

DAVIDSON COLLEGE:
INSTRUCTIONAL TECHNOLOGY GROUP REVIEW

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Executive Summary

A review process consisting of research, interviews, and observation finds that Davidson's Instructional Technology Group (ITG) has grown and accomplished much over the past three years. ITG puts Davidson at the leading edge of its peer institutions, due to its energy, combination of leadership and coalitions, and growth across disciplines and the curriculum.

ITG's situation and identity within Davidson's campus culture has supported its success. Structurally, its location under Information Technology Services (ITS) and the business and finance VP enables cross-sector and interdisciplinary outreach. ITG's involvement in a series of computing spaces spreads its reach, although science lab support is a stress on its resources. Technologically, ITG has promoted applications well suited to disciplines and faculty adoption, such as Blackboard. In terms of personnel, Mur Muchane's diplomacy and energy have been crucial in creating a sustaining, information-sharing, and growth-enabling network. Muchane's team has carefully established computer-mediated teaching as a liberal arts enterprise. A consultative approach geared towards faculty self-sufficiency supports professorial innovation and reduces subsequent support needs, in addition to careful support of faculty technology leaders (such as *JUNE*, the undergraduate neuroscience journal). Steady, year-round showcasing and training have made ITG's work a campus constant.

Based on the ITG relationships network, which includes technologically advanced and intermediate faculty, other parts of IT operations, and elements of the library, ITG's campus effects are well rooted, reaching across disciplines and divisions, especially the sciences and humanities. Training and pedagogical implementations have arrived at a critical mass for computer-mediated teaching and learning within the liberal arts tradition.

Several issues exist for the near future. Storage and preservation of rapidly growing digital content requires medium- and long-term solutions, especially for digital video files. Science lab support should be offloaded. ITG-promoted faculty innovations deserve archiving and accessibility. Areas for growth include the fine arts, writing across the curriculum, and more library collaboration.

Bryan Alexander, Ph.D.

SUMMARY

Davidson's Instructional Technology Group (ITG) has made impressive strides during its existence (2001-present). Driven by Mur Muchane's energy and coalition-building, ITG has made connections with advanced faculty, other parts of the IT department, the library, and many interested faculty. The relationships are supportive, primarily, but also informational and collaborative. Sciences and languages are leading fields for ITG work, while the humanities have made great strides. Based on a combination of increased technical competence and expanded usage of information technology, a critical mass for computer-mediated teaching and learning is nearly achieved, and new curricular developments are likely. The operation is stable, growing, and integrated into Davidson's operations and curriculum. Faculty have increased their skills in teaching with technology, both technically and pedagogically.

ITG puts Davidson at the leading edge of its peer institutions, due to its energy, combination of leadership and coalitions, and growth across disciplines and into curricula.

Structurally, ITG is well suited in its position within the school's organization, and in its interstitial role between a series of key players. However, some structural changes would support further development, such as shifting responsibility for lab infrastructure elsewhere.

PROCESS

The author of this report interviewed numerous members of the Davidson community, from across sectors, and in many different settings. The information below is drawn from conversations, observations, and research.

STRUCTURE

ITG falls under Information Technology Services (ITS). In an unusual structure, ITS is under the VP for business and finance. This represents both imagination and a reliance on ad hoc relationships. The VP and ITS heads are extremely positive about ITG, and extend their support willingly. Moreover, the unusual position bypasses traditional sector walls, enabling inter-sector collaboration: an "anti-silo". Furthermore, this arrangement received presidential support, and links to a perception of the Web as utility (as opposed to as special experiment). However, the relationship is fragile, insofar as it is driven by personal goodwill and office occupants. It takes extra work to generate a full campus perspective, from this stance.

Funding for ITG is based on a leading-edge premise: as faculty learn and become proficient with technology, they grow increasingly self-sufficient, and need less ITG support. Additionally, the VP has worked with ITG to stabilize hardware replacement cycles. Hardware budgets for this roll over, encouraging a "savings mentality" for users (i.e., a desire to conserve expenses now, in order to have more later).

ITG, through Muchane, meets regularly with ITS leaders: the Directors of Administrative Computing, Computing Support Services, Systems and Networks, and the Technology Services Assistant.

The Joint Committee on Information Technology (JCIT) works with ITG, and includes representation from faculty, IT, and administrative sectors.

Within ITG are several staff members, whose work is based on expertise and academic division.

Foreign languages: Heather McCullough is the primary staff member for this. She uses her CET training well, helping develop faculty expertise and materials. Languages were early adopters of technology at Davidson, and their uptake drove the expansion of staff. This section of ITG draws on the physical site of the Language Resource Center (LRC; <http://www.davidson.edu/academic/lrc/index.html>).

Social sciences are in the care of Kirsten Eshleman, instructional technologist.

Natural sciences are Mur Muchane's purview. Scientists were early and rapid adopters, including some of Davidson's most advanced users.

ITG works with several physical spaces:

http://www2.davidson.edu/its/instruct/in_docview.aspx?id=587

Center for Instructional Technology (CIT;
http://www2.davidson.edu/its/instruct/in_docview.aspx?id=548

Language Resource Center (LRC)
http://www2.davidson.edu/its/instruct/in_docview.aspx?id=552

These spaces are welcoming, supportive environments for Davidson instructors to enter. They are designed for project-based work. The CIT is especially powerful, as it is multipurpose, well served by staff, and located just off the main streams of foot traffic to allow sustained work to get done. CIT is well-stocked with software and a variety of appropriate, well-maintained hardware

ITG hosts some digital content, which may grow into a problem for limited memory resources. That is, its successes in eliciting and supporting faculty work in new media naturally cause memory storage needs, which then bring attendant preservation and archiving issues. Down the road, but approaching quickly, ITS should consider longer-term memory solutions, including offsite archiving, large-scale content systems, and collaboration with similar entities, perhaps through the ACS.

CAMPUS RELATIONS

ITG has developed close relations with a variety of key campus players in the instructional, informational, and technological fields:

FACULTY OUTREACH

ITG generally supports faculty in a consultative, positive, encouraging way, and has made excellent progress in generating faculty buy-in. Faculty welcome ITG's presence, seeing it as stable, exciting without threatening, and fully within the domain of the liberal arts.

The summer and fall institutes have attracted good and interested instructors, partly through a selection process, which associates a sense of rigor and value to the program.

Foreign languages have been using information technology for several years, but at a basic level. McCullough's arrival is likely to push them further.

Media is likely to increase use of computer-mediated teaching practices, especially for film studies. A student media center in some form might support this.

Fine arts has potential, but hasn't developed to the point of the sciences. Like the liberal arts sector in general, the arts have been exploring addressing their specialized needs with technologies. The many levels of computer-mediated arts, from digital imagery to haptics to video to 3D modeling, combined with the information savvy of Davidson students, suggest directions for growth in the near future. Their library is independent of the main one, and hence doesn't partake of that institution's relationship with ITG.

LIBRARY

Davidson's library is committed to striking a sensitive, dynamic balance between physical and digital information. This has enabled them to welcome ITG as a campus presence, largely due to Muchane's assiduous diplomacy. This is a signal accomplishment, as the library is not merged with IT. The Library has a new and growing interest in the digital world. Furthermore, ITG and IT are organizationally separated from the library, reporting to different vice presidents (Business and Finance, and Academic Affairs, respectively).

Blackboard is the leading instance of collaboration between ITG and the library. Several librarians have co-taught classes using that CMS. ITG has supported the development of a campus library resources tab within the campus BlackBoard interface, including deep links to library documents, which brings the library more effectively into the learning experience. Additionally, ITG has consulted personally with the library on its Blackboard usage.

The library is concerned with syllabus archiving, and ITG may consult on mechanisms for this.

The library is involved in several external collaborations, including the Associated Colleges of the South (ACS) and with peer institutions (Washington and Lee, Furman). ITG consults on projects that arise from these affiliations.

The library sometimes works with ITG in place of IT. ITG serves "as point people for IT as a whole.... [which is] crucial for success of IT."

ITG and the library are exploring SIRSI's Hyperion, a content management tool. This collaboration emphasizes a combination of information technology and pedagogy.

Among its many responsibilities, the library works with the college's writing across the curriculum (WAC) program. ITG does not have a role in this. Given developments in computer-mediated writing, from hypertext and blogging to problems of internet plagiarism, this is perhaps an area for potential collaboration.

INFORMATION TECHNOLOGY (IT)

Relations between IT and ITG are very cordial and close. Muchane meets regularly with IT leaders, so that each group informs the other of developments and needs. IT staff have a uniformly high

opinion of ITG, and much trust and respect. “Mur’s group has made all the difference,” according to one.

There is no campus digital asset management (DAM) strategy in place, although ContentDM is being looked into. Should a DAM system be developed, ITG is well placed to consult and respond.

INTERACTION WITH PRE-EXISTING LEADERS

Several Davidson science departments predated ITG’s arrival in their experimentation with computer-mediated learning strategies. Physics has won national renown for their Physlets (Java applications). Physicists also see little need for a CMS, but prefer to create learning objects; other sciences are also attracted to learning objects. Yet sciences see Muchane and ITG as valuable, “as a knowledge base,” according to one. A good example of ITG enhancing these leaders is *JUNE*, the undergraduate neuroscience journal, which ITG helps support.

SCIENCE LABS

ITG has an unusual relationship with science labs on campus. Unlike its consultative and collaborative roles with faculty, ITG is charged with conducting maintenance on machines in these labs. This structure is problematic for several reasons. First, it adds a different and contradictory layer to ITG tasks, one of routine technical work. Second, this lab work will continue to demand time and energy, perhaps increasing, and this takes away from ITG’s core mission. Third, ITG’s director is an inappropriate person to be tasked with this function. Fourth, the work risks creating negative morale in ITG.

Several options are available. Support external to ITG, but within ITS, either grant-funded or from within the budget, can be justified by the prominence, excellence, and well-known support needs for these sciences; a new staff member should be considered. Alternatively, other liberal arts campuses have had some successes in facilitating student-run support. Furthermore, outsourcing is increasingly an option in our educational sector. Given the steady demands of this function on ITG, prompt action is needed to correct this problem.

CURRICULAR CHANGES

ITG’s work has caused some initial curricular changes, which remain consonant with Davidson’s academic mission.

GIS has had initial impact on several classes, as interest came from anthropology, economics, and biology. Once the software had been installed and experimented with, faculty have been able to present data more richly. A PDA version for research in a biology class is in the works. Most dramatically, a joint course using GIS is suggested between anthropology and biology.

At the same time, other programs are evolving in response to information technology’s presence on campus. Visual Ethnography and Film are developing intensive student work with new media, which in turn shapes their class offerings, and their general education roles.

COURSEWARE

After examining the course management system (CMS) field, ITG helped select BlackBoard as primary campus CMS tool (<http://blackboard.davidson.edu/>). With support from IT and campus

leaders, faculty have increasingly adopted this tool, often to get course materials on the Web for the first time. ITG's goal is to use BlackBoard as a "gateway" to more powerful computer-mediated learning techniques. While the CMS hasn't been adopted by a majority, "a significant minority" have migrated to it (in the words of the library director).

Additionally, Davidson faculty currently use Blackboard to track student learning behavior (an underutilized feature of that software). While studies show that faculty tend to prefer using a CMS as a publication tool, Davidson instructors report using the application to track student participation and patterns of resource usage, deepening their understanding of student learning practices. This takes advantage of Blackboard's registration and access mechanisms very productively.

Live integration of Banner information into BlackBoard in an ITS objective, which should have the dual effects of increasing faculty buy-in still further by presenting data seamlessly, and saving time for ITG staff.

ASSOCIATED COLLEGES OF THE SOUTH (ACS)

Davidson has been an energetic player in the ACS. Several faculty have led or been showcased at regional workshops, while others have benefited from teaching with technology fellowships. Davidson's music faculty are interested in the ACS music initiative, Orpheus.

INNOVATION

For numerous reasons, ITG is the best placed campus site for perceiving and vetting new developments in computer-mediated learning. Faculty and IT are thoroughly tasked with their primary responsibilities, while ITG's basic operations require an active awareness of the external world.

Disseminating innovation news has some systematic structure. ITG is able to alert members of the Davidson community to new practices and technologies, and can "push" appropriate advances to individual faculty or staff. Showcases also allow innovation to be demonstrated. Furthermore, the close personal relationships ITG has formed with instructors, administration, and IT staff enable the gleaning of lived experience, best practices, and news from those populations via professional activities and personal relationships, widening the newsgathering reach. However, there is no formal structure for such exploration, including rewarding or sharing it – i.e., no knowledge management structure for digital innovations. Furthermore, the institutional memory of these innovation identifications and promulgations is entirely oral and ad hoc; some archiving mechanism, such as video interviews or an internal blog, would be very beneficial.

RECOMMENDATIONS FOR THE FUTURE

Based on these findings, I offer the following recommendations for ITG and its role at Davidson. Their order is not indicative of ranking by importance:

- Development of a physical space dedicated to student new media work. Such work is intensive enough to require separation, which would make identifying ITG assistance easier (for class assigned work). As ITG and undergraduates increase their digital work, demand for equipment and space will only increase.

Closer work with library, such as on a syllabus archive, further Blackboard support, and in writing across the curriculum (WAC) projects, perhaps through leading classes or instructors. (Also see DAM below)

ITG shedding science lab maintenance role

Development for the fine arts. Bringing in consultants and hiring a specialist is recommended, for focusing on the unique, specialized needs of these fields. Such an investment could trigger innovative practices, which in turn can influence the rest of the campus. This is in the broader context of expanding the humanities' technological skills and utilization.

Improved facilities in Chambers for better synergy between the CIT and LRC. As is the case in most campuses, physical proximity breeds collaboration. The two facilities should be physically closer for better teamwork, information- and resource sharing.

Enhanced archiving for ITG innovation, especially for content.

Increasing ITG's role in exploring new technologies. For example, ITG could follow up on wireless experiments, teaching wireless pedagogical issues, or explore Internet2. Handheld computing (PDAs, Tablets, PocketPCs) should be assessed.

Exploration of a partial or campus-wide digital asset management (DAM) solution.

Exploring learning objects in other disciplines, beyond physics. MERLOT is one rich resource to begin; Maricopa's RSS project is another.