McCracken 2002, p. 399)

Using students to staff the commons

Student assistants are an integral part of many implementations of an information commons or learning commons. In a number of cases the students function as roving helpers in the commons in a tiered system where students provide initial support to users and then refer enquiries which are beyond their scope to professional staff. This model is reversed at the Texas Christian University where tier one consists of librarians and IT consultants and tier two consists of student assistants. This system requires that users consult librarians before being referred to student assistants although anecdotal evidence suggests that this system does not function particularly well (Beadle 2004).

In many implementations students provide technical support only and are selected from IT related courses. At Lied Library Information Commons at the University of Nevada, Las Vegas the computing assistants consist mainly of undergraduate students. Mann Library at Cornell University also employs students as computer lab operators, at US$7.65 per hour.

Leavey Library at the University of Southern California uses student navigation assistants to assist library patrons with research of print, electronic and Internet resources as well as some assistance with computer related enquiries. They are expected to provide first line support and also to recognise when to refer questions on to other staff members (Crockett, McDaniel & Remy 2002). The reference librarians are only available for limited hours from Monday to Friday while the student navigation assistants are available whenever the library is open.

At the University of Guelph Learning Commons students are used for a wide range of learning support. The student assistants, entitled Peer Helpers, assist students with learning, writing and research. The Peer Helpers are styled as "paraprofessionals" and are selected from a range of disciplines. There are three types of peer helpers in the Learning Commons (The University of Guelph 2005):

- The Learning Peer Helpers present workshops, provide individual consultations for students, and assist in staffing the resource area of the Learning Commons.
- The Writing Peer Helpers acquire a foundation of writing theories in their area of specialization, provide individual writing consultations to first-year students and assist in staffing the resource area.
- The Supported Learning Group Peer Helpers are trained Peer Helpers who are successful students in their disciplines. They lead regularly-scheduled, voluntary study sessions in selected courses. This appears to be a version of the Supplemental Instruction model of peer mentoring.

The University of Guelph Peer Helper Program extends well beyond the learning commons, with several hundred Peer Helpers providing services in 25 units across the university. Peer helping is formally recognised as an experiential learning opportunity at the University and participants obtain an academic notation on their transcript to this effect, but no other form of academic credit. Guelph emphasises the key role of peer helping in developing its version of core graduate attributes (hence the notation on transcripts) and in providing opportunities for learning in the workplace.

Peer Helpers commit to either 5 hours a week or 10 hours a week for a minimum of three semesters and receive an honorarium of CA$200 to CA$400 per semester. Peer helpers can be promoted to Senior Peer Helpers (with an honorarium of CA$300 or CA$600 per semester) as an acknowledgement of the performance of higher level tasks.

Guelph has developed a number of policies and protocols for the peers including Ethical standards for Peer Helpers, Standards for using Peer Helpers and a problem resolution process.

Training of students

In most examples the importance of providing effective training for student assistants is emphasised. At the Leavey Library Information Commons new student navigation assistants are provided with 24 hours of training on topics including basic reference transactions, customer service, network overview, email software, triage, administrative issues and MS Office. The next year the training was reduced to 12 hours due the high degree of on the job mentoring and training the students were receiving from librarians, staff and peers (Crockett, McDaniel & Remy 2002). At the Lied Library, University of Nevada, Las Vegas student computer consultants attend basic library and database searching classes. It is frequently reinforced in training that students must recognise that they were providing first level support and need to refer users to librarians if they could not answer a query themselves (Church 2005).

At the University of Guelph the Peer Helpers attend mandatory training for the role which includes:

- Core training
- Unit specific training
- Ongoing training.

Reflecting on the training offered to students, a university (not identified in the survey) commented that their 'Student assistants require better understanding of integration of information literacy and technology literacy, and focus on customer service' (Haas & Robertson 2004, p. 39).

Challenges

At Lied Library at the University of Nevada, Las Vegas a number of challenges were reported associated with using students to staff the Information Commons. Although the student workers were hired and trained by the library, not by the IT department, there were still significant tensions. The main issue was that while the IT support staff were mostly students, the Research and Information staff were librarians and paraprofessionals with significant differences in age, levels of service skills and professional manner (Church 2005; McKinstry & McCracken 2002). Librarians expressed concern that the atmosphere at the service desk was more social with two to three students serving the desk in a shift. In addition, there was a high turnover of student staff.

Advantages

Some of the advantages of using student assistants are listed by the University of Guelph. These include that peer helpers help make the environment 'welcoming and non-threatening' in that many students feel more comfortable seeking assistance from a peer. At an institutional level, the other major advantage is the opportunity provided for the development of core graduate attributes and the provision of evidence for their achievement in student portfolios. Related to this is the opportunity for meeting service learning or learning in the workplace requirements.

The educational effectiveness of other models of peer support in postsecondary education is well established. For example, the Supplemental Instruction model of academic assistance (similar to the Guelph Supported Learning Group model) has been adopted by hundreds of institutions in the United States. In a useful annotated bibliography, Arendale describes the aims of the model to 'help students in historically difficult classes master content while they develop and integrate learning and study strategies' (Arendale 2005, p. 52). There is convincing evidence of its effectiveness in supporting student learning in "content intensive" subjects.

The physical place

Location

The commons is typically located on one floor of the library although there are examples, such as the Kate Edgar Information Commons at the University of Auckland, where it is a separate building. The commons is generally highly visible and centrally located on the university campus. There is also, not surprisingly, a focus on creating an attractive physical space for students.

Rethinking learning spaces

The literature suggests that the design of the space within the commons is integral to its success. The space needs to be purposely designed to promote student learning and not just to suit library operations. Narum in her work on creating strong learning environments for undergraduate programs in science, technology and engineering, and mathematics comments that we need to start the planning for new learning spaces by asking questions about the quality and nature of the educational experience (Narum 2002).

New types of student learning space are needed, in particular spaces that support the collaborative learning which is increasingly emphasised in the undergraduate curriculum. In most examples of both information and learning commons, the space is designed to support a continuum of learning activities: from individual learning, through informal collaborative learning, to more formal small group learning, including workshops and tutorials. In most there is substantial open space for individual and small group work with adjacent enclosed space for larger groups. The provision of contiguous areas for different types of interaction is often emphasised.

Social component of learning

The learning commons recognises that there is both an individual and a social dimension of study and therefore combines quiet spaces for study with a busy, lively social space where noise is permitted. To accommodate these multiple purposes there must be a variety and hierarchy of spaces dependent on the activity required from quiet to busy, from long term to short-term seating, from individual to group. Students need options for space depending on the work they are doing, e.g. group work or independent study, and the level of distraction they want.

Bennett states that such space encourages study and fosters learning by:

- Supporting a distinction between studying and socialising that does not deny the social dimension of study
- Favouring learning functions in the space's mix of academic and social functions
- Providing choices of place, ranging from personal seclusion to group study, that variously reinforce the discipline needed
- Permitting territorial claims for study that enable students to govern the social dimension
- Fostering a sense of community among students that enable student to govern the social dimension of their study space.

(Bennett 2005, p. 17)

Bennett argues that too often library designs attend too much to library operations and that instead they should be designed for active learning and to allow students to spend time on learning. Bennett also examines how the library might become a space where students actively learn, for instance by discussing class content. Bennett cites research studies that found that these kind of conversations did not readily occur in libraries but did happen in more 'domesticated spaces' such as cafeterias and refectories (Bennett 2005). Bennett goes on to argue that food plays a role in domesticating authority

and notes that the provision of food outlets is becoming a standard feature of library design. Bennett observes that 'space that allows students to manage the social dimensions of learning, that domesticates the foundational character of knowledge (the character that dominates at most colleges and universities), and that celebrates the communal (i.e., the non-foundational) character of knowledge will indeed foster learning' (Bennett 2005, p. 22).

Technology

The learning commons is inevitably a technology rich environment. Among other things, it should provide access to the technology that students need to learn effectively. Decisions about what technology to provide also deserve to be based on student learning needs. At one level, a student ought to be able to work from initial library research to final product in the one location. Some common features of the technology in a learning commons include:

- Computer stations available for research, word processing and Internet access
- Printers
- Wireless networking
- Multimedia production
- Storage space for student work
- Library check out area for materials, laptops, video equipment, etc.

The virtual space

The learning commons is typically both a physical space and a virtual space. Many of the resources accessed by users in the physical space are digital resources that are available online to users elsewhere - on the same campus, on another campus, at home or in a student residential hall. This is also true for self-access centres in language learning as the convergence of technology and increasingly fast networks ensure that the resources used are less likely to be available only in print or videotape format.

For a multi-campus university, the virtual learning commons is important as it allows the learning commons to support users who are unable or choose not to attend the physical space. At the same time, the physical space allows users to develop both competence and confidence by helping them use resources in a supportive environment before moving on to using the same resources in the virtual space from home, hall of residence or local library. The virtual space therefore supports the operation of the commons but also provides flexible access to many of its services beyond the walls of the building.

Supporting student learning

The literature on self-access centres in language learning highlights the importance of the teaching community embracing the development of independent learners:

> The extent to which [students] are free to undertake their self-access work programme independently will depend on the extent to which the teacher and the teaching establishment is prepared to embrace the idea of independent learning. It will also depend on the actual provision of self-access resources and the degree to which these resources are integrated into actual teaching syllabuses.
> (Rodden & Parrington 2002)

This applies directly to the learning commons. For the learning commons to have a meaningful impact on student learning, teachers need to support, promote and incorporate the development of independent learning in the curriculum and the role of the learning commons in this. To facilitate this learning commons staff need to work closely with teaching staff. The Instructional Services Coordinator at the Information Commons in the University of Southern California's Leavey Library,

describes how they collaborate with staff: 'We consult with classroom faculty to design curricula and assignments that integrate information gathering in a discipline-based intellectual context' (Remy 2004, p. 4). While at the Purdue University one of the key goals of the Digital Learning Collaboratory (DLC) is to collaborate with faculty to enhance their course curriculum so that students develop critical thinking, information literacy, research and technical skills.

For some teachers, the notion of working closely with support staff in the design of "their" curriculum and "their" assessment tasks is challenging while for others it is well accepted and refreshing. As the focus moves from teaching as the transmission of content to the development of independent learners, the important contribution made by learning support staff is increasingly recognised. Apart from anything else, these members of staff work closely with students and can provide rich feedback to teachers on the problems faced by students as they go about the prescribed learning tasks. For the learning commons to achieve its potential, it is therefore necessary for staff of the learning commons to be accepted as members of course teams.

The learning commons at Victoria University

Victoria University is committed to the shift from a teacher-centred to a learner-centred University. Its Learning and Teaching Policy states explicitly that the University is committed to both a focus on learning and a learner centred approach. It goes on to state: "The purpose of teaching is to enable learning. A central focus of the University is therefore the provision of environments that promote high quality learning." (Victoria University 2004)

This commitment to a focus on learning and on the needs of the learner is reflected in the recently defined *Capabilities of Victoria University Teaching Staff* that form the basis of the University's Induction for Teaching policy. These capabilities include the following:

> 6. Teaching staff create and maintain effective learning environments.
>
> 6.1 Teaching staff provide a learning environment that engages and challenges their students and encourages them to take responsibility for their own learning"
> (Victoria University 2005)

This shift involves re-engineering the learning environments throughout the University so that they actively promote the types of learning that make students successful beyond their time at the university. These new environments need to be based on an understanding of both the way students learn and how they seek support for their learning. The new learning centre being built at Glasgow Caledonian University (2005) is based on the premise that 'students should not have to understand how the University is structured in order to access its services'. As far as is possible, our administrative arrangements should not compromise the services we provide to support student learning. This is also the underlying principle of the University's One Stop Shop or Student Connections initiative.

It is within this context that the learning commons offers a real opportunity to support the University's commitment to increasing its focus on learning and the needs of the learner – a University that is both learning-oriented and learner-centred. As Curtin University argues in its draft proposal for a commons, a learning commons can be seen as embodying the notion of a learner-centred university (Willis 2004).

Victoria University's context

Victoria University's circumstances are unusual. We are a multi-campus, cross-sectoral university with a special responsibility for the West of Melbourne. Most of the information commons and learning commons examined in the preparation of this report are at single sector, single campus institutions.

The exceptions are Seneca College a multi-campus community college in Toronto that has a campus in York University and learning commons at three campuses, including at York.

A multi-campus approach

As a multi-campus university, VU has a responsibility to support all of its students in their learning, regardless of the campus they attend and whether that campus is predominantly TAFE or higher education. Due to the number of campuses and the diversity of our student population, it is useful to conceptualise the learning commons as a way of operating rather than as a physical centre. As a way of operating in the support of learning it can be applied to differing degrees and scales across all of the University's campuses.

Since the campuses vary significantly in terms of size, the types and numbers of students, and the existing library and other facilities it is inevitable that the physical space of the commons will vary from campus to campus. The range of services offered face-to-face, staffing, the number of computers, the range of physical spaces and opening hours will necessarily vary across campuses.

While the physical space and the services available face-to-face may vary depending on the campus size, as many resources and services as possible need to be accessible to students across the campuses. Having a well-developed virtual space will ensure that students on all campuses and elsewhere can benefit from an integrated approach to service delivery. This will necessarily include virtual support through telephone, email or online.

Student diversity

Victoria University has a diverse student population, offering education and training from Certificate I to PhD level. It also attracts substantial numbers of students who are from low SES backgrounds and from culturally and linguistically diverse backgrounds. Many of our students are the first in their families to attend tertiary education. There is also a disjunction between TAFE and higher education in terms of requirements for independent learning, so those articulating from TAFE to higher education may need extra support in making this transition. In addition, many of our first year undergraduate students struggle with the transition from the highly supported environment of secondary school to the independent learning environment of higher education. All of this means that many of our students are ill-prepared for independent learning. One of our major challenges is therefore to help them develop the confidence and competence required for autonomous learning.

Emphasis on generic skills

The Core Graduate Attributes are a set of five attributes that higher education graduates are expected to attain during their VU experience. Attributes 2 and 5 listed below are particularly relevant to this discussion.

> A VU graduate:
> 2. can locate, evaluate, manage and use information effectively (including "critical thinking", ICT and statistical skills)
> 5. can work both autonomously and collaboratively as a professional.
>
> (Victoria University 2003)

As with the higher education, TAFE is also placing a greater emphasis on generic skills. In the TAFE sector the Mayer Key Competencies were included in national training packages. The more recent ACCI/BCA Employability Skills Framework will replace the Mayer Key Competencies and signals the need for students to develop the capability to work in teams, to learn and to self-manage.

While the learning commons can provide an environment for the development of these generic skills to some extent for all students, it can also provide a very powerful learning experience for the students it

uses as student assistants or peer helpers. Experience at the University of Guelph and elsewhere suggests that these students gain a great deal from the peer helper experience, including evidence of this learning that is valued by future employers.

Learning in the workplace

The University's draft Learning in the Workplace policy aims to enhance both the student learning experience and the employability of students through learning in the workplace (Victoria University 2005). This draft policy requires some form of learning in the workplace in all courses. There is a challenge here for the University to accept its responsibility as one of its region's major employers by providing learning in the workplace opportunities for some of its students. An obvious response is to offer work to its students as peer helpers.

Recent developments in the University's libraries

Recent developments in the Library funded by the HEIP grant can be seen as a step towards a learning commons. The Library has recently purchased new computers and increased software as well as new furniture, providing improved access to technology for our students. There are also arrangements under way to provide a higher level of IT support to these spaces. These are encouraging developments but there is still some distance to go before these initiatives could claim to be information commons and much further to go before we can claim to have a learning commons on each campus. In Beagle's (2004) terms, we are at the stage of isolated change and have much to do if we wish to progress through the stages of far-reaching change and transformation change. We do, however, have the necessary ingredients for such developments.

Principles for a learning commons

This review is designed to inform the development of a Victoria University model for a learning commons. Much more work is required, including targeted information gathering from examples of good practice elsewhere and stakeholder consultation within this University, before a model for Victoria University can be proposed. However, based on this review, we have developed a number of general principles for the design and operation of a learning commons and propose that these might be used to guide the development of this model.

Learning oriented
Facilitates active, independent and collaborative learning.

Learner centred
Focuses on student needs, preferences and work patterns.

University wide
Part of university-wide development of learner autonomy.

Flexible
Responsive to the changing needs of learners for resources and support.

Collaborative
Based on collaboration between different learning support areas in the university.

Community building
Provides a hub for physical and virtual interaction for staff and students.

The physical space

The learning commons requires us to conceptualise new learning spaces that recognise the changing work patterns and needs of a diverse community of learners.

Learning oriented

Learning spaces are re-designed to promote active, collaborative and independent learning. Students can choose from a variety of spaces to learn that include individual and collaborative work spaces, technology to support learning from library research through to document production, self-access areas to promote self-directed learning and access to learning support.

Learner centred

The physical space is designed to accommodate student needs rather than those of the organisation. It accommodates the social as well as an academic dimension of study and provides an environment that is welcoming, non-threatening and not dominated by staff. The place is highly visible, centrally located in the campus and close to other student services.

University wide

The development of learner autonomy is integrated into every course and a learning commons is available to support this on every campus. While the range of support in the learning commons may vary somewhat between campuses, there is a learning commons on each campus.

Flexible

The physical space can be used in diverse ways. There is a continuum of spaces for individuals, small groups, larger work groups and classroom spaces depending on the activity. Access is provided to a wide range of print resources, digital resources, software and hardware. It is open for extended hours. The space is flexible enough so that it can be adapted to meet changing patterns of use.

Collaborative

The physical space is not dominated by staff from one particular organisational unit but ownership is shared by all partners. The environment is characterised by collaboration and integration rather than by the division of functional areas.

Community-building

The place provides space and resources to support students and staff engaging in collaborative activities which are face-to-face or online in nature.

The virtual space

The learning commons is both a physical and virtual space. As a virtual space the learning commons can support users who cannot attend or who choose not to attend the physical space of the learning commons. Indeed, learners may use the higher levels of support available in the physical learning commons to gain the skills and confidence they need to operate effectively in the virtual space. It therefore needs to be designed to complement the physical space and to provide access to resources and services to students working off-campus, including off-shore.

Learning oriented

The virtual environment allows access to the wider world of information through the Internet, search tools and digital information. It helps students to develop a broad set of information literacy capabilities to locate, evaluate, manage and use information effectively. It facilitates online learning and aids the transition from dependent to independent learner.

Learner centred
The virtual space allows students to access online materials and services such as learning support. Online resources range from those for specific units of study to those providing generic support for all students.

University wide
The virtual space helps make many of the resources of the learning commons available to all students. It also allows these resources to be integrated into courses, whether offered in face-to-face mode, mixed mode or online mode.

Flexible
The virtual space is accessible both on-campus and off-campus. This allows flexible access to a range of support services. Students have storage space to store their work and retrieve it at different locations. Wireless access is provided within the campuses. New approaches and methods for identification, retrieval, transmission, access and storage of information are adopted.

Collaborative
Like the physical space of the learning commons, the partners in the learning commons share responsibility for the virtual space.

Community-building
Virtual communities are facilitated using email, asynchronous discussion groups and synchronous chat groups. There are links to these learning commons activities in all WebCT/TAFEVC courses.

Staffing

The learning commons requires us to redefine how we provide technology, library and learning services to students.

Learning oriented
Those staffing the learning commons understand that it is not just about technology or resources but about their effective use in learning. Members of the learning commons staff are active participants in redefining and reorienting roles and services to fulfil student learning needs.

Learner-centred
Those staffing the learning commons are approachable, easily recognisable and provide a continuum of service including effective referral to other staff members. Student assistants are used not because they cost less but because they help to shape an environment that is welcoming and non-threatening for students and because they learn a great deal from the experience. Student feedback on the facilities and service is collected in a variety of ways and used to improve the service.

University wide
Those staffing the learning commons work with teachers across the university in developing learner autonomy. They also collaborate in the design of assessment tasks that integrate the development of generic skills within a disciplinary context.

Flexible
A variety of ways of helping students are used including roving support, help desk service and online support. Staff members, both professionals and students, are drawn from across the university to ensure a rich mix of skills and diversity of provision. Cross training is provided to assist staff to work more flexibly across traditional functional divides as well as specialised training for functional areas.

Members of staff are responsive to local factors and staffing arrangements and training evolve, as the needs of students change.

Collaborative

Those staffing the learning commons collaborate across the different functional areas to provide integrated and effective service delivery to students. Staffing arrangements are collaborative rather than hierarchical. Members of staff also collaborate with teachers to ensure that the learning commons is integrated into the curriculum across the university.

Community building

Staffing arrangements help to break down cultures of various partners and build a community within the commons. Communication is transparent and open.

Appendix: Information and Learning commons models

Newcastle University - Auchmuty Information Commons

Auchmuty Information Commons at Newcastle University is described as a learning space within the library. They have an integrated information desk combining research and IT support. Student workers provide roaming support in the IC.

It is a food and drink friendly area. There is an additional lab for training which functions as open access when there is no training planned. The IC can be accessed at night by card after the library has closed. The website for the information commons is separate to the Library website.

http://www.newcastle.edu.au/services/library/aic/

Queensland University of Technology – The V-lab

The V-Lab is a triangular partnership with between three parts of the Division of Academic Services – Information Technology Services, Teaching and learning support and the library. These departments provide integrated support for V-Lab through the one service point including access to technologies, technical advice and assistance, one-to-one support in the access of information resources.

QUT's Campus Library Manager describes having a hierarchy of space dependent on the activity required from quiet to busy. Open space with cutting-edge student focussed design. Noise control, security, seating, colour scheme. Busy central areas moving out to quiet peripheries, variety of usage spaces –quiet, more noisy long term, short term variety. There is also a 24 hour access laboratory.

The Campus Library Manager recommends clearly focusing on the client requirements and aiming 'the whole project in their direction'.

Curtin University – Information Village

Curtin University is planning to develop an information village. In a (draft) concept report they describe the Information Village as a new learning and student service environment that aims to 'create a community gathering point that embodies the notion of a student-centred university'(Willis 2004). The Information village will contain:

1. Renewed library
2. Central campus hub for student C&IT
3. Centre for the support of student learning
4. Centre for the support of academic staff teaching
5. One-stop shop for student services.

(Willis 2004, p. 58)

University of Auckland - Kate Edgar Information commons

This is the largest facility of its type in New Zealand. It differs from other ICs in that it is a separate building rather than part of an existing library. The Information Commons brings together 'the custom-built building providing a pleasant study environment, the appropriate technologies and the student desktop software, and integrated learning support services readily available close to work stations' (University of Auckland 2003). Overall aim was to enhance student learning.

Electronic Campus Helpdesk was merged with the University's Library's Learning Services to become the IC Help Service. The service consists of two components – provides for walk-in support to students, NetAccount sales, and open consultation space, while the Information Commons consultants provide a roaming consultation service, assisting students using the workstations'. Consultants are fellow students who have a knowledge 'of electronic resources, software and databases in the Information Commons on the Internet and on the campus network' (University of Auckland 2003). Information skills teams run information literacy skills training courses. Learning support providers are co-located such as the Student Learning Centre, ELSAC and core University Library Services.

A high level of use reported and from the first day every workstation was filled.
Majority of enquiries were related to computing and help on directions, information, research skills and CECIL.

http://www.information-commons.auckland.ac.nz/

Cornell University – Stone Centre

The Stone Centre is the main computing facility in within the Mann library and is a standard IC providing enhanced access to computers.

Students are employed as computer lab operators in the Centre and are paid $7.65 per hour. Students are required to have full-time status, general computer competence is required but not a formal background in computers and 'strong background in public service or demonstrated ability to work in a public service position'. The student job description can be viewed at

http://www.mannlib.cornell.edu/computing/stone/employ/job_desc.html

University of Iowa – Information Arcade

The Information Arcade is situated in the University's Main Library. It was established in 1992 and is described on their website as an 'advanced facility for using electronic information and multimedia for teaching, research and independent learning'. The Information Arcade is a partnership between the University Libraries, the Office of Information Technology and the Academic faculty. Like most IC's the focus is on information technology.

Staffing consists of consultants and assistants from a variety of disciplines. Students are also employed for various positions. Graduate students serve as primary front-line public services staff in the Information Arcade employed for 20 hours per week. They are expected to have a combination of technical and research skills including:

- To have a general knowledge of electronic resources available
- How to use the major electronic resources including multimedia software, the Internet, CD-ROMs, online databases and instructional software
- Current research and detaching tools.

In addition, each consultant works on special instruction and development projects on their area of interest and expertise.

http://www.lib.uiowa.edu/arcade/

Article by Anita K. Lowry on the Information Arcade:
http://www.educause.edu/ir/library/text/CEM9438.txt

Purdue University - Digital Learning Collaboratory

Purdue University developed a Digital Learning Collaboratory (DLC) located in the undergraduate library to 'support and facilitate the integrated learning of information and technology literacy' for their students. Students can utilise workstations for accessing electronic resources, scanning documents, capturing images, 3-D development & rendering, web development, as well as editing and compressing digital video and audio. The DLC also features a wireless instructional area, equipment checkout e.g laptops, digital cameras etc, and rooms for collaborative work.

The DLC provides one-on-one research and development advisory to students upon request and run a formal workshop program for students on topics such as advanced Internet searching, presentation skills and evaluating information sources.

One of the key goals of the DLC is to collaborate with faculty to enhance their course curriculum so that students develop critical thinking, information literacy, research and technical skills. They provide support for courses through many different avenues including direct instruction, team teaching, or the provision of space and resources. Their website contains examples of how they partnered with faculty members on curriculum re-development and instruction. To use the DLC instructional facility, courses must match the DLC's mission by incorporating both information and technical literacy.

They use student Digital Navigation Assistants to help staff the DLC.

http://www.dlc.purdue.edu/dlc_home.htm

The University of Guelph – Learning Commons

The Learning Commons is described on the Guelph University's website 'as the central gathering place for students to study, engage in writing and research, and learn in collaborative settings'. The partners in the Learning Commons are the Library, Computing and Communications Services, Teaching Support Services and Student Affairs.

The Learning Commons integrates the following services on the first floor of the Library:

- IT Help Desk
- Learning Services
- Library Centre for Students with Disabilities
- Library Research Help
- Reference Services
- Supported Learning Groups Program
- Writing Services and ESL Support.

The Learners Commons uses Peer Helpers to provide a range of learning, research and writing assistance, some of which are discipline specific. The students are academically successful 'paraprofessionals' drawn from a range of disciplines at the University. For more information about Guelph's Peer Helpers program go to:
http://www.studentlife.uoguelph.ca/service/php/PHP-about.cfm

Guelph Learning Commons website
http://www.learningcommons.uoguelph.ca/

Indiana University – Information Commons

The Information Commons is a joint effort between the University's libraries and Information Technology Services. It is quoted as being the latest and greatest example of the IC although it is strictly an IC and does not have access to other types of learning services.

http://ic.indiana.edu/

University of Nevada - Information Commons

The Lied Library at the University of Nevada, Las Vegas contains an Information Commons. The IC includes computer work stations, two large group study rooms and technology and productivity software. In the beginning the IC was a distinct location on the first floor although the principles and the technology were part of the entire library. It also had multiple service desks to address different user enquiries. The service desks were recently merged to better accommodate student needs.

University of Southern California –Information Commons

The Information Commons occupies two levels of the Leavey Library at the University of Southern California. The IC provides students with access to computing facilities, collaborative learning spaces and research, IT and writing support. Librarians and student navigation assistants (SNAs) assist students with research using a combination of print, electronic and Internet resources and with computing questions regarding productivity software and E-mail. The facility is staffed 24 hours a day. Reference staff are on duty until 7pm, students the rest of the time. They have ask-a-librarian service that provides access to research assistance in via live chat, email or phone. They have an adaptive technologies room, a collaboration between the Centre for Academic Support and Disability Services and Programs. In cooperation with the writing centre, writing consultants are available for a couple of hours four days a week.

http://www.usc.edu/isd/libraries/locations/leavey/spaces/#infocommons

Texas Christian University – Information Commons

The information commons is a partnership between Library, Information Services, Centre for Instructional Services and the Writing Centre, although the latter two departments are not functionally integrated. The IC is staffed by two tiers of staff – tier one librarians and IT consultants, tier two: students.

The Center for Instructional Services focuses on support for teaching, but also provides some services for students. They are located in the library. The Writing Centre has a main office but four staff members are also located in the library.

On the IC website they provide online access to assistance including ask an IT expert, ask a librarian and ask a writing consultant.

http://www.ic.tcu.edu/default.asp

University of Calgary – Information Commons and Learning Commons

The University of Calgary in Alberta, Canada has an Information Commons and a separate Learning Commons. The IC incorporates library and IT functions providing students with space, technology and expertise to use information resources. The Information Commons has separate service points: the

information commons service desk and information technology desk. They have 13 collaborative work rooms. Their website contains information about their user statistics. They report among other benefits that Information literacy training attendance for students has increased 148%.

The Learning Commons is run by the teaching and learning area of the University and supports faculty by:

- Providing teaching and learning development activities
- Disseminating key research
- Supporting curriculum renewal
- Supporting technology innovation.

The University is planning to build a new building which incorporates both the Information and the Learning Commons.

Learning Commons
http://commons.ucalgary.ca/

Information Commons
http://www.ucalgary.ca/informationcommons/

Sheffield Hallam - Adsetts Centre

Willis (2004) cited this as an example of a learning centre. The Adsetts Centre includes:

- Library facilities
- IT facilities
- Media viewing and production
- Learning and Teaching Institute
- Print Unit
- Teaching space

The University's Learning and Teaching Institute has also been integrated into this building. There are a number of Information Desks located on different floors of the building which are staffed by advisers from the Learning Centre's Information Teams. These Information Teams represent different discipline areas but also give assistance on a wide range of subjects, and generally support the users Learning Centres.

http://students.shu.ac.uk/lc/adsetts/

Glasgow Caledonian University – Learning Centre

This model of a learning centre is highly integrated library, IT and learning support. The library is part of Learning Services and is made up of departments from Learner Support and Learning Resources. Learning Services provides access to Academic Programs, Access and Learner Skills (learning, English language, research and ICT skills), the Academic Practice Unit which has a central role in supporting the successful implementation of the University's Learning, Teaching and Assessment Strategy.

Learning support provides access to a number of student related services including:
'the base' which encompasses an enquiry desk and drop-in area assisting with basic requirements and referrals to counselling services etc. Learning Resources includes Bibliographic, Audio Visual, Electronic, IT and Telephone services.

Glasgow Caledonian University is currently building a new learning centre due to be completed in December 2005. As stated in their Synergy newsletter 'The building houses a range of learning space to suit a variety of learning styles, provides a home for our library collection, is a venue for social interaction, and the single point of access to the full spectrum of services that the University provides for its students' (Glasgow Caledonian University 2005).

This is a one-stop shop model which provides access to a range of services for students. The interior design is being conceptualised as a city with districts, edge zones, and landmarks within the building to help users navigate and use the building. The University argues there is clear link between this building and students' feeling valued and their success at the University. In the Learning Services newsletter, *Synergy*, they state:

> … it says a great deal about how we value our students. The campus development will make a significant contribution to the experience of every student….In a university where many of our students struggle to balance the demands of study, work and family, and are always pushed to find time, it seems obvious that providing a single place for one stop access to the whole range of services is one of the best things that we could do. All of this adds up to a greatly improved student experience that provides the best for our students, engages them with the University, and directly affects how long they stay with us.
> (Glasgow Caledonian University 2005)

http://www.learningservices.gcal.ac.uk/library/about/index.html

Seneca College – Learning Commons

The Learning Commons model is a blend of library expertise, learning centre academic support, audio-visual services and microcomputer resources in one academic facility. The learning commons operates at three Seneca College campuses, including one at York University (Seneca@York). Online help is available through Live Reference Chat Service "Ask LCO Live".

Along with information and technical resources, the Academic services include:

- One-on-one tutoring for all subjects offered by Seneca College
- Workshops to improve skills
- Computer help desks
- Special needs services.
- Web appointment booking system.

http://learningcommons.senecacollege.ca/

Allegheny College – Learning Commons

Allegheny is a small liberal arts college that has around 2,000 students. Allegheny's Learning Commons is located on the second floor of the library and draws together a variety of services to create a one-stop shop for students. Services provided in the Learning Commons include the Writing Centre, the Speech Centre, computing support for students, Student Support Services, administration of the advising program for the first two years, and new student orientation. There are plans to merge the Learning Commons with the Reference Desk and become a focal point of the redesigned library.

http://learningcommons.allegheny.edu/

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