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Title: Information Commons: Models for E-Lit and the Integration of Learning

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## **Information Commons: Models for E-Lit and the Integration of Learning**

Information Commons are often described as integrated learning facilities, where the user can receive assistance in acquiring information literacy skills and/or technical literacy skills or “e-lit skills”. User acquisition of e-lit skills that support further learning is a desirable goal. Information Commons in academic libraries are designed to facilitate this learning goal, often through an integrated and collaborative service model. What are the models of integrated service delivery for Information Commons in academic libraries? Are there models which have been more effective in fostering the learning of e-lit skills and if so, how?

This paper will describe the results of an environmental scan of some of the most successful Information Commons in North America and elsewhere, focusing on the elements of their service and program model that in the authors’ opinion foster e-lit integration.

Information Commons, e-literacy, learning, university, library

## **I. Introduction**

Information Commons are a new type of library facility offering innovative services that facilitate student learning. This paper presents an environmental scan of Information Commons in universities and identifies service and program models that support e-literacy. It examines to what extent instruction and services, supporting formal and informal learning, are offered for technology and information searching, that is e-literacy. It seeks to identify which models of Information Commons best meet this objective and suggest areas for further research.

## **2. Background**

During the 1990's and continuing through the present day, a new type of service facility has begun to appear in academic libraries across North America, Europe, and elsewhere. Commonly known as the Information Commons, this facility is "specifically designed to organize workspace and service delivery around the integrated digital environment." (Beagle, 1999) and holds many attractions for university and library administrators.

Throughout the eighties, nineties and even into the new century, there has been much comment and forecasting surrounding the death of the academic library (Carlson, 2001). The pervasive nature of technology and the ready access to information over the Internet led to a conclusion by many people that a library would no longer be needed. In response and to counteract this belief, administrators identified an enhanced role for the library, one that would ultimately align it more closely with the primary goal of the academy: learning. The Information Commons seemed to offer this opening as it could provide enhanced learning support in the era of ever expanding electronic resources. Equally, and perhaps more importantly for administrators, early evidence indicated that the Commons could be instrumental in reviving the life of the library. (Creth and Lowry, 1994) (Halbert, 1999) (Holmes-Wong and Bahavar, 1997)

A new vision for the library began to develop. Departing from the traditional library, by offering assistance and instruction with digital products and software such as Microsoft Office™ in addition to reference and information, the new library would re-situate itself as a learning facility. It would accentuate and highlight these opportunities. The individual learner would be able to take advantage of the resource rich environment of the library as it is supported by technology. Further, design of the Information Commons would be such as to enable the service providers to assist in learning.

Libraries emerged as a natural site for this facility due not only to their long association with technology as an enabler for learning and access to information, but as well to their service orientation and organizational culture which were more likely to enable fluid adaptation to a new path. This culture of collaboration and teamwork and integrated learning prompted libraries to work with partners such as Information Technology in the

development and achievement of a new common goal: the provision of an innovative service in a new physical environment. Although this path has not always been easy, those who have taken the initiative to collaborate to create an integrated learning environment have found the results to be positive.

There have been many iterations of the Information Commons since its inception. Not all have been collaborative but all support skill acquisition and learning to one degree or another. The question remains as to how well this objective has been achieved.

Assessment of qualitative outcomes for Information Commons is sparse. However, as MacWhinnie (2003) noted “even without objective evaluation data, it is evident that ICs have been a success at many academic institutions.” The authors believe that there are ways of benchmarking the activities and programs of the Commons that frame its success and thereby determine the degree to which learning is being supported and what sort of learning is occurring.

One method for assessing the Commons is to benchmark it against the framework for effective learning proposed by Chickering and Gameson (1991). Their framework has been well used as a rubric for establishing learning support in the academy and outlines seven elements that are proven to contribute to learning. The authors believe five of the seven identify learner-centered Information Commons, namely those that include spaces and services that

- encourage cooperation among students.
- encourage active learning.
- give prompt feedback.
- emphasize time on task.
- respect diverse talents and ways of learning.

Learners are blocked in their learning when there is a gap between their skill set, knowledge, and/or physical requirements and their ability to easily close it. Today’s academic learner has the double challenge of learning not only how to access and assess the resources, but also how to use technology to his or her benefit to create evidence of learning. This is the challenge of becoming e-literate. In an Information Commons where student learning is a priority, the physical facility and expert help are designed to enable successful learning outcomes and the closure of this gap. Careful and thoughtful design and service program development focused on learner behaviours, needs and outcomes help achieve this objective.

The learning environment in a learner-centered Information Commons is therefore about enabling and meeting diverse student needs. A design, for example, which features spacious and comfortable workstations that allow for collaboration between pairs of students, or group workrooms that provide the opportunity to work on larger team projects, will reflect the group project focus that is prevalent in academic learning. Coincidentally, this design will also “encourage cooperation among students” by enabling peer-to-peer learning.

Not only must the physical facility support learning but the staffing and services should also be available to enable learning if the Commons is following the Chickering and Gameson rubric. To support e-literacy, for example, immediate assistance for both information and technology questions provides opportunity for “prompt feedback” and “active learning” in technology and information skill acquisition. In an Information Commons where formal classroom instruction is provided, students have the further opportunity to spend “time on task”, learning a concept while receiving prompt feedback from an instructor. Finally the opportunity to work and learn in a variety of ways, face-to-face, virtually, collaboratively, individually and receive help from peers or experts, through formal or informal instruction respects “diverse talents and ways of learning”. In theory, the rationale, purpose and physical structure of the Information Commons support learning, but does the reality match?

### **3. Methodology**

In a preliminary attempt to gain answers to this question, the authors undertook an environmental scan of the Information Commons across North America and elsewhere. An environmental scan is "A kind of radar to scan the world, systematically and signify the new, the unexpected, the major, and the minor" (Brown and Weiner cited in Morrison and Held, 1989). The initial selection was gained by reviewing lists of Information Commons, websites, and bibliographies by Gaspari-Bridges and Pearson (2002), Heaton (2001) and Murray (2001) to identify appropriate sites. Information Commons that identified themselves as such or were identified by others made up the preliminary group. The initial sample included over 100 sites. This group was then narrowed to a smaller subset.

The Information Commons had to be located in a university, and have over 100 PC's in the facility. These criteria were chosen because they would provide a sample group similar in size to the authors' own institution and it was felt that similar and familiar programs, facilities and services with their concomitant challenges and issues would be present. Thirty-six Information Commons met these criteria, thus forming the nucleus for the environmental scan.

To frame the environmental scan, the authors created a data collection form outlining the information that would be sought about each particular university and Information Commons. In assessing the Commons the authors tried to identify the collaborators, if any, the location of the Commons within the institution, and how learning was supported in the Commons, based on the Chickering and Gameson rubric and our experience with our own Commons. Information was then mined from the websites of the universities and the Information Commons. This approach provided many challenges. The detail offered on websites varied greatly as did the terminology, accessibility and clarity of the information. As a result no definitive claim can be made about any one Information Commons without a more detailed follow-up, such as a focused questionnaire. Nevertheless sufficient information was gleaned to provide an initial picture of the

Information Commons and the “new, unexpected, major and minor” as it relates to e-literacy.

#### **4. Models of Information Commons**

The initial scan identified three prototype models for Information Commons: the Computer Laboratory, the Integrated Facility and Information Commons Building. The Computer Laboratory embodies the minimalist approach for integrated learning support. Primary focus is on the technical infrastructure. Help, if it is available, is generally available as technological assistance only. The lab may or may not be in a library.

The Integrated Facility refers to an Information Commons that is in a library and is one of two sub-types. One is a facility that is operated, staffed, housed and managed by the library. (The authors dubbed this Library Only.) Help with information searching and possibly with technology is generally available, but the extent varies greatly. The second type of integrated facility is those Information Commons that are a collaborative venture either between the Library and Information Technology and/or other partners. (The authors dubbed these Library Joint.) Help with information searching and technology is almost always available and the level of expertise is generally very high for both types of help. Further, learning support in other areas such as learning technologies may also be available depending on the partners involved.

Information Commons Building represents a newer and evolving prototype. In this case the whole building is considered to be the Information Commons. Services and facilities vary considerably depending on the partners involved. Frequent partners with the Library include Information Technology, Writing Centers, Educational Services, and Student Services. These buildings can be considered true learning centers.

After identifying the three basic models, each Information Commons was assigned to an appropriate model. The learning support offered was then analysed by type of support, and model. We identified six elements which in our experience are linked to learning support. These could be either formal, self-directed or informal and were

- face-to-face support for informal learning
- virtual instruction support for self-directed learning
- classrooms - formal learning support
- formal instruction to students
- group workrooms- informal learning support
- social areas - informal learning support

#### **5. Findings**

What did we find? For the purposes of this analysis the authors consider e-literacy to be a combination of information literacy and information technology literacy. E-literacy or E-LIT learning support factors were noted as falling into the six elements identified above.

These elements could be instructional, physical or social. Where we saw instruction, face-to-face assistance, or the opportunity for informal learning within both literacies, then we considered that the facility supported E-LIT. For example, group workrooms and social space by their very nature support informal learning. We considered then, based on our observations and experience that E-LIT learning would occur informally where those spaces existed, as peer-to-peer learning occurs when students research and work on papers and presentations. Skill developments in both sectors occur as opportunity and need coincide. Where classrooms existed we considered there was the opportunity for formal E-LIT instruction and learning, but interestingly enough, we could not always determine that formal E-LIT instruction therefore necessarily consistently occurred, either in the Library Joint model or in the Information Commons (IC) Building model.

Table One below depicts the initial findings with regard to learning support. Thirty-six Information Commons, grouped according to the following types were examined.

- Computer Labs (3)
- Library Only Facilities (11)
- Library Joint Facilities (13)
- IC Building (9)

As the elements which support integrated learning were isolated and tallied it became clear that there was a trend, the trend was that the more integrated and collaborative the operation was the more likely it was to have more of the elements which support e-literacy.

**Table 1 E-Literacy Learning Support in Information Commons Models\***

<b>E-Lit integrated learning support elements</b>	<b>Computer Lab N=3</b>	<b>IC in Library Library Only N=11</b>	<b>IC in Library Library Joint N=13</b>	<b>IC Building N=9</b>
Face-to-face Support	0	8	12	7
Virtual instruction	1	4	7	4
Classrooms in IC	1	9	9	9
Formal instruction	1	2	11	6
Group workrooms in IC	1	8	7	9
Informal learning support: social areas, café, lounge	0	5	3	4

Number Observed	4	36	49	39
Possible Total	18	66	78	54
Score	22%	54%	63%	72%

\*Note: Possible Total is derived by multiplying the number of facilities of each type by the number (6) of E-lit integrated learning support elements. So in the case of the Computer Lab model for example, if all 3 labs had all 6 elements present the Total Possible points achievable would be 18.

In considering the trend the authors took into account the total possible number of elements that support integrated E-LIT learning, whether they existed in any of the Commons and then compared totals for each model. While we acknowledge that there may be some inaccuracies in our data gleaned from websites we do believe that the trend is obvious and interesting. The more collaborative the Commons, the more likely it is to offer design and service features which enable integrated e-literacy learning and to align with Chickering and Gameson's five elements which support learning. Conversely, those who choose to go it alone are less likely to offer facilities and services which enable integrated e-literacy learning. We believe that the most successful Commons are likely those with integrated models for E-LIT learning and which more fully support the learner-centered goals of the academy.

Additionally the authors then took a look at where the future may lie with Information Commons models.

**Table 2 Collaborators in E-Literacy and Whole Learning Support\***

<b>Collaborators</b>	<b>Computer Lab N=3</b>	<b>IC in Library Library Only N=11</b>	<b>IC in Library Library Joint N=13</b>	<b>IC Building N=9</b>
Library	0	11	13	9
Information Technology	3	4	13	8
Com Media	0	1	1	0
Writing Centre	0	2	3	1
Educational Services and Technology	0	3	4	4
Student Services	0	0	1	2
Other	0	0	0	2
Number Observed	3	21	35	26
Possible Total	21	77	91	63
Score	14%	27%	38%	41%

\*Note: Possible Total is derived by multiplying the number of facilities of each type by the number (7) of Collaborators. So in the case of the Computer Lab model for example, if all 3 labs had all 7 collaborators present the Total Possible points achievable would be 21.

Taking collaboration further seems to be the trend as does the more collaborators the better. Although not as clear as in the E-LIT model for learning integration in Table One, there does seem to be a trend highlighted in Table Two which identifies a tendency towards more academic learner support units collaborating in the Commons for the benefit of the learner. While there is discussion and debate over just what exactly e-literacy is, it is clear that success breeds success. And the success of being user-focused and supporting the whole learner brings more partners to the table, all for the benefit of the learner.

## 6. Conclusions

It is the authors' belief that some models of Information Commons clearly provide better integrated learning support and overall support for the learner. Are they, as well, a better fit for today's learner? To answer that question we need to take a look at what today's

learner needs and expects. A Pew Report (Jones and Madden, 2002) highlights the following characteristics of today's college students.

- 20% began using a computer between age 5-8
- 72% check their email at least once a day
- 60% have downloaded music files
- 44% have shared files of all kinds
- 26% use instant messaging daily

The Internet is a familiar world for them. Technology is a part of their daily living as well as a part of their daily learning. They use it to communicate, play, research information, and access sources of all kinds. Today's learner exists in a wired world and expects that the tools they have become accustomed to will be readily available. Moreover, the skills they are learning will be a necessary part of their portfolio as they move into the world of the future. (White, Beatty, Warren, 2003) Used to being connected electronically, their social network is more widespread. Because of e-mail and instant messaging (IM) they maintain relationships over distance and time. They readily mix work and social activity. They share files, chat, and use IM. Multi-tasking and the use of standard software to prepare presentations and reports are routine.

When viewed from the perspective of an electronically savvy user, academic libraries that offer a fully integrated platform of technology, access to resources and expert assistance in e-literacy are more likely to appeal to the learner. Spaces that support the integration of technology into work and offer expert help when needed are strategically positioned to become an integral part of the learning experience. The pervasive growth of Information Commons speaks to the goal of the academy to develop useful space and accessible learning support within an environment that is collaborative and holistic. The continuous transformation and re-creation of the Information Commons model to meet the learning needs of the students also speaks to the recognition by campus leaders of the current and future learning trends. The Information Commons models are nothing if not adaptable and flexible, but is there a best practice that supports e-literacy learning? Of the four models reviewed in this paper, the Library-Joint model and the IC Building are indicative of the strength and value of a collaborative model.

The Library-Joint model offers much of what is needed by the learner. In collaboration, usually with Information Technology, learner support of all kinds for both technology skill acquisition and information research is generally available. Expert help is provided on a face-to-face basis and through formal classroom instruction. Spaces including group workrooms, social areas and spacious workstations, encourage collaboration and peer-to-peer learning among students.

The IC Building model takes this vision one step further. Collaboration can broaden to include other learning and technology support units such as Educational Services, Media Services, Student Services and Writing Centers. The size and scope of the building can allow for greater functionality and diversity in workspaces. Expert assistance may include instruction in advanced technological and learning tools thereby offering support to the

learner as knowledge and skills heighten. Users have access to a variety of technology and a number of services in a comfortable, multi-functional space. Integrated e-learning is enabled.

Information Commons generally have been deemed a success by the academy and its users. One purpose of this environmental scan was to identify possible future research on Information Commons. Our scan identified elements which support learning. Are these the most significant elements? Of the collaborative models extant, what is the best collaborative model? What makes for successful collaboration? Does collaboration improve the learning outcomes? Does the Information Commons promote e-learning? If so, how? There needs to be more research to answer these and other questions. However, the continuing growth in the number of Information Commons seems to indicate that university administrators and others have noted its success. They are providing funding for new facilities that embody the concept, and many units on campus are anxious to collaborate in this development. The trend is clear: libraries which were said to be dying are becoming dynamic, transformed places through supporting e-literacy and the integration of learning.

## 7. References

Beagle, D. (1999) "Conceptualizing an Information Commons," *The Journal of Academic Librarianship*, **25** (2): 82.-89.

Brown and Weiner cited in Morrison, J.L. and Held, W.G. (1989) "Developing Environmental Scanning/Forecasting Systems to Augment Community College Planning, *The Journal of Virginia Community College Association*, **Spring**: 4, 12-20

Carlson, S. (2001) "The Deserted Library" *Chronicle of Higher Education*, **48** (12): A35-39

Chickering, A.W. and Gameson Z.F. (1991) Z.F. "Appendix A: Seven Principles for Good Practice in Undergraduate Education, "*New Directions for Teaching and Learning*, **47**: 63

Creth, S, and Lowry, C.B. (1994) "The Information Arcade: playground for the mind" *Journal of Academic Librarianship*, **20** (1):22-23

Gaspari-Bridges, P. and Pearson, D. (2002) *Information Commons (IC): a selected bibliography*  
[http://gateway.library.uius.edu/administration/planningbudget/BES/BES\\_files/biblio.p](http://gateway.library.uius.edu/administration/planningbudget/BES/BES_files/biblio.p)

Halbert, M. (1999) "Lessons from the Information Commons frontier" *Journal of Academic Librarianship*, **25** (2): 90-91

Heaton, J. (2001) *Information commons: From Needs Assessment to Evaluation, a selected bibliography*: SLAIS-University of British Columbia  
<http://www.bcla.bc.ca/aips/ICBiblio.PDF>

Holmes-Wong, M.A. and Bahavar, S. (1997) "If You Build It, They Will Come: Spaces, Values and Services in the Digital Era" *Library Administration & Management*, **11**:74-85

Jones, S. and Madden, M. (2002) *The Internet Goes to College; how students are living in the future with today's technology*: Pew Internet and American Life Project  
[http://www.pewinternet.org/reports/pdfs/PIP\\_College\\_Report.pdf](http://www.pewinternet.org/reports/pdfs/PIP_College_Report.pdf)

Lougheed, T. (2001) "Libraries Gain Clout and Cachet in the Information Age" *University Affairs* **42**: 9-11, 17  
<http://www.universityaffairs.ca/issues/2001/oct/pg08.pdf>

MacWhinnie, Laurie A. (2003) "The Information Commons: the Academic Library of the Future" portal: *Libraries and the Academy* **3** (2): 241-257.

Murray, D. (2001) *Information Commons: a directory of innovative services and resources in academic libraries*  
[http://brookdale.cc.nj.us/library/infocommons/ic\\_home.html](http://brookdale.cc.nj.us/library/infocommons/ic_home.html)

White, P., Beatty, S. and Warren, D. (2003) "Information Commons", *Encyclopedia of Library and Information Science*. DOI: 10.1081/E-ELIS 120020359

## **8. Websites reviewed** (All accessed on August 2004)

Arizona State University  
<http://www.east.asu.edu/infotech/labs/>

Australian National University  
<http://infocommons.anu.edu.au>

Colorado State University  
<http://lib.colostate.edu/tour/eic.shtml>

Dalhousie University  
<http://www.library.dal.ca/commons/index.htm>

Emory University  
<http://infocommons.emory.edu/>

Ferris State University  
<http://www.ferris.edu/library>

Georgia Institute of Technology  
[http://www.oit.gatech.edu/computer\\_labs/lwc.php](http://www.oit.gatech.edu/computer_labs/lwc.php)

Holmsglen Institute of TAFE  
<http://www.ic.holmesglen.vic.edu.au>

Indiana University  
<http://ic.indiana.edu>

Kansas State University  
<http://www.lib.ksu.edu/geninfo/infocommons.html>

Marquette University  
<http://www.marquette.edu/library/maps/Raynor1.htm>

Oregon State University  
<http://osulibrary.oregonstate.edu/computing/overview.htm>

Pennsylvania State University Berks  
<http://www.bklv.psu.edu/academic/library/thun/info.html>

Rutgers University  
[http://www.libraries.rutgers.edu/rul/libs/douglass\\_lib/douglass\\_lib.shtml](http://www.libraries.rutgers.edu/rul/libs/douglass_lib/douglass_lib.shtml)

Simon Fraser University  
[http://www.lib.sfu.ca/about/projects/info\\_commons/IC.htm](http://www.lib.sfu.ca/about/projects/info_commons/IC.htm)

Sonoma State University  
<http://libweb.sonoma.edu/about/infocommon.html>

Texas Christian University  
[www.ic.tcu.edu/facilities/stu\\_index.asp](http://www.ic.tcu.edu/facilities/stu_index.asp)

Trent University  
<http://www.trentu.ca/csd/labs/info-commons.shtml>

University of Arizona  
<http://dizzy.library.arizona.edu/library/teams/pic/pic.htm>

University of Alberta  
[http://www.ualberta.ca/CNS/labs/knowledge\\_common.html](http://www.ualberta.ca/CNS/labs/knowledge_common.html)

University of Auckland, New Zealand  
<http://www.information-commons.auckland.ac.nz/>

University of Calgary  
<http://www.ucalgary.ca/ic>

University of Chicago  
<http://www.lib.uchicago.edu/e/crerar/using/facilities/>

University of Georgia  
<http://www.slc.uga.edu/>

University of Guelph  
<http://www.learningcommons.uoguelph.ca/>

University of Iowa  
<http://www.lib.uiowa.edu/commons>

University of Michigan  
<http://www.umm.umich.edu/>

University of Newcastle, Australia  
<http://www.newcastle.edu.au/services/library/index.html>

University of Nevada, Las Vegas  
<http://www.library.unlv.edu/media/about.html>

University of North Carolina, Charlotte  
<http://libweb.uncc.edu/library/infocom/>

University of Otago, New Zealand  
<http://www.library.otago.ac.nz>

University of Southern California  
<http://www.usc.edu/isd/locations/undergrad/leavey/IC.html>

University of Toronto  
<http://www.utoronto.ca/welcome.html>

University of Utah  
<http://www.scl.utah.edu/>

University of Washington  
<http://www.lib.washington.edu/Ougl/study.html>

University of Waikato, New Zealand  
[http://www.waikato.ac.nz/library/library\\_news.shtml](http://www.waikato.ac.nz/library/library_news.shtml)

