



**Douglas College**

**EDUCATIONAL TECHNOLOGY PLAN**

**2007 - 2010**

## Introduction

Over the last decade, educational technology<sup>1</sup> has deeply permeated the fabric of Douglas College and become essential for teaching and learning as well as for support and administrative processes. Although the use educational technology on its own is not an aim, the pursuit of learning at Douglas College would be impossible to sustain and would grind to a halt without it. It is therefore essential that educational technology get its due share of attention in terms of thorough and thoughtful planning to ensure that it continues to help the College realize its mission and attain its goals and objectives.

This plan sets out priorities, goals and objectives for the application of educational technology at Douglas College for the period of April 2007 to March 2010. This is the fourth time the College has prepared a 3-year Educational Technology Plan, and this iteration builds on previous successes. Early plans focused mostly on access, bandwidth and connectivity, as the College worked to deliver computing power to every user and to create and support multi-purpose, shared computer labs. In those years, the issues involved in delivering access and connectivity services were much more challenging. In the 2007-2010 plan, the challenges have shifted away from access and connectivity, and much more to the areas of content and training.

Unlike the 2004-07 Ed Tech Plan, this plan does not contain a list of purchases and projects to be undertaken in each plan year. Not only are we faced with a rapid pace of technological change, we are faced with significant changes at the College as we transition to offering baccalaureate degrees and also add more new programs than at any other time in our history. This document provides a framework of goals and principles to be followed when decisions are made about the acquisition, deployment and management of educational technologies, and not a specific list of items to be implemented.

Together with the Educational Technology Project Process, this plan will constitute a framework for decision making regarding educational technology over the 3-year period from 2007 to 2010. At the tactical level, the Educational Technology Project Process (Appendix A) which was established in 2005, will be used to evaluate and prioritize specific new initiatives, obtain budgetary approval and build annual technology plans. The 3-year plan will be consulted to ensure that the annual plans containing ongoing and new technology initiatives fit with its directions.

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<sup>1</sup>“Educational Technology includes communication, media, computer and other electronic technologies used as the subject of educational programs, or as applied in scholarly activities, development, delivery and administration of educational programs, or when used by students to facilitate or enhance education. This includes computers used by employees and students, audio-visual classroom technologies, data communication infrastructure, and software-based administrative and support systems.” This definition was adopted by Douglas College in 1998. It is based on a definition approved by the British Columbia Standing Committee on Educational Technology.

## Inputs

This plan is based on three major categories of input:

- College strategic directions.
- Input received from within the College regarding needs for educational technology over the planning period,
- General trends: societal, technological, pedagogical and those local to the College

### *College Strategic Directions*

This plan fits into the college planning framework<sup>2</sup> as a medium-term look at “how” the College will use technology to support the directions articulated in the Strategic Plan<sup>3</sup>, the Academic Plan and the Students First Plan. The thrust and general direction of this plan have been derived from those higher-level plans. The Educational Technology Plan recognizes the technology implications of initiatives described in the other plans, both where the plans make explicit references to technology and where the technical needs are implicit.

### *Input from within the College*

This plan is broadly based on the input received from instructional faculties as well as support and administrative departments (Appendix B). Departments and faculties have indicated what components of educational technology will be important to them over the next three years as they work towards achieving their objectives.

An important aspect of the technology directions set by instructional areas is that decisions about the application of particular technologies are evidence-based. This evidence comes from teaching faculty through their own experiences as well as from research and studies they have read. Douglas College faculty and college leaders keep abreast of best practices in decision-making around technology.

### *Trends*

In addition to the general directions derived from the Strategic, Academic and Students First plans, and input provided by faculties and departments, this plan also responds to numerous external environment factors, which require the College to react to what is taking place now or is anticipated to happen as technology races ahead. Some of these trends<sup>4</sup> are:

#### **Societal trends:**

- Millennial students—the Internet Generation comes to College. There is significant evidence that young people who have had computers since their pre-school years will be a different sort of student than we have experienced in the past.

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<sup>2</sup> Douglas College Planning Framework 2006

[http://www.douglas.bc.ca/\\_shared/assets/Planning\\_Framework\\_200638410.pdf](http://www.douglas.bc.ca/_shared/assets/Planning_Framework_200638410.pdf), page 2.

<sup>3</sup> The three plans are available at this url: <http://www.douglas.bc.ca/institres/planning.html>.

<sup>4</sup> The trends are drawn from conversations with colleagues, both local and international, from pedagogical and technical literature and from the authors’ experience working with educational technology in post-secondary education.

- Online copyright is managed differently than hardcopy copyright and this will be a challenge to the College, as it is to any institution with widely distributed responsibility for content that is maintained electronically.
- A variety of regulations, controls and best practices will mean we change the way we manage resources, and this will have costs associated with it. Just to name a few examples: strengthening of regulations around financial controls, an increased awareness of the importance of preparing for business continuity and disaster recovery, information security, protection of and access to personal information, privacy legislation.

#### **Technical trends:**

- Social software allows people to spend time online in virtual environments, or journaling and communicating using rich multi-media hyperlinks to a wide variety of resources. This provides opportunities as a learning medium; it also has implications about student attention spans and expectations.
- The need for storage rate is growing at an exponential rate.
- Media-rich communications are pervasive and boundless.
- Broadband wireless and personal communication devices are ubiquitous – access to any information, from any place at anytime.

#### **Pedagogical trends:**

- There is wide recognition of the power of technology to enhance learning in many if not all disciplines.
- Student engagement is enhanced if they have ready access to information about their progress (for example, if gradebook information is available to them online throughout the term.)
- The use of simulation and virtual reality as learning methodologies is increasing.

#### **Douglas College trends:**

- Educational technology budgets have not increased; demands for services and support have increased and are expected to continue to do so.
- The College competes with other institutions for students. This is due in part to demographic shifts in the population. The number of high-school graduates is dropping; all institutions are feeling this. There's also more innovation in programming and in recruiting for students who belong to demographic profiles other than the traditional "recent high-school graduate from the local area."

Trends specific to each technical area are discussed where they arise later in the plan.

## **Directions and Principles**

Over the next three years, Douglas College will strive to meet the expanding educational technology needs of students and employees. The college will continue to provide necessary and adequate technologies that enable and facilitate success in achieving teaching, learning, research and business goals.

The college will increase usage of educational technology as an enhancement to face-to-face instructional delivery, but there will be only selective increase in the availability of fully online, distributed learning (distance-only) courses. This statement is based on the following from the College Strategic Plan:

The priorities for developing online courses will be those programs where Douglas College has provincially or nationally distinctive expertise or curriculum, and for student populations that are geographically dispersed or have flexible delivery needs (as is increasingly the case with continuing education and contract education).<sup>5</sup>

The college will use technology to provide more access to online services for students, improve service delivery and reduce administrative tasks so that more time can be used in transformational activities.

The college will strengthen business applications of technology by maximizing use of technology in existing processes. Technology will be used to streamline business practices and workflows for greater effectiveness and efficiency. Data and information will be consolidated and integrated to facilitate evidence-based decision-making.

Educational technology initiatives and projects will be guided and adhere to the following principles:

- The use of technology clearly and directly supports college mission and strategy and that technology objectives are derived from and remain aligned with teaching and learning objectives of the college.
- The existing installation base of technology is adequately renewed in order to remain strong and robust and to provide a solid foundation for current activities and new initiatives.
- The continued, steady and measured growth in the adoption of technology will receive adequate funding within existing budgetary framework.

## Goals, Objectives and Priorities

This plan sets a portfolio of goals and objectives, which support the directions and principles stated above. The portfolio is organized around the themes identified by Craig R. Barret, Chairman of the Board of Intel Corporation,<sup>6</sup> who said that there are four crucial areas related to using information technology effectively. These areas are: Access, Connectivity, Training, and Content. Douglas College must make progress in all four of these areas in order to succeed. The four theme categories provide focus areas for specific

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<sup>5</sup> Douglas College Strategic Plan 2006. Approved by the College Board March 2007. [http://www.douglas.bc.ca/\\_shared/assets/Strategic\\_Plan\\_200648202.pdf](http://www.douglas.bc.ca/_shared/assets/Strategic_Plan_200648202.pdf). accessed April 23, 2007.

<sup>6</sup>Barret, Charles R, in a TV interview with Charlie Rose on Dec 22, 2006 [http://www.tv.com/the-charlie-rose-show/an-hour-with-craig-barrett-chairman-of-intel/episode/948410/summary.html?om\\_act=convert&om\\_clk=episodessh&tag=episodes;title;1](http://www.tv.com/the-charlie-rose-show/an-hour-with-craig-barrett-chairman-of-intel/episode/948410/summary.html?om_act=convert&om_clk=episodessh&tag=episodes;title;1), accessed Feb 15, 2007.

initiatives. There is naturally some interrelationship among the various theme areas, and some specific initiatives or projects may cross multiple categories.

## **Content**

### ***Definition***

The subject of content includes data and information as well as the technical means of delivering that content. By “technical means of delivering,” we include software systems that store, organize and help manipulate data and information to allow users to achieve their goals and objectives.

A course delivers the knowledge and skills that the students need to learn (data and information): it also delivers the experience of learning. These cannot be neatly separated because the experience of learning is not easily divided from the knowledge and skills to be learned. Whether speaking of a very low-tech environment (such as in-person discussion groups) or a very high-tech environment (computer-mediated instruction at a distance, or interaction with robot hospital patients), this statement is true. Both the learning management system (such as WebCT) and the database of information or knowledge to be delivered (learning objects, examples, test questions, other “material” for use by the students) are treated here as a part of the “content” component.

Faculty have an indispensable role in defining, creating, enhancing, delivering and mediating student access to content. It is not the intent of this plan to be prescriptive or to control faculty in their pedagogical role, but to ensure the provision of tools that facilitate the management of content and enable its delivery to learners.

Administrative “content” includes both the data (for example, a student record) and the means of working with that data (for example, the Banner Student system).

### ***Important trends***

Users expect virtually all content to be digitized and accessible through technological means.

Users expect digital content to be accessible through a wide variety of technological means anytime and anywhere.

Users expect common feature sets and functionality from online environments they frequent. They are reluctant to use something that is different from what they are already well familiar with, particularly if they perceive it to be inferior. Users expect the features they see in other online environments to be available at the College.

The ability to mix-and-match delivery modes is increasing. For example, being able to combine (seamlessly, of course) an online conferencing system from one vendor with a portal from another source and e-mail from a third.

Organizations leverage information and data for more effective and efficient, evidence-based decision-making.

Traditionally separate forms of content and content delivery are converging and will continue to do so. For example, tools exist that allow full integration of voice-mail and e-mail into a single mailbox, with full access to all communication from phone, computer or other device.

Two distinct trends are apparent in relation to content delivery systems. The penetration and saturation of proprietary, vendor-offered approaches to content delivery is increasing at the same time as a high rate of growth in open-source, open-access-based delivery modes.

Licensing models for the proprietary approaches increasingly feature a subscription or annual-fee model over the approach of purchasing once and having unlimited use forever.

The pace of change is high in the area of content delivery methods.

### ***Goals***

- To make more of the existing educational content and other relevant content available and accessible to students and employees through common, standard technological means.
- To technology-enable additional services, processes and workflows.
- To provide appropriate technology for timely, evidence-based decision-making.
- To foster experimentation with new approaches to content delivery, for example, simulations and virtual reality, among others.
- To review and discuss opportunities presented by and implications of open-source software. To make a decision on how to go forward.
- To balance the need for standardization and control against the need for creativity and uniqueness in specific discipline areas.

### ***Areas of focus***<sup>7</sup>

- Improve and enhance the functionality of the myDouglas portal in order to encourage more use by students, faculty and staff. The myDouglas portal will continue to be a key component in the delivery of educational content, particularly as an effective communication tool.
  - *Upgrade myDouglas to add web content management functionality, which will allow for targeted delivery of content relevant to each user.*
- Leverage additional functionality of the new releases of WebCT learning management system in order to provide students and faculty with an improved and enhanced on-line environment and tools.

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<sup>7</sup> Italicized items included in the “Areas of focus” section are examples of the sorts of initiatives that could/will be undertaken to address that focus area. Each project or initiative is still subject to the Educational Technology Project Process for approval and inclusion in the annual budgets.

- *Integrate WebCT login with myDouglas; make WebCT courses accessible through myDouglas;*
  - *make use of online grade book.*
- Develop, transfer and maintain more course materials online, and make them increasingly available to students in an online environment.
- Facilitate and encourage sharing of local content and access to and use of content that has been made available by others for sharing.
  - *Implement enhancements to WebOpac software (Library system).*
- Explore new technologies such as blogging, wiki, e-portfolio. Explore how the ones showing promise and potential can be implemented and supported.
- Explore how technology can be used to reduce academic dishonesty.
- Make more online services available to students and employees.
  - *Implement Employee Benefits In-House, Employee Web Self-Service, CE Online Registration and Payment, DC Bookstore on the Web.*
- Implement Management Decision Support System.
  - *Enhance existing Internal Data Warehouse in the short term; acquire and implement strong Data Warehouse and Business Intelligence platform in the medium-to-long term.*
- Enable better management of documents by digitizing existing records and documents and implementing a college-wide document management system
  - *Implement document-imaging system in the Registrar's Office and Employee Relation department, and integrate with Banner.*
- Keep existing content systems within maintenance windows and on an adequate update/upgrade schedule in order to maintain availability and avoid obsolescence.
  - *Install available updates and upgrades to Banner system software and Library system software*

## **Training**

### ***Definition***

The topic of Training covers a variety of issues related to helping users employ and apply technology in their endeavors in an effective and efficient way. It includes all forms of user training and support.

Users need assistance in operating the hardware, software and services that comprise both Access and Content. Assistance can be provided in many forms such as: help desk, online help, online courses and tutorials, structured classroom training and one-on-one, just-in-time training and support, etc.

### ***Important trends***

Differing levels of familiarity and proficiency require a variety of approaches to providing relevant support and training.

Increasing demands on users' (faculty, student, and employee) time mean that a traditional classroom approach to training cannot be the only option available.

Some technologies will become easier to use, and users more technically savvy; traditional training modes (in a classroom as a group at a pre-determined time) will be less effective and less appealing.

Using of a variety of approaches works better than “one size fits all,” due both to trainee availability and preferred learning styles.

Blended models are more effective than either a completely automated online approach or a completely classroom-based approach to training.

The pace of change of technologies, particularly content-related technologies, means that the need for training and support resources will continue to be high for the term of this plan.

At Douglas College, training requirements can be broadly divided into two categories:

- Training for new people: faculty, staff and students who join the College need to know how things work here.
- Training for existing members of the college community when things change.

There will be an increased demand for both of these types of training, which will create more pressure to make the technology easier to use so that explicit user training can be minimized.

### ***Goals***

- To enable and empower students and employees to use technology in an effective and efficient ways
- To build and foster educational technology competencies among students and employees
- To provide relevant training in multiple formats to facilitate diverse needs and preferences.
- To encourage, enable and facilitate self-help and self-improvement
- To provide timely and relevant assistance for those who need it

### ***Areas of focus***

- Where possible, make all technology easier to use.
  - *“Single sign-on” philosophy for access to WebCT and myDouglas; simplifying and making videoconferencing “self-serve.”*
- Improve and enhance user introduction and orientation in the specific technology environment of Douglas College including efficient provision of necessary accounts for accessing the network and core applications.
  - *Implement Identity Management System*
- Help students become familiar and proficient in using technologies required by their instructors in support of the learning process such as myDouglas or WebCT; it may also include hardware such as digital video cameras.

- Provide better orientation and more help for students in learning how to access technology-based services and perform tasks such as registering for classes, paying fees, checking grades, etc.
- Provide better orientation and more help for faculty in accessing administrative services available in the Banner student system, as well as any administrative services associated with their status as an employee.
- Improve assistance to faculty in using various applications such as WebCT, myDouglas, PowerPoint, etc.
- Provide basic support in trying new approaches in using existing and/or new technology systems and tools.
- Provide professional development opportunities to explore “best practices” with the use of technology.
- Improve and enhance training for employees in the use of core College-wide applications such as MyDouglas, WebCT, IronPoint, GroupWise and Banner Self-Service.

## **Access**

### ***Definition***

The access category covers various means used directly by users such as employees and students to enter digital world and work with data and information. In other words, access is the front door that allows us to reach Content through Connectivity. This includes devices such as personal computers, laptops personal digital assistants and cell phones, as well as printers, scanners, audio-visual gear and others. It also includes basic software that makes the devices operational and facilitates manipulation of data and information.

### ***Important Trends***

The proliferation and adoption of new technologies in people’s lives raise expectations regarding the same level of adoption and saturation in the work-space and/or teaching and learning environment. Users expect further improvements in the availability of various technological means to help them do their jobs and manage workload.

The prices of personal computers are not dropping as fast as they did only a few years ago. Instead, PCs are becoming more powerful and feature-rich. New software requires modern PCs.

The prices of peripherals such as LCD displays, printers, scanners, LCD projectors, etc., have dropped dramatically and will continue the downward trend for quite some time. This makes it easier to deploy them more widely in order to improve user experience and productivity.

Popular adoption of user-owned, personal devices such as smart phones and PDAs builds demand for open access to College technology infrastructure (Connectivity) and services (Content and Training).

Almost all Douglas College students (98%) have at least one computer at home. 76% of them report that this computer is two years old or newer. 93% of students report they have high-speed internet access to their homes.<sup>8</sup>

### **Goals**

- To provide ubiquitous access to basic, modern technologies for all students and employees thus enabling them to succeed in their endeavors.
- To manage costs of providing access to technology by thoughtful selection, mainstream adoption, standardization, and appropriate replacement cycles.
- To improve access to college data, information and other technology assets from user-owned personal devices.

### **Areas of focus**

- Provide each regular faculty with a personal computer (desktop or laptop)
  - *Increase the number of personal computers available to faculty.*
- Encourage the adoption of laptops by faculty for use in e-classrooms
  - *Offer laptops as a better choice for faculty, in lieu of standard PC.*
- Provide projection, audio and video technology in all remaining regular classrooms (convert to e-classroom) and minimize the need for borrowing from the Library
- Continue implementing laptop-ready classrooms, as well as fully-equipped e-classrooms in selected teaching spaces to enhance teaching and learning
- Standardize e-classrooms in order to make them easier to use and minimize training needs
- Increase capacity and further improve coverage of wireless network
  - *Install additional wireless access points as needed.*
- Maintain reasonable replacement cycles for personal computers and non-PC technologies in order to avoid obsolescence and keep them relevant to users
  - *Provide adequate funding for replacement cycles.*
- Maintain standardization of personal computers, printers and other commonly used devices
- Improve access to colour printers and high-end scanners
  - *Increase the number of available colour printers and scanners.*
- Review and adjust the role and configuration of employee workrooms with particular attention to the need for better work spaces for non-regular and/or contract employees

## **Connectivity**

### **Definition**

The connectivity category covers various means of connecting Access with Content. It includes hardware and software that enable and facilitate the transmission and storage of data and information. This category is also called technology infrastructure, or simply back-end, and consists of server and telecommunication rooms, servers, networks and

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<sup>8</sup> Institutional Research, Douglas College. *Student Profile and Perceptions Study, 2006*. Fall 2006.

data communication links, as well as the specialized software necessary for their operation and management.

### ***Important Trends***

More processing power and more devices in the central computer room demand additional power and cooling. Technology vendors offer an array of cost-effective consolidation strategies options to address this issue.

Data, video and voice content converge onto a single, digital network. The network needs to be prepared to handle the convergence. This will also affect the content area, as there are significant impacts on both support staff and on users when the telephone and cable television systems integrate with the data networks. This transition may not be complete within the three-year planning period; it will definitely be underway, in fact, it has already started in new buildings C and D at the David Lam Campus.

Business demands and regulatory requirements call for enhanced provisions for contingency and continuity of information technology services in terms of data availability, security and protection. Various risk mitigation strategies must be employed.

Greater reliance on technology in teaching, learning and administrative activities puts more pressure on computing and network infrastructure. There is a growing demand for greater processing power, more bandwidth and more storage for data. This demand needs to be satisfied by adequate increases in capacity.

### ***Goals***

- To ensure, through measured growth in capacity, that the technology infrastructure can support growing needs for Access and Content.
- To ensure, through, adequate renewal cycle and cost-effective maintenance, that the technology infrastructure does not become obsolete and remains operational and relevant.
- To improve operational efficiency, consolidate infrastructure resources and contain maintenance cost.
- To ensure the security of the technical assets of the College, including data, software and hardware.

### ***Areas of focus***

- Create proper physical environment for centralized technology infrastructure by upgrading computer rooms and telecommunication closets with adequate electrical power and cooling
  - *Upgrade electrical power and HVAC system in DLC main computer room (A2090).*
- Minimize growth in demand for additional power and cooling by pursuing infrastructure consolidation strategies such as blade servers, virtual machines, centralized disk storage, etc
  - *Implement additional blade servers and deploy VMWare as a platform for small or non-mission-critical applications.*

- Enhance provisions for contingency and service continuity, as well as the availability of data and application
  - *Enhance redundancy and failover capabilities of servers and data storage.*
  - *Expand Oracle licensing for database and application servers.*
- Continue to develop a convergent network to satisfy current and future data, video and voice application needs
  - *Start deploying the next generation of Ethernet switches with power-over-Ethernet (POE) and quality-of-service (QOS) capabilities.*
- Meet growing demand for file space by adding capacity of tiered and secure data storage
  - *Provide more disk storage for user files on Drive H:, GroupWise, myDouglas and WebCT.*
- Provide easy, transparent and secure access to data across the enterprise
  - *Implement Novell Storage Manager*
- Develop and implement a strategy for point to point video-conferencing and campus-wide video streaming
- Enhance data, application, network and computer security at all levels
  - *Implement Intrusion Detection/Prevention system; implement Identity Management System*
- Use existing intercampus bandwidth more efficiently; increase bandwidth when necessary

## **Budget Implications**

To enable and facilitate the implementation of the goals of this Plan, the College will have to designate adequate financial resources.

Educational Technology Capital Budget will address the goals of Access and Connectivity themes as these primarily require the acquisition of tangibles such as PCs, laptops, projectors and other infrastructure equipment.

The goals of Training relate directly to the Operating Budget because they are about employees taking time for training and other PD activities, and about sufficient resources to deliver the training and support that are required.

Content goals will need to be tackled in both Capital and Operating budgets since the College will simply purchase some types of content where as other types will have to be created in-house.

### ***Capital Budget***

Over the three years of 2004/07 Educational Technology Plan, the Educational Technology Capital Budget remained steadily at the level of 1.45 million dollars per year. During that time, the installed base of PCs, printers, servers and other infrastructure

equipment grew by approximately 20% and this was after a 30% growth experienced between 2001 and 2004.

The Access and Connectivity goals of this plan, and the addition of technology-heavy buildings C and D at David Lam Campus, will further increase the installed base by (approximately) another 20%.

In addition, the initiatives and projects arising from Content goals, as well as from introducing new programs, including degree programs, will be capital-intensive, such as licensing for additional college-wide software and/or when professional implementation services are required.

Clearly, to address the needs arising from the above-described, recent and anticipated growth in the Educational Technology arena, as well as to enable the pursuit of all goals of this plan, ongoing lifts in the Educational Technology Capital Budget will be necessary.

### ***Operating Budget***

All four themes of this Educational Technology Plan have a potential to affect college's Operating Budget. Although the application of technology to administrative processes and services reduces operating costs in the long term or, at the very least, is cost-neutral, the use of technology in teaching and learning requires additional operating resources. Reallocations and increases must address these implications.

The recent growth in the installed base of hardware has not impacted the Operating Budget thus far, mainly due to the fact that replacement cycles kept the equipment relatively "fresh" and have minimized the need for operational maintenance. This trend however has run its course and any further growth in the area of classroom and lab technologies will require additional resources for CEIT to ensure proper operations and ongoing maintenance. Also, the anticipated convergence of voice, video and data onto single network will require reallocations of operating resources, if not increases.

Adding many college-wide software applications over the last few years, such as Luminis (myDouglas), IronPoint (web content management system), FAST (financial reporting system), LaserFiche (digital document management system) and others, has increased software maintenance costs and put a significant strain on Applications Services group in CEIT in the area of project management and operational support. Additional resources will have to be (re)allocated to this group so that it can adequately service this ever-expanding portfolio.

Addressing Training and Content themes will also put demands and affect the Operating Budget. Fostering and accelerating the development and transition to digital content, as well as encouraging faculty and other providers to develop content and take necessary technology training, will require additional incentives and resources. Client and Learning

Services in CEIT, and other support, training and collaboration-oriented departments will need reinforcements to deliver on the goals of this Plan to all college employees.

## **Conclusions**

Douglas College is strong in the effective use of Educational Technology. This strength is a result of good planning in the past ten years, and resolute support for the execution of those plans. This Plan envisions further progress in the four areas of Content, Training, Access and Connectivity, to ensure that Douglas College maintains its leadership position in the effective and practical use of technology to meet pedagogical, research and student service goals.