

What are They Thinking... A View of the IS field “from the Dean’s Office”

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We were asked to reflect on the role of Information Systems in our schools and in the broader business school community. We were asked to do this because we are “IS Deans”. I am not sure about my fellow deans but it is a rare day when I think about myself as an “IS Dean”. It is rarer still that I take the time to reflect more formally on our field and what it has and has not accomplished. So this opportunity is welcome.

Relative to my time as an active IS scholar my view is now a more “distant” one and that brings some disadvantages and perhaps a few advantages. My perspective is not particularly well-informed relative to the current state of the broader research milieu outside what goes on in and around my own school. Nor am I current with the leading edge of IS curriculum and teaching outside my personal network and local experience in the Desautels Faculty of Management at McGill University, where I have served as Dean since 2005. So it is clear that what I have to say will be biased to local experience. Given that, it might be useful to provide some context on IS at Desautels.

Our IS area (we are a non-departmentalized faculty) includes eight professors (excluding me). One is a chaired full professor, four are tenured associate professors and three are assistant professors. We have been able to hire and grow in recent years, building the group from four to eight since 2005. While this is probably not unique, it is perhaps anomalous among IS groups. We have also had limited turnover, though, we lost one excellent colleague who was recruited home in recent years.

My IS colleagues are excellent and productive scholars and four hold, or have recently held, positions on editorial boards for top journals including *MIS Quarterly*, *ISR* and *Organization Science*. They are also accomplished teachers and collectively contribute in meaningful ways to the life of the Faculty and the University.

Against the standard assessment of the strength of a “department” along the dimensions of research productivity, teaching quality and service contributions, our IS group certainly performs as well as any area in the Faculty. This is borne out in our annual merit review exercise. In terms of overall merit rating and the research-specific merit rating, on average, IS rates at or near the top among the Faculty’s seven areas (the others are Accounting, Finance, Marketing, Operations Management, Organizational Behavior and Strategy). So overall, the area is strong and healthy.

My sense is also that the group is respected by colleagues across the Faculty for the strength of their scholarship. They have fostered strong

Acknowledgment

I am grateful to Dennis Adams, Celine Junke, Liette Lapointe, Ryan Nelson, Alain Pinsonneault, and the two reviewers for their input on this manuscript.

collaborations across areas within the business school and with other parts of the University (particularly our Faculty of Medicine). Their position in the University is also solid. People seldom question the research role of Information Systems within the Faculty; at least not within my hearing.

It would be argued by some colleagues in other disciplines that the IS group has been unduly advantaged by my presence, particularly in terms of hiring. That, in fact, may be. Though, I don't think you would hear that argument from my IS colleagues. They from time to time suggest, usually gently, that I hold them to a higher standard than others in the Faculty. That too may be. On balance I believe they have been supported because they perform well overall but have been disadvantaged in areas where they underperform.

So what don't they do well? Attract students. The single biggest challenge facing our IS group is the same as most other IS groups; a lack of students. With notable exceptions, such as the University of Houston, we have had a "lost decade," with IS enrolments in most schools still significantly below the levels seen in 2000. In our case, the enrolments are starting to rise but are still relatively low when compared with Finance, Accounting and Marketing.

For our IS group this has been a blessing and a curse. It is a curse since low enrolments inhibit growth. In many schools facing economic pressures, that has led to downsizing of IS groups. A blessing in that our group, while it has grown, has done so without the stress and pressure that comes from high enrolments. That is not to say that they don't face other pressures, but on balance they have had opportunities that more stretched areas might not. This is part of the explanation for the vibrant research environment. I suspect, though few would agree with me, that this is true for many IS groups if they reflect carefully on the matter.

So the silver lining of low enrolments may be a stronger research environment. Since faculty resources are sticky, the ramp up in IS hiring through the 1990's built strong research groups in many schools. Those groups had an opportunity, in the face of lower student demand, to build out significant research programs. IS scholars appear, collectively, to have taken advantage of the opportunity. Though they may not have capitalized on the advantage it provides.

My quick perusal of the past two years of *MIS Quarterly* and *ISR* suggest to me a very healthy research environment in terms of the volume of papers, the variety of work published, and the global nature of the scholarship. The fact that there are also new top quality journals developing through AIS

and more crossover of IS research to journals such as *Organization Science*, all suggest a research vibrancy. In addition, there appear to be more non-IS scholars, from Marketing, Operations Management, Organizational Behavior and other disciplines, aspiring to publish in IS journals reflecting their broader attractiveness as top tier outlets. In that sense, the downturn in enrolments has probably been healthy for the research environment.

The strength of the research may be one thing keeping IS faculty on the good side of their dean. No dean who committed significant resources through the late 1990's to grow an IS area to meet rising student demand, would have been pleased to have completed the investment just about the time student demand crashed. Even though it was a widespread phenomenon, they would feel either duped or foolish. Either way, by 2001 or 2002, most IS groups had spent all their currency with the dean and probably had little leverage with the next dean. So those in IS who have seen few resources come their way since then, should not be surprised.

This brings us back to our hiring plan over the last 5 years. What dean would be growing an IS group over the last five years? This one. We have been lucky to be in growth position for the entire school, adding more than 50% to our pool of tenure track professors. This did not occur because of increasing enrolments, indeed we have reduced them, but because we were in a position, starting in about 2005, to remedy years of under-staffing across the business school. So Information Systems grew as every area in the school grew. Relative to the IS area, most others increased more in absolute numbers but less in proportion.

To understand the growth in IS, it is important to understand the environment we operate in. Desautels is a research-intensive business school, in a university that is dominated by its research culture and particularly, by research in the life sciences. The playing field can be very uneven. The gaps in research productivity between business scholars and those in the medical sciences can often be measured by orders of magnitude in research grant dollars, the number of publications, and citations. To compete in that environment with other units at the university, the business school has to work hard to establish its research bona fides.

Our IS group has been an asset to me in gaining recognition for the quality of our research contribution to the University and in building bridges to the life sciences. Three of our eight colleagues are actively engaged in joint research with our medical school and allied teaching hospitals.

So even if I did not believe in the importance of research (which I do) and if I did not believe in the value of Information Systems research and teaching in a business school (which I do), in the context of the environment we operate in, the IS group would still be important to me. Our Operations Management group is in the same position.

Despite low enrolments overall for both Information Systems and Operations Management, they have grown because they contribute significantly to the research intensity of the Faculty and have developed strong partnerships with important parts of the University. One lesson here is that an IS area that is struggling for attention and resources should find a way to bring value to their school (not just to the IS group).

Research is one way to do this and for many, perhaps the most obvious path. Though its impact may only be truly felt in a handful of research intensive universities. Making significant contributions to teaching and outreach are others. These, though, require different skills and more creativity. In each case, they require IS to think beyond its own narrower interests to the broader needs of the school and the university and to be proactive in developing opportunities rather than reactive in responding to problems.

Teaching. My IS colleagues are strong teachers and have developed some innovative pedagogy (though not always related to IS). For example, one of my colleagues has led the development of our enormously successful Executive MBA program that we offer jointly with HEC Montreal.

They have improved enrolments in IS, but the overall enrolments are not at the level of leading areas in the Faculty. The IS group still has the lowest full time equivalent (FTE) student to faculty ratio in the school. Operations Management is a close second.

In both cases, that lack of student pressure has contributed to stronger research performance but will now limit their opportunities for growth going forward. Growth of the IS area would likely only happen when enrolment is stronger.

Why have enrolments not returned? Around 2000, there were three almost simultaneous market shocks that affected enrolments. The burst of the tech bubble had the effect of driving students away from IT; it coincided with the passing of Y2K that eased immediate pressure on the labour market and, at the same time, the advent of robust availability of cheap bandwidth has been a boon to offshoring.

Together they formed an unfortunate confluence of events *to suggest* that the future for IT jobs in North

America was limited. It is a complete fallacy but it is one that is firmly fixed in the minds of students and parents today. This is despite the fact that, at least in the US, IS graduates still attract the highest salaries among any business undergraduates according to the AACSB. And in Canada, a shortage of IT labour continues to be well-documented.

It is not likely that even the awakening of Warren Buffet to the underlying value of IT with his recent investment in IBM, will compel many students to follow the path of an IS education. We lack the cool factor. Bill Gates is not cool, Larry Ellison is not cool, Mark Zuckerberg is not cool, Sergei Brin and Larry Page are not cool. Steve Jobs, while perhaps cool, was not an IS guy but a product and marketing genius. The technology may be cool, those who work with it are decidedly not. Rich, yes. Cool, no. The subject matter does not attract and hold students in large numbers.

To think about the path forward, it may be useful to reflect on the experience of one of our recent graduates who started her studies as an IS major. As a student, she was heavily involved in extracurricular activities and was a leader among her peers. She is also very smart (all our students are very smart), thoughtful, poised, persuasive and engaging. She is cool. In her junior year, she served as the Vice President for Information Systems for the student society. By her senior year, she was President of the Student Society and no longer an IS major. Instead, she completed joint concentrations in IS, Finance and Marketing.

Why? Well, she started in IS because she wanted to do something concrete and substantial but was not interested in Accounting or Finance. She thought she should do a major and so started with IS. Over time she realized there were elements of the IS curriculum she liked (tying technology to business) and elements that she did not (related to computer science and modeling). She also discovered that mixing a technology understanding with knowledge of other functional areas of business would be beneficial. So in the end, IS plus Finance plus Marketing. Less commitment to IS, but probably a more useful mix of knowledge. And a little more "cool". For IS groups this may be the better pathway to success.

It is one that my Desautels IS colleagues are pursuing with some success as we see overall enrolments increase (even if not as quickly as the dean might like). My friends at the McIntire School at the University of Virginia are doing something similar around program themes that tie in popular business topics like project management and business analytics that make students more market-ready.

The long term success at the University of Houston is also rooted in an on-going process of curriculum change that tried to adapt both what is taught within courses and how it integrates across courses. All these approaches emphasize how IS can be used to better understand and manage businesses. IS groups that get this right—and often that means right for their own local market—are most likely to succeed.

Yet many persist in simply trying to attract business students to the technically oriented IS major. I believe it is a recipe for failure. Students who want the technology go, also in limited numbers, to Engineering and Computer Science. Students who want to learn about business and use technology, study Marketing, Finance or Accounting. While there will certainly be exceptions, the business IS major is unlikely to draw large numbers of students across a broad spectrum of universities. But I am quite convinced that IS courses may draw huge numbers of students. It is all about partnering and packaging.

Partnering. IS groups will interest more students by looking where the student interest lies and developing complementary IS curriculum. Building targeted course offerings that provide job-ready skills for students studying in other areas is a critical step. It can start with a course, for example, IT for Financial Services has proved popular in many schools. E-business and analytics courses targeted and tied specifically to the Marketing curriculum is another area that is underdeveloped. It may be different across different schools. These need to push beyond the notion of service teaching in a core curriculum which has sustained some IS groups. It needs to be value added teaching that helps make business students more market-ready.

Look at how your IS curriculum complements the popular areas of study in your school and how to draw students into courses related to those areas. You want to have both student impact and economic impact. To have student impact, create courses that the Finance, Marketing and Accounting students seek out because they make them more job-ready and marketable. Measure your success by the number of students taught, not by how many courses each student takes.

A handful of popular complementary courses can provide a lot more impact than a high-cost, low enrolment major. It will also be better appreciated by the dean as it bridges across disciplines. It should also provide an economic advantage. If your school only counts majors, you may have to reframe the argument but a full class is a full class and you should be able to tie what you do back to the budget process that funds your school. Remember, all

deans are obsessed with money and most people who come to them are asking for it rather than thinking about how it is generated.

IS professors are a change oriented group by nature, having to adapt courses and approaches to emerging technological trends. You should be able to use that orientation to your advantage. But ultimately to succeed may also require a different mindset around change.

Consider the issue of partnering outside the faculty to build novel teaching programs. Put a Computer Science professor, a Computer Engineering professor and an IS professor together in a room and what do you get? While you should get an opportunity to create a novel and rounded technology management program, you are more likely to get suspicion and deadlock. IS groups need to break beyond the traditional barriers between the technology camp, the algorithmic camp, the modeling camp and the behavioral camp, and learn how to put some cross disciplinary teaching programs together.

Do this effectively and you might not only make your dean happy, you might make your provost happy by taking what they generally view as a poor use of scarce resources and turning it into something novel and noteworthy. This may be true even if it is small; as long as it is high quality, interdisciplinary and unique. You hold resource cards and have little at risk so learn to play them in more novel ways.

Packaging. I have spent five plus years talking in my Faculty, particularly to the IS group and the Operations Management group, about Technology and Innovation Management. I am convinced it sells better than either IS and OM. I am in the minority.

This framing also provides a way to do something truly integrated within the school, bringing together Information Systems, Operations Management, with Strategy, Entrepreneurship and Organizational Behavior to create a well-rounded technology offering that would be broadly attractive to students.

This would be attractive to Engineering students in MBA programs who want to be technology managers. It will also be attractive to undergraduate students who want to find their way into consulting. At Desautels, we have made some good tentative steps in this direction, particularly in our MBA, where Technology and Innovation Management is one of four concentrations that emerged from a program redesign that emphasizes an integrated management approach.

There is more opportunity here. Much more, and it seems to me the IS community doesn't take advantage of it. Some might say in response, "you're

the dean, why don't you make it happen?". And many who say that would be the first to rail against any dean to tries to impose a curriculum approach or program on the Faculty. We affect change by persuasion. What's more, we serve the whole Faculty, so rather than focusing in on the parts, we try to set the scene for the whole.

My failing has been that I have not been persuasive enough in getting colleagues to truly champion the idea. I have not found the right carrot, the right stick or the right combination of the two. But there is an opportunity and I would encourage IS colleagues to run their own thought experiments to see what they might develop in their schools. A successful initiative will require matching your internal capabilities and the external labor market your graduates will enter.

There have been some good examples of IS groups that have seized this issue in meaningful ways. My former colleagues at the University of Virginia have done a superb job building a Master in the Management of IT for practicing IT executives. They run two robust cohorts each year. It has developed into a strong core IT program but it is truly integrated and cross disciplinary. I describe it as 1/3 MBA core; 1/3 technology; and 1/3 a unique view on technology management. It has been running successfully for over a decade. The program now has a strong industry alumni base and has been a financial boon for the school. The IS group in Virginia, with low traditional program enrolments, responded by creating something unique and making themselves valuable to the school. They have followed this up with excellent offerings related to project management, consulting and business analytics that have proved extremely popular with undergraduate students.

I am sure other schools have also developed successful alternatives to the IS major. There are lots of paths for doing so. Overall, there needs to be more experimentation and it needs to be done with an eye towards strengthening the school and the university, not merely preserving the IS department. Rather than feeling put at a disadvantage by low enrolment, realize the opportunity it provides to be creative and innovative in both research and teaching. That creativity needs to be channeled to deliver both a great student experience and an economic boost for the school.

Outreach. If you don't have a lot of students, aside from a strong research performance, outreach is the other notable way to contribute to the life of a school. In fact, a strong outreach program can be a major lever and get significant attention from a dean. Outreach supports fundraising and most business

school deans are, of necessity, obsessed with fundraising.

Outreach has been a notable success for IS groups at many schools. There are many well-established IS research centres with generally good corporate connections. There have been interesting models at different schools. Though labeled as research centres, their focus is often more on corporate training and development than it is on research per se. That is not a bad thing, but it is the case that collectively, we have not learned the lesson of the engineers around contract research. It is another way to get on the good side of a dean. Bring resources from novel sources. Help your dean connect to the corporate interests of the school and offer services that business finds to be of value. In other words, find a way to be relevant.

This has been a strength of many IS groups but, at least in my experience, is not carried to scale. A centre with 15, 20 or 30 corporate sponsors provides a reasonable budget for an IS group to support its faculty. It does not necessarily add value to the school as a whole. To do that you need to think bigger. We are not particularly good at thinking big. Successful executive education programs and major applied research/consulting partnerships, along with strong student internship programs, can all help to boost the profile of an IS group in a business school. But you have to stretch to have impact. North American engineering schools and European business schools, especially those in Germany, have been particularly good at industrial partnership. They can provide a possible roadmap.

The key to developing some of these initiatives in a big way would be to have significant donor support to endow or underwrite a research centre. Most places have not been enormously successful in this regard, us included. It is a source of frustration to my IS colleagues that, as a dean who has raised significant money for the school, there has been little dedicated specifically to IS. The explanation for this is not lack of effort but a lack of alumni and a lack of money.

Support for area specific initiatives like this most often come directly from successful alumni or from companies where alumni hold senior leadership positions. IS related fundraising – as opposed to say, finance related fundraising, is challenging. There are not a lot of alumni and they are not always well placed to make major commitments for their organizations. Moreover, significant philanthropic dollars almost always come from individuals rather than corporations. So while there is a lot of wealth in IT, it is not always IT wealth and it is often not from alumni. Or it is from alumni in Engineering and

Computer Science, which is where they tend to make gifts.

For most schools, there are not large numbers of IS graduates. Where there are, there may be few in true senior executive leadership positions outside IS. Where there are graduates who have been successful entrepreneurs, they view themselves as just that: entrepreneurs. And they are more likely to support Entrepreneurship than IS.

So, just as you might work to develop a teaching strategy that is complementary to popular academic areas such as Finance and Marketing, you might develop an outreach strategy that is complementary to the entrepreneurial segment of your alumni population. Tailor your activities to engage them in meaningful ways. For example, we and others have had much success creating structured programs for alumni to return to the classroom. Engaging people in this simple manner can be powerful and the payoff can be significant. But it takes time, patience and persistence.

Overall, can anything be learned from these reflections and from our local experience at Desautels for the broader IS community? That is probably for others to judge. That said, let me offer a couple final thoughts. The contribution of IS to a school is based on the same three dimensions on which we typically judge scholarship: research, teaching and service. Research contributions appear strong, perhaps because of the long push for research legitimacy coupled with slack resources after the technology bust. This remains a strength to be better exploited. Teaching, curriculum and program development remain a weak point. There is

a lot of room for value-added innovation in this area and little risk for established IS groups to pursue. As more and more schools look to integrated and interdisciplinary programs, IS groups should be uniquely positioned to play such an integrative role. Outreach has been strong across IS groups through corporate-affiliated research centres, though the scale of activities has often been too modest. More attention from the school and university will come from more ambitious projects. With our systems orientation, IS academics have traditionally been pioneers and boundary spanners well positioned to understand the whole business. Keep a focus on this traditional strength and you should collectively be able to leverage it for the good of field and the good of your School.

About the Author

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