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Oral History Interview with Steven Miller: Conceptualising SMU

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Singapore Management University

Li Ka Shing Library

Conceptualising SMU: The People and Ideas behind the SMU Story

Interviewee: Steven Miller

Interviewer: Patricia Meyer

Date: 12 April 2011

Location: Singapore Management University, Li Ka Shing Library Recording Studio

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Patricia Meyer: [This is] Pat Meyer. Today is Tuesday, the 12th of April 2011. Today I'll be speaking with Steven Miller, the founding and current dean of the School of Information Systems at Singapore Management University. This interview is part of the Conceptualising SMU oral history project. We're meeting in the recording studio of the Li Ka Shing Library at SMU. By way of full disclosure I'd like to say that I first met Steve during our graduate school days and this year we'll be celebrating our 27th wedding anniversary.

The subject of today's recordings your recollections and perspective on the formation of the School of Information Systems, and I'd like to start by asking you to step back in time and summarise your career before you came to SMU, and also tell us what brought you to Singapore.

Steven Miller: Immediately prior to joining SMU, I was working in Singapore for the IBM Corporation. I was working in their consulting group at that time. It was called Business Innovation Services, and I was involved in e-business architecture, helping to organise and improve the architectural community of practice for IBM's consulting group across Asia. And in the few years that I was working with IBM in Singapore, ASEAN [Association of Southeast Asian Nations] and Asia, I was working in practice areas that, at that time were referred to as e-business integration, e-business architecture, e-business solution. Prior to the several years of working with IBM, I joined them in May 2000, and I started with SMU right about January 2003, a few weeks right before January 2003.

Patricia Meyer: Why do you think it was important, at that time, to form this new school as a separate school rather than within the business school?

Steven Miller: The actual proposal was submitted in March of 2002, and the approval was in the second or third week of October of 2002. Now, earlier aspects of this planning had taken place in 1998, '99, 2000, and it's good to reflect on history what was happening in the world at that time.

Well there was this explosion, and it really was unlike anything people had ever seen before, probably in the history of civilisation with the rapid spread of being able to use web pages. It really was transforming many aspects of the world. And at that time, it just didn't exist before. Now it's so second nature, it's almost impossible to conceive of a world prior to the Web. So when they did the early planning of SMU in '98, '99, it was clear that something important was there. Clearly we have a school [SMU] about business and management and everybody in organisations are talking about, and how we can get this on the web, and how is the internet going to be incorporated into how we work, and all these new mail services that were impacting what people do at home. So I think there was just a broad sense that we needed something about infocomm. Singapore had taken a very proactive and aggressive stance about the use of computerisation in the civil service—that goes back to the early 1980s. So this was a country that had prided itself by aggressively positioning on the, in its ability to make use of computerisation, in both the public sector, the private sector, to the extent possible even in educational programmes, because they knew business wanted this manpower.

Patricia Meyer: How did you come to join SMU in late 2002?

Steven Miller: So when I came back I had gotten back in touch with Ron Frank just to see what was up, knowing that they had this pending proposal. And he notified me that it was either just about to be approved, or will be approved, or was approved, but it was right at that time basically. As I had mentioned that indeed it was approved about the second or third week of October. And now they're approved! And they're supposed to start a new cohort less than twelve months away, from scratch. In a situation where they really have no pre-existing curriculum, and really nobody with real experience in that area either. So Ron was faced with an interesting situation. You know they quickly had spun off an accounting school a year after SMU started, but of course, the core faculty of SMU, to a large extent had come from NTU School of Accounting. So that's a little different, because you have them all sitting there in the first place. And I think with economics as well, they had had people trained in that area.

So Ron had the mandate of launching this new school. I was seriously thinking about transitioning back to a university-like setting, after what had been an interesting hiatus. I had left Carnegie Mellon in September 1989, and here we were in the end of 2002—I think that was about thirteen years or so that I'd been working in industry in various capacities as a practitioner of using or designing information systems and large scale automated types of environments. So it just seemed like an interesting match, and the fact that at that time there was really no formal relationship with Carnegie Mellon, and not even any relationship of much depth to speak of, other than two Carnegie Mellon faculty had done a bit of visiting and offered a few opinions on some possibilities for planning the curriculum. But that was really no more special than the types of conversations one would have with a large number of people at that stage of the planning process. But the fact that there was some involvement with CMU that way, and of course I was a prior CMU faculty member and I'd done my PhD there—it seemed just like an interesting set of things were aligning.

Patricia Meyer: How did you go about, in those early days, how did you go about developing the concept for the school, realising what the school's going to be?

Steven Miller: The point of mentioning all this is to say that, when I was reflecting on what I saw around me, as well as what I did myself in those thirteen years, the kind of people you need to do it were neither the graduates of a business school-oriented information systems programme or the graduates of a computer science programme.

So I basically said, we're going to start in terms of that type of professional who really drives the use of information systems in business settings, but has the technology capability to do this. Now if you read the wording of what a textbook definition of a business school oriented-information systems programme is about, that's actually what they're about, and that's what they started on. Twenty, thirty years ago, information systems programmes in business school had a much stronger software [design] and technology [application] depth than they do now. And there are reasons for that related to

how business schools evolved and what drives business school rankings and things like that. We won't go into that. But we in some sense wanted to go back to that classic capability of a business-trained and -oriented person who had real skills to design and implement information systems that really enable people to do their work better in complex organisational settings. And while computer science programmes offered some aspects of the technology and the technical thinking, they weren't focused on the domain. And here the domain is important, it was less important for us to know many of the intricacies inside a computer, than to know the context in which it worked.

So summarising, to draw these threads together, these years of experience in industry gave me, at least, what I thought at that time was a clear image of a kind of professional that we needed to create, that was a hybrid between what was coming out of engineering and computer science programmes and business programmes. Like a business programme [graduate], the person would have a lot of understanding of the business context. More so than the computer science programmes [graduates], the person would focus on software applications and the ability to design a new software that was especially pertinent to solving the problems of business.

Patricia Meyer: Can you just tell us a little bit more about the collaboration between SMU and Carnegie Mellon, how that developed?

Steven Miller: And the important thing is—because an MOU is just a sheet of paper of course—is that the president of SMU at that time Ron Frank, agreed to back the MOU with some resources, small, in the context of, of course what Singapore is spending on some of our new universities now, but not insignificant. And through the allocation of that budget, that we said would last for—I forget, an initial three or four years—we could put together a consulting team from CMU that took a multi-year interest in the start up of the school. That turned out to be really helpful. We did not transplant anything from CMU. So it's not that there was this thing at CMU, there was this programme at CMU and we would bring it over here, and the resources would be a payment for that. It was not that at all. It was through these resources a set of CMU faculty became engaged in a way as a kitchen cabinet, if you will, a set of advisors who would help think through [the design of the school] and be a sounding board, and if we have these [prospective] faculty, could you also evaluate them, you know, faculty candidates. So the whole thing was more a collaboration, than any aspect of, "We know something and we're going to transplant it to you." And they were willing to take the attitude of, "We'll help you grow from scratch and plan with you." And that, that's how it happened.

Patricia Meyer: Can you tell us about how you went about developing working relations with business and industry and obtaining feedback about this programme that you're starting?

Steven Miller: Well the thing that we found fascinating is here we are, starting from nothing. You know although he [Desai] and I have very credible and formidable experience, the school—SMU's new—and the school [SIS] is doesn't exist yet hardly, I mean it exists but it's really, nothing there. And the other two established universities in Singapore, both have a computing school, of one form or another. NUS had the School of Computing, NTU has the School of Computer Engineering and they've a lot of overlap [with SIS], and they both

had business schools that dealt with the management side of information systems. And more than one of the industry people we spoke with, I say more than one which is a polite way of saying a number of them, said, “Well gee, you know, it’s kind of a refreshing conversation. It’s the first time somebody has spoken to us to have this kind of discussion about this kind of concept for this kind of [business-oriented IT] professional.” I’m sure the other schools had spoken to industry and had advisory panels, I would assume that’s the case, and I’m sure they did it.

But we just did a lot of it. And it was just, it wasn’t something like we run the school and do everything you’re supposed to do as an academic institution, and, oh, we have this little bit of effort we do occasionally to go talk to business. It’s like, no, that was part of our daily work, and...talking to business and—not just saying what do you want—we were a little audacious to have our own ideas of what we think the school should be, just from our own experiences. I didn’t exactly know at that time how to articulate it as clearly as I might today, but there was this...wavelength, that I was homing in on, and then I think Desai had a lot of similar views, and it only reinforced that. So we had a view of where to go, and what we would do is ping this off of people, and see how they’d respond. And through that pinging and hearing the response, we’d refine, and we’d learn. And it was really fascinating because it wasn’t too long afterwards that we’re interviewing students, my goodness. Desai started in April, that’s right in the middle of admission season, you know, and that’s when you have to do the [admissions for the] intake that starts in August, and you know you’re in the midst of figuring out a curriculum. Keep in mind that the majority of courses were SMU standard courses anyway, so we didn’t have to do the whole thing from scratch, but there had to be some SIS courses right from the outset.

And as we were interviewing students on a daily basis—which would occur in the April, May, June period—Desai and I would be doing our regular interactions with the industry because that’s what we were using as a sounding board to help think through how we should put this thing together. And as part of the interview process students would say to us, “Well, how do I know this is a good idea?” Or, you know, “You guys don’t have the experience, why is this the way to do something?” And we would always have fantastic examples. We’d always have the ability to just say (snaps fingers) right there without thinking, well, let me tell you about the conversation I had this morning, with the CIO of this firm, and that firm and that firm, and let me tell you what they’re saying about their challenges, the kind of people they need. So the recruiting of the initial batch of students, the conceptualisation of the curriculum, the design of the curriculum, the interactions with industry, and the pinging back and forth to Carnegie Mellon, it was just all happening at the same time at a very rapid rate. And that’s how it happened.

Patricia Meyer: Can you just tell us a bit more, what would be the benefits that you saw for the learning outcomes, how did that approach help SIS and the students?

Steven Miller: And I think the big difference in our world versus the rest of SMU—and this is just using vocabulary and common ways in which people talk about it as an indicator of the difference in mindset—is that the standard way across SMU of talking about the progressive aspects of the learning process was to always focus about what happened in the classroom. That when we have the classroom, students are called on and they speak out and its seminar style. That was true, it is an important thing that happens at SMU. But do your arithmetic, for every one hour a student spends in class, at least in our

programme, you're supposed to spend more than two, more like three to five hours outside of class. Doing what? Doing! Doing what it is that you're supposed to be talking about in class, right? So from the outset I think we had the strongest emphasis on learning by doing, and the focus that most of that doing happens outside of the class session. And that what you're really designing in the curriculum, are ways of getting people informed in class, so that they can spend a lot of time in groups, doing what you want them to be able to do. So I think, from the outset SIS always had a much stronger emphasis on what do the students do, and the output of what they do, than the form and the shape of what they do, which is to sit in a class and interactively discuss. And I think you see that in the SIS students today. I think that seemingly simple difference and emphasis has really woven itself quite deeply into just the whole ethos and characterisation of the SIS student. And the performance of the SIS students I think reflects this.

Patricia Meyer: What opportunities did you have to meet with the SIS students and get their feedback, in the early years?

Steven Miller: But the school was small, for goodness sakes, and students were all around. We had spaces where they would work—I was always a believer that...there should be space around for students to use, that...you know it's a little noisy, chaotic, this, that, but that's what the university is for—it's to have places for students to do their thing. That time we only had undergraduates. So students would be around all the time, and they'd be talking to us all the time, and they'd be commenting, and observing, and complaining, and all the wonderful things that are just what you want students to do.

One student walked in once, year 1, year 2, something like that. It was great. He said, "We shouldn't have classes, let's do away with classes. You should give us assignments, and then just for each assignment teach us what we need to know. What are we wasting our time in classes for?" You know he's not entirely wrong, actually, so you couldn't just dismiss it out of hand. There are some reasons why it's nice to have classes to—from people like to do things in groups and not just to do things alone, to you're able to plan, you can give people some foundations and whatnot—so we did not throw the whole curriculum out with the bathwater. But students had ideas, and it's like, "Oh, you got an idea? Go do it!" And there're various ways to improve labs, to improve this, to improve that, to form special interest groups, to get people involved in stuff. So the issue is, we need help. You have an observation, something's wrong, go take it. And students responded well to that.

Patricia Meyer: Can you tell us about building up the faculty and establishing the research programme at SIS?

Steven Miller: As a practice faculty I had come from research track faculty. Even though I had a lot of experience and interest in preparing people professionally at the undergraduate level for...practice in professional-type careers, I'd loved the world of ideas [both] in industry and research and think they're important. So there wasn't really a conflict there. But there was a positioning that the school would have a...an applications and an applied focus, systems-oriented focus. Now, this does not mean unintellectual, and this doesn't mean that research can't be world-class, first-rate best journals and all that. It just meant that it's okay to build a philosophy and a community that really was not theory in isolation. If you

really wanted to do the theory in isolation go someplace else. If you're trained to have the intellectual capacity to do that, but want to do it with at least an aspiration for impact and application—even if not directly [with] today's industry version of it, [but with a future version]—then come here and we'll really help you.

So I think it's this interesting way to simultaneously tolerate—not so much tolerate, that's not at all the word—but to have this coexistence of ideas that are intrinsically interesting in their own right, because of their both beauty and transformative potential, even if that potential is quite down the road—and here's where things are today, and the complexities of today, and what should happen tomorrow to ameliorate some of the complexities of today. And I would say in SIS, it's not been a schizophrenic thing. It has not been schizophrenic to say it's okay for these two kinds of attitudes to coexist. And I think in a lot of engineering-like programmes, they coexist. In medicine they coexist. In places like architecture, they coexist. In some of the social sciences and business, there's a little bit of this [attitude], well, if it's too applied, it's not academic. You know it's like, why is this? And I'm not even talking about SMU, I'm really talking about the global community, places that consider themselves good business schools. They almost have to justify if something is too applied. Of course, in a good engineering programme nobody ever worries about that kind of thing, they celebrate it—gee, I had this really powerful idea, nobody could ever think of it before, I thought of it, I did it, and look how it's helping people.

I guess a big decision that I'm taking for granted, is that we would hire computer science-trained people who had the technology background in computer science and information technology, in addition to some people who came out of business school-like training to analyze the impacts of the information systems from a business perspective. And that was the big thing, that we're not a classical computer science school, but we're going to hire a large fraction of our research faculty from computer science programmes.

And the CMU faculty were very helpful, because even when I would talk to people on the phone who were faculty candidates and say we're going to do part of your evaluation interview at Carnegie Mellon, it was helpful. And to actually get the feedback from the CMU faculty who were our kitchen cabinet, who were part of this consulting arrangement, really did help.

So step by step, and we did it, we built up a few research faculty and the very first research faculty we hired in August and September of 2003, [the] very first ones to come right at the beginning of first semester, they're with us today, and actually both of them were converted from assistant professors to associate professors with tenure. So we've been very fortunate that that worked out, and not only that, internationally, by any metric, they've done beautifully. And when you think of the fact that relative to other computer science programmes, we didn't have a graduate programme, and all the emphasis on new curriculum and whatnot. Yet, they managed to flourish, and even do well, on any international benchmark in terms of their publication output, and and their ideas. And what they do fits the spirit of the school well. So we were blessed that way. I think that we were able to find people who were willing to take the chance on the new school and we selected for a certain kind of attitude, and for a certain kind of predisposition to quality academic work in a systems and applied context, and for people who, without any compromise in research, were willing to say, the quality of education is also really important.

Patricia Meyer: Graduates from the undergraduate programme, where did they go? Where, what types of work did they do?

Steven Miller: At the same time you have to sit with the vendors and the coders, or you might be involved in the prototyping, or you might be involved in taking the early phases of the system sitting with the users, seeing how they use it, figuring out what has to change, going back and forth, and all that kind of thing. So we had a lot of students end up in those interface roles. Some people would call them business analysts, some people would call them other things. And we had some students work for the IT part of the company internally, some people work for the business part of the company but still doing IT-related things. We had some people immediately who got hired by the consulting firms, and put the students in client-facing roles. Some students who would do more software technology-oriented backend work. So even from the very beginning we had the different students fanning out into all these things, so I think it's fair to say SIS students work in a wider variety of job roles, across the cohort of students, than the students from any other part of SMU. We have the largest number of entrepreneurs in all of SMU, the most number of student spinoffs, of companies that are actually functioning as companies you know making it come out of SMU. So they're all over the place in just a wonderful way.

Patricia Meyer: Can you tell us about the start of the postgraduate programmes in SIS?

Steven Miller: We ended up starting the very first PhD programme at SMU, and our first PhD intake was August of 2006. The official approval was February 2006 so that means in 2005, we were working on the planning of the PhD programme. In computer science-like programmes, typical to a lot of technology-like programmes, they're very PhD intensive, you tend to have large groups, lots of PhD students working on projects with faculty. So faculty coming out of the computer science programmes would move here, and it's like, "But where are the PhD students? I don't have any to work with." We did have a system where we would bring in some research engineers, full-time research engineers as full-time staff, to help some of our faculty who were used to working in this mode and we were able to do that because of some resources from SMU. The point is we didn't have a PhD programme.

But lo and behold, that's grown. Now we have thirty-two PhD students. We'll be taking in another ten or so this year, so soon we'll have about forty and there could be things on the horizon with some government initiatives that we might be able to expand it, but now that's a quite solid programme and I think it will get better and better.

In the following year we started a master's by coursework programme [Master of IT in Business (Financial Services)], a very, very niche programme, focused on IT and business, but focused on the banking and financial service sector. We spoke to about sixty people in industry. "Well, how should we educate students?" is not very effective, but putting something in front of them, based on what you think is important to them and having them react to it is very effective. We did a lot of that, and lo and behold, we now have about 80 professional master's students. That will grow, over the next few years, and now we have the PhD programme, and then we have the undergrad. So we're running full spectrum.

Patricia Meyer: Now I'd like to just have you look back over the last eight or nine years that you've been at SMU and from the time that the fourth school was just an idea. What changes have you seen in SMU over these years? And then, I'll ask you again about SIS specifically.

Steven Miller: I think one of the big issues is getting the internal community, not the faculty, but the internal administrative and administrative support people in the various central administration functions to realise, we're beyond the days when SMU was only an undergraduate school. So these two big ideas, SMU is not just a business school, when we started it was just a business school. SMU is not just a place for undergraduates, although for those who know the details, the very first people to get degrees from SMU were master's students. The Master's of Applied Finance first cohort actually graduated before the first cohort of business school students, but nonetheless, there was such a small number, that in the earlier days people would think about this [SMU] as only an undergraduate school.

We want to progress from just being able to say, oh, we're research active because we have a lot of good research faculty who publish a lot of papers in good journals to, hey, let me tell you about the ideas that have come out of SMU. These are big ideas, you don't even have to cite the journals. I think in your earlier phase, when you're trying to prove that you have some validity on the international scene, you give a lot of attention to saying oh our faculty publish in this and that and that journal. When you're really there, you don't waste your time referring to the fact that your faculty publish in certain journals—it's assumed, it's, hey, look at these ideas that have had an impact on the world, either truly worldwide or in this sub-community, and they came out of this university. We need to plant these seeds to say, hey, these things can happen here. And to get the community to realise, the community outside of SMU who really loves the dynamism and the industry interaction of SMU, to realise that we're that and the world of ideas, to take us into the future.

Patricia Meyer: Can you tell us some more about the challenges you'd see for SIS in the future?

Steven Miller: Well, you know (laugh) we've always had the advantage of being the outlier, of being able to operate with tremendous autonomy because we're such a small part of SMU, and we're so different from the rest of the university, but with some of these big projects, we're not such an outlier anymore. And things that we do impact the university in a big way. And through some of these grants that we'll get it will [also] enable big parts of the university. So (laughter), we have to, maybe...adopt aspects of behaviour that, look at the broader institutional (laughter) interactions, in addition to just being this innovation unit that can just move without impediments. So I think, that's something to adjust to.

Patricia Meyer: Just two questions for closing, how has being part of SMU changed you or impacted you?

Steven Miller: In the main, it's been just tremendously positive for me. And it's been fun. And it's been fun because of all the real impacts, in terms of helping people whose parents could hardly afford to go to school when you see the first jobs that they get. Or just making things

possible for the students, the faculty, the staff, even like the research staff who spend a year or two or three with us, they go on and do neat things that never would have been possible if they haven't spent the time in our environment.

So it is inspiring, to be able to create this thing that actually helps a lot of people, in a wide range of ways. And, you know, the tiny little corner of Earth where we focus our time and attention, and because of the SMU experience and what we do, and SMU's role in Singapore, and just the way we work with ecosystem—it's really a connected feeling. And that's neat, because why do people want to live? To have some sense of connection—it need not be through one's work, people can find this in various ways—but in this case the actual work experience has been a very connected sense because of all these things we've been able to do.

End of Interview

Acronyms List

Acronym	Definition
ASEAN	Association of Southeast Asian Nations
A*STAR	Agency for Science, Technology and Research
CIO	Chief Information Officer
CMU	Carnegie Mellon University
CV	Curriculum Vitae
HR	Human Resources
IDA	Infocomm Development Authority
IDM	Interactive Digital Media
IS	Information Systems
ISM	Information Systems Management
IT	Information Technology
KAIST	Korea Advanced Institute of Science and Technology
MOE	Ministry of Education
MOU	Memorandum of Understanding
MITB	Master of IT in Business
NTU	Nanyang Technological University
NUS	National University of Singapore
PA	Personal Assistant
PhD	Doctor of Philosophy
SIA	Singapore Airlines
SIS	School of Information Systems
SMU	Singapore Management University
UOB	United Overseas Bank Limited