

Harnessing ICT to develop community and identity: a model for academic departments*

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Abstract:

Universities have been early adopters of Information and Communication Technologies (ICT). However, does availability imply use? How is ICT being used by academic departments? This article addresses these questions, and discusses the use of ICT to support research, instruction and service, but more specifically, the use of ICT to enhance a sense of identity and community across all members of a department. The authors' observations of university departments across the Atlantic reveal very limited uses of ICT. A democratic web-based academic departmental community model is proposed to assist in the strengthening of departmental identity and community as well as advancing its mission. Concepts such as 'wiki' and anthill community underpin this model.

Keywords: academic department model; identity and community; university; web based community; ICT.

Article:

1 Introduction

"Recently, I was working late at the office when the phone rang. I heard a colleague's desperate voice on the other side of the line. He said: 'I am very sorry, I am blocked! I can't generate my grade sheets and they're due in a couple of hours. Can you help me, please?' Of course, I did. I got my documentation and walked him through the document creation process until we finished setting up the grade sheet for the first class. During the process we dealt with extraneous matters like choosing the right printer on the network and changing the paper tray for the corresponding type of paper for this job. Happy with having taken care of the first class, he wanted to continue (by telephone), but I stopped him in order that he do the fishing instead of me. Before leaving him to his own devices I pointed him to the online help and the University grading guidelines. I wished him well and promised to be right by the phone in case any new troubles arose."

Information and Communication Technologies (ICT) have become an integral part of academic life as demonstrated in the above example in course management. This example is also evidence of the challenges that are part of the common experience in the process of adopting technology. Beyond practical applications and automation of processes, how can QCT be fully tapped to improve the practices, and create identity and social community of an academic department? It is often assumed that "if we build it, they will come," or as university administration hopes: "if we supply them, they will be used". These assumptions beg certain questions: are ICT being used by academic departments?, how are they being used?, and are they being taken full advantage of to

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improve our real communities? This paper aims to address these questions, and discuss the use of ICT to support research, instruction and service, but more specifically, to enhance a sense of identity and community across all members and stakeholders of a university academic department. The authors draw from their observations of having had academic exchanges in different university social science departments in North America, Western Europe and Latin America. Based on these experiences the authors have identified particular uses as well as under utilisation of ICT, and thereby propose a democratic web-based academic department community model that maximises the potential of ICT. ICT can be harnessed to carry out organisational and individual activities in some different and complementary ways, including:

1. doing the same things in different ways (to facilitate)
2. doing the same things in better ways (to improve)
3. doing different things (to create/to change).

2 ICT use in an academic department

Most universities have access to Information and Communication Technologies (ICT), which enable the professoriate to continue to engage in beyond-the-hallway discussions and faculty meetings. Professors have access to ICT for conducting their duties: research, instruction and service. How are they using them to move beyond physical interactions to improve their work? The authors have encountered different versions of hardware and software, languages, university systems and extent of economic development in university departments, albeit our combined experiences and observations revealed very similar limited uses of ICT in academic departments. The above scenario is not so unusual and many of us could imagine ourselves playing out either one of the two roles and relying on older technology to learn newer technology. Inasmuch as the assistance needed was obtained and the task was achieved, what would have happened if the colleague had not been within a no/low-cost phone call? This example reveals that:

- people do not know how to fully use the technology at their disposal
- people tend to rely on older technology and accustomed methods (low-technology or face-to-face) to communicate.

These challenges are faced by all members of an academic community in an Information Society; for example, staff to remain productive in their respective supportive roles, students to learn and conduct research, administration to make decisions, alumni to stay informed and support their alma mater, and stakeholders to contribute to the success of the department. Strategies need to be implemented to support learning and application of ICT to assist a departmental community in achieving its mission.

2.1 From replacing to enhancing communication

With basic ICT tools in place, could our professor's grading dilemma have been solved using only ICT? Both counterparts had e-mail and chat but did not have 'push' technology (software that helps deliver or push information directly to someone's computer) nor the ability to directly access each other's computer. Using e-mail would have been time-consuming as a message would need to be received before a response could be typed and sent back, and clarification of any message would necessitate another round of exchange. Text-chat would also slow down the process as typing is again required. On the other hand, voice chat, which resembles hands-free telephony, allows for two-way communication while computer and other activities can be performed simultaneously as in a physical conversation and interaction. Furthermore, video chat can provide a visual image of each communicator's actions, which, depending on the activity, can add or be of no consequence to the interaction. However, voice chat and video chat require additional equipment, headset (microphone and speaker) and web camera, respectively. In short, we have access to technology but are at the same time limited by it because we do not know how to fully harness it. Technology organises, entertains, and fascinates, but it is also associated with changes (learning anew, modifying ways of performing tasks, *etc.*), and when not fully utilised, it can also lead to depersonalisation and isolation.

As more technology is introduced into our daily lives and in the confines of the 'workplace,' its use is a matter of job survival. ICT is forcing people to adjust to a rapid and continuously changing environment. In academia, older staff and faculty did not anticipate the fast pace of the learning curve and some are not functioning effectively and feel disenfranchised. In many cases, the necessary training has not been made available as new technologies are introduced. Our experiences or interactions with ICT have either spurred us to try out advanced functions and new product releases or forced us to create mental walls so we only use them for the most basic of activities, such as e-mail. For faculty and staff who are keeping up with technology we still tend to use it *to replace* information transmission *rather than enhance* communication. For example, e-mail is sent to announce meetings along with attachments, as appropriate (or in some cases placed on a public or password-protected server for direct access) and these faculty and committee meetings continue to be held *in situ*. However, for teaching, ICT have been applied to both replace and enhance course delivery and management, as appropriate to an institution's goals. Students who are overcoming the digital divide are using ICT, including cellular telephony, in learning, studying and research.

It is clear that much technology (hardware and software) is becoming inexpensive, freely available and, in some cases, easier to use. However, many parts of the world and even early adopters, such as universities, still experience a digital divide; either in access to hardware and software by faculty and students due to cost, in access to relevant content as it is still predominantly Anglo-American, in bandwidth and electrical dependence as a result of infrastructure which affects cost and availability, or in use/training as technology use is not always self-evident and new versions and formats are constantly being introduced. Other factors that present continuous challenges when using ICT are issues of security and authenticity of information and varied ethical/policy issues (*e.g.*, piracy, plagiarism, intellectual freedom, privacy, *etc.*) Regardless of one's technological accessibility (current generation or earlier generations), ICT are necessary for effective functioning of large departments and extra-departmental collaboration (research or academic programs) or resource sharing (*e.g.*, support services) beyond a physical location.

2.2 Developing a WBC academic department: virtual and/or physical worlds

ICT in the workplace is changing the way many people do their work. Because of the speed and possibilities of communicating using the new ICT tools, it is likely that in the future more people will be able to work from home. Furthermore, the development of Web-Based Communities (WBC) as a complementary form to the original real/physical one can improve our practices. For example, a web-based academic department will harness technology and create a virtual space that enables faculty to collaborate more in research, retrieve information more effectively, teach beyond our immediate physical reach and reach quicker consensus as a result of extensive virtual discussion prior to decision making. Communication 24/7 can either create a stronger identity and a more cohesive community among administration, faculty, staff, students, alumni and stakeholders of a department, or due to the ease of belonging virtually to many communities, it can decrease our sense of belonging and loyalty to any one group/organisation.

Like many companies and organisations, academic departments can be developing strong Web-Based Communities (WBC) to support, in a complementary way, our regular activities as universities have been among the first in most countries to have ICT access and have incorporated them to facilitate some of our tasks. A WBC that fully utilises ICT tools, has access to community information, and has well-established practices and policies, allows its members to communicate with each other by going to video conference centers or telecenters, or connect from their own computers at their offices, homes, or other site with internet connection, instead of spending time and money traveling to physical on-site meetings. We use e-mail instead of written notes and letters, but we have not improved on other established practices that would benefit from nongeographic-dependent asynchronous and synchronous communication, and from broader participation of academic departmental members. For example, a faculty member is abroad conducting research with her doctoral students, and an alumnus (not on the research team) and the research coordinator (not *an* alumnus) have submitted their viewpoints on a new doctoral program to the departmental portal and are making their opinions known to the faculty member who will be participating in the virtual faculty meeting the following day.

Online communities foster community building which has long been regarded "as a way to shape social interaction and provide a common foundation for connectedness among its members" (Gregory and Austin, 2004,p.500). These Online or Virtual Communities (OC or VC) according to Preece (2000) "represent people who interact to satisfy their own needs or roles, have a shared purpose, act within a determined set of policies and guidelines, and are supported by a `computer system' which facilitates interaction, information sharing, and social connectedness" (Gregory and Austin, 2004,p.500). OC and VC may have only been created in cyberspace or are extensions of `real' communities, a distinction that researchers should note and that may or may not be of consequence.

In reality, most physical communities coexist with the creation of their own online or web presence. A WBC could be considered as an infrastructure that coexists with the physical community in a temporary or permanent way. It can provide a virtual place as a copy of the real place coexisting in order for its members and citizens to contribute ideas and participate in meetings that would otherwise be impossible to attend due to geographic dispersion or physical limitations. For instance, in a university department it is the duty of faculty to attend all faculty meetings; thus, providing a virtual parallel infrastructure that supports/enhances the physical one further ensures that they will be present wherever they are. Consequently, our discussion of a web-based academic department community recognises the coexistence of a physical community, as well as the inclusion of all its membership: administration, faculty, staff, students, alumni and stakeholders. Communication among these departmental subgroups, whether physical or virtual, has been hierarchical. The proposed model of a web-based departmental academic community will open up the channels of communication, based on the democracy of community participation.

2.3 Applying 'CT for civic participation, education, work and social life

Miller (1998) suggested that the purpose of our lifelong pursuit of education should be to learn how to sift through mountains of facts and ideas to find the few that are most useful and worth knowing; we need to be wisdom seekers, not information vessels. All of us need easier and cheaper access to relevant information in order to minimise the opportunity cost. Economists in considering `cost' deem the value of sacrificed opportunities and time as the most important factors of cost. Indeed, this philosophy requires a firm commitment to learning how to think critically and function expeditiously. Sharing information and creating *an* intellectual commons are difficult challenges to manage in a traditional physical community and in our increasing globalised society. It takes more and more time and money to collect and identify relevant information in *an* information society, and furthermore, to filter it to one's community for its well-being and survival, and in the case of university departments to carry out its mission.

The limitation of physical encounters and meetings among delegates and representatives seem a bad practice in our actual democracies and globalised economy. Even if democracy is literally government `by the people' through elected officials and representatives, the main thrust is not just to emphasise representation when participation by civic society is feasible with the use of QCT. In the case of a university or academic department, we could apply the same rules as for regular democratic government. Lobbies and interest groups do not necessarily represent the whole community and its ideas, so civilian participation should always be welcomed in whatever way ICT can now make possible. We want to reduce the alienation of participants and to keep the person-to-person encounters when possible. Digital platforms can provide their users with more open, multi-access and less hierarchical forms of engagement with each other while enabling them to keep the same roles as in physical/real life in decision making and information sharing, while adding more voices in pre-decision deliberations (a nonhierarchical democratic process).

2.4 Observations of ICT use and WBC in academic departments

Experience in academic social science departments across the Atlantic revealed the following patterns of limited ICT use:

- Communication software:

- a Electronic distribution lists to send announcements, reports or other information (organisational, intellectual, instructional, social, *etc.*) of interest to the academic department members. Membership on these lists may be organised by group (all university, all department, faculty only, student only, *etc.*) or by purpose (academic information, social or miscellaneous issues, *etc.*). **In** some cases these lists also function as a form of asynchronous discussion.
 - b Bulletin boards for announcements or instructional purposes.
 - c E-mail for communication with selected others in the department.
 - d Text or voice chat and discussion for instructional purposes and in some cases for research.
- Noncommunication software (*e.g.*, presentation, spreadsheet, word processing, statistics, publishing, database management, internet browser, web design, *etc.*) for teaching, research and service duties as needed.
 - Computer-supported cooperative work (groupware) may be used within an institution but has tended to be more quickly adopted by research groups which are geographically distant.

These ICT uses in academic departments are reflected in web-based communities created by subgroups of *an* academic department, and thus far, not encountered to create a WBC of the university department as a whole. The research literature describes ICT use by Online Knowledge Communities (OKCs), Communities of Practice (CoP) and Educational Virtual Communities (EVCs). OKCs are: "meeting places for continuing professional development, a social network of members, who are organised by making use of an online meeting place, having an adequate group culture and are involved in appropriate information processes to develop and exploit a certain knowledge domain" (de Vries and Kommers, 2004,p.115). Faculty, students and research associates can constitute an OKC within a department, can open it up to nondepartmental members, or can join one created outside the department (regionally, nationally or internationally). Communities of Practice (CoP) are "social learning systems, where the learning is very much grounded in practice" (Bell and Heinze, 2004,p.22). They are further defined by being "an emergent rather than organised form of interaction, characterised by the mutual engagement of its members, the negotiation of a joint enterprise, and the creation of a shared repertoire" (Bell and Heinze, 2004,p.22). DeSanctis (2003) demarcates them as voluntary rather than formal and as having no economic interests, except to advance the interests of their membership. In universities, CoP can be constituted by any member of the academic community. The prevalence has been for CoP to be created from research groups but they can be as readily established to address the interests of other academic department sub-communities, such as student groups, community service learning groups and departmental task forces. Educational Virtual Communities (EVCs), on the other hand, tend to be created by formal organisation. The authority is created by *an* institution, such as a university, which establishes the governance structure and the constitution of its membership (*e.g.*, students in a course or program of study), and provides for the Computer-Mediated Communication (CMC) technology and digital library resources that create the Virtual Learning Environment (VLE). EVCs are often the first type of WBC to be established in universities as the offering of distance education to increase educational access has become a priority and is made feasible by ICT.

Universities, and to an extent many academic departments, have a sense of identity and community, especially those of smaller size or with a long-standing community culture, which on a website are expressed through design (*e.g.*, logo, colours), and information on traditions (*e.g.*, lecture series, homecoming, *etc.*), programs (*e.g.*, Moving Image Archival Studies) and research (*e.g.*, breast cancer research, center on poverty and the law). However, an academic department website that provides unidirectional, static information serves to reinforce identity, but it is not as effective in *building* community. This is best done through a web portal that facilitates open democratic participation and contributions by members. The proposed academic department WBC model offers a digital environment for the engagement and multidirectional communication by not only faculty and administration, but also by students, staff, alumni and stakeholders.

3 Building a model of ICT use in academic departments

Community members should have access to bulletin boards, forums, conferences, virtual meetings, among other forms of web-based departmental engagement and information sharing. In short, participation includes involvement, contribution and dialog but it should no longer be localised. The creation of an academic commons that allows physical and/or virtual participation can only serve to strengthen a sense of identity,

community and ownership within the department as well as when members represent the department in extra-departmental interactions.

ICT use in a web-based academic departmental community



The proposed uses of ICT (see Figure 1) by a university academic community creates a WBC that is open to the whole community (administration, faculty, staff, students, alumni and stakeholders) and any of its subcommunities. In order to create departmental identity and cohesion, the department as a whole should set up a virtual/web departmental commons and modes of exchange so information is shared and added to by all and communication can take place with/amongst each other. However, departmental subgroups should also have the opportunity to interact and address their own specific sub-interests because they also have to perform their own particular duties respective of their particular role in the departmental community.

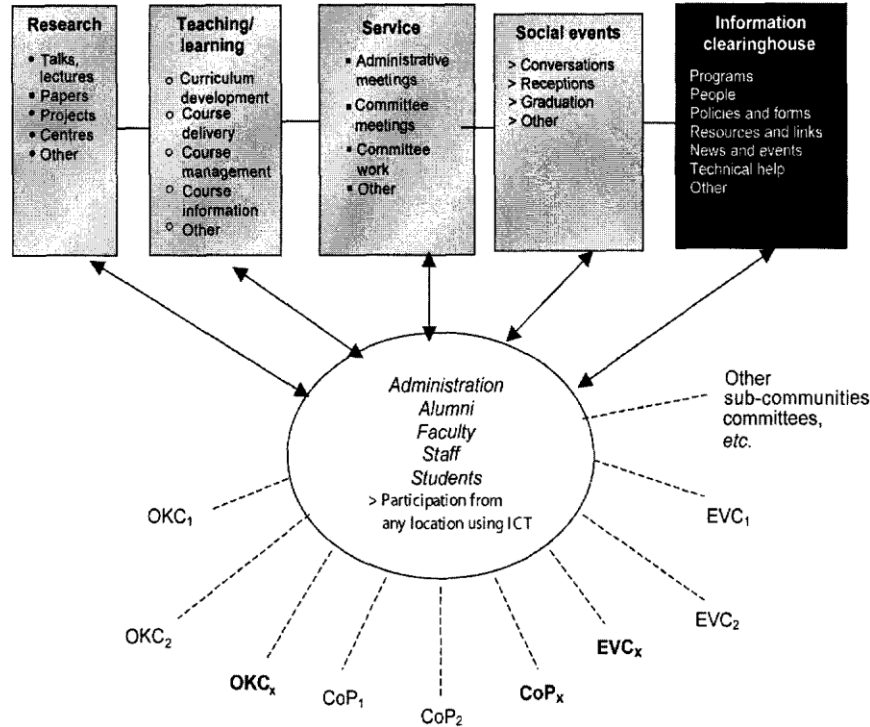
ICT can be harnessed to enable academic departments to conduct activities in different ways (to facilitate) and in better ways (to improve), or to engage in different activities/practices (to create change). More specifically, an academic department web-based community (virtual or coexisting with its physical community) facilitates the following types of activities:

- Increase participation at faculty meetings by enabling those who can join the meeting virtually to do so. It will increase ownership of departmental concerns and directions.
- Create a departmental communication mechanism (*e.g.*, discussion list, bulletin board, chat group, *etc.*) which enables:
 - a) discussion of issues before they are voted on at faculty meetings
 - b) airing out (reading, posting, discussing) internal and external problems concerning the community
 - c) sharing perspectives on intellectual or research issues in the field.
- Create a departmental digital archives for depositing and retrieving documents of interest to the departmental community.
- Stream talks, conferences and other forms of public intellectual discourse over the web 'live' and also be recorded and available for subsequent access.
- Support voluntary and formal participation by individuals or subgroups.
- Create a departmental community web portal/commons for public (extra-departmental) access that is maintained by democratic participation and contribution.
- Offer ongoing training and personal assistance so unfamiliarity with ICT use should not be an excuse for non-access/participation and ineffective work/learning practices.

Figure 1 Academic department web-based community model

Legend:

- OKC_x = Online Knowledge Community
- CoP_x = Community of Practice
- EVC_x = Educational Virtual Community
- = Interaction within or outside academic department
-  = Modes of communication: electronic bulletin board (one stop information commons), electronic lists (information alert service), chat (real-time synchronous communication), discussion (asynchronous threaded communication) and e-mail (targeted communication)
-  = Modes of communication: wiki (open, community-wide contributions and updates) and read-only information (official descriptions and documents)



Note: This model includes the key elements that demarcate an academic department as a WBC that can exist only in cyberspace or co-exist in physical mode. The features of a co-existing physical community include diverse means of communication (face-to-face [verbal and nonverbal], telephony, fax, written, typescript, etc.), print and nonprint resources, human resources, etc. All members of the academic community may participate in all aspects of the WBC, with exceptions stipulated by the community.

The concept of a participatory departmental community web portal/commons is based on two concepts: a 'wiki' and anthill communities. As demonstrated in the creation and maintenance of the *Wikipedia: The Free Encyclopedia*, a Wiki or wiki (pronounced 'wicky' or 'wecky' or 'wiki'; Wiki wiki comes from the Hawaiian term for 'quick' or 'super-fast') is a website (or other hypertext document collection) that allows any user to add content, as on an internet forum, but also allows that content to be edited by any other user. In this case, the contributor or Wikípedian would be limited to a departmental community member. Although one might think that this form of open participation may lead to chaos and abuse, it is based on the principle of connectedness amongst its members, and the expectation that contributions will be authentic, authoritative and respectful of its members. In some cases, there may be instances of fun, but in all, the community should be able to monitor itself to ensure equity and civility in participation. To guide the means of engagement, a governance structure may be set up or it can germinate as an organic process. Anthill communities (Lefkowitz, 2005) are *communities of purpose* where people work together, not because they are from the same background, but because they share a common goal that all would like to see realised. Each brings what she can and tools, such as the internet, that enable individuals to participate/contribute regardless of geography.

4 Conclusion

In an information society we find ourselves mired in information and cannot see the forest for the trees. However, to perform effectively and lead our daily lives, we need to be able to have the right information at the right time. To deal with the overabundance of information, we can use ICT to organise, reconfigure, filter and communicate/distribute relevant and needed information. Now with this technology quite readily available in academic communities we cannot simply continue to function in the same manner in our traditional physical communities. Moreover, in an economically, politically and technologically integrated world, local practices have to change according to the new global needs and possibilities. The proposed WBC model should assist in the strengthening of academic departmental identity and community as a whole. Teaching/learning, intellectual engagement, work and social life need to be an open communication process and decision-making needs to be informed by the participation from the department as a whole. Going back to our professor who needed computer assistance, he will have more forms of assistance and can tap the full range of ICT tools at his disposal. However, from a holistic perspective the creation of academic identity and building of community, as proposed by the academic department WBC model, can't succeed unless it builds on the existing *esprit de corps* and departmental members take ownership of creating community culture using ICT. These uses include those that are mandatory, such as generating/submitting electronic grades, or those that are voluntary, such as collegial chats and nonfaculty input on curriculum development.

Investment in ICT can produce savings in money and time by enabling organisations and individuals to do things easier and faster, and allow a variety of ways to learn, contribute, and perform. Digital tools magnify our ability to think, to communicate and to work together. As Gates (1999) concludes in his book on companies doing business in the new millennium: "I strongly believe that if companies empower their employees to solve problems and give them potent tools to do this with, they will always be amazed at how much creativity and initiative will blossom forth". Academic communities and stakeholders should design and build the New Departmental Model for Learning and Scholarship in the 21st Century University through collaboration, utilising a combined wiki' and anthill community framework.

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Note

1http://en.wikipedia.org!wikifMain_Page