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SMU-X: An Innovative Approach to Preparing Students with Skills for the Future

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Citation

SMU-X: A RADICAL APPROACH TO PREPARE UNIVERSITY STUDENTS WITH SKILLS FOR THE FUTURE

Introduction

The SMU-X Initiative is a paradigm shift which focuses on learning as opposed to teaching as well as a mind-set shift to get the university to collaborate both internally and with our external stakeholders more. We strive to do this by introducing innovative curriculum based on an experiential approach that is interdisciplinary and hands-on. It gets the SMU community to collaborate and step out of their silos by encouraging group effort in solving complex issues. All SMU-X courses are characterized by 4 principles: (i) inter-disciplinary content and activities, (ii) experiential learning via an actual problem/ issue faced by an organization, (iii) active student-mentoring by faculty and industry, and (iv)creating a tripartite learning loop for the faculty, student and industry, characterized by sharing forum at the end of the course.

In other words, for our undergraduates, every SMU-X course will challenge and inspire them to use their disciplinary knowledge and skills in tackling multi-disciplinary, real issues faced by the partner organizations. By deep-diving into current

and actual problems and constraints, SMU-X courses can accelerate studentsâ learning to go beyond hypothetical classroom exercises. Courses span across different disciplines and students get to help improve peopleâs well-being, contribute to society or help businesses improve processes.

At the same time to build up an ecosystem for students, faculty and our partners to interact, we look to creating physical environments and learning spaces to support the collaboration and project work that takes place within the curriculum. We think that the concept of SMU-X: creating a collaborative mindset, experiential curriculm and space, will bridge the gap between academia and practice, and prepare undergraduates to the challenges of the future.
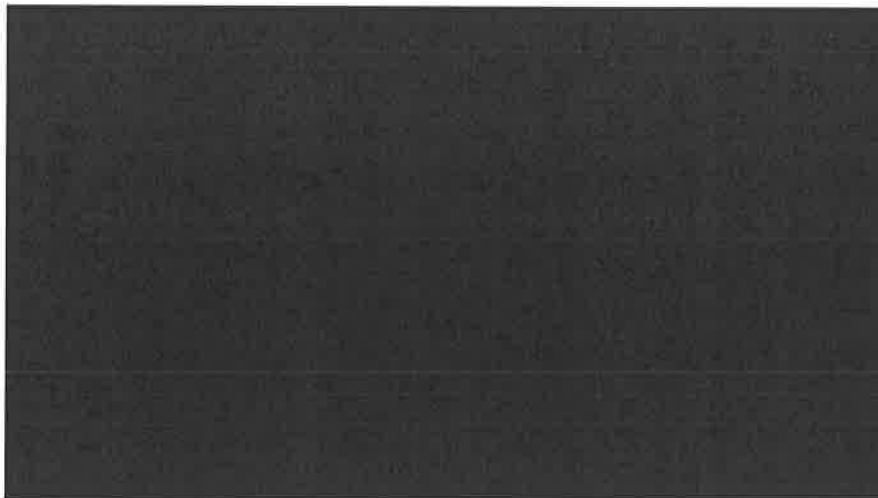
Synopsis

Objective

Since its conception in 2000, SMU was designed to provide a different model of university education here in Singapore; positioned as a boutique University modelled after the

Wharton business school in USA. The original goal was to have a core identity anchored by School of Business with a range of complementary disciplines including information systems, law, political science, sociology and psychology. Besides pioneering an interactive teaching pedagogy and a broad-based curriculum for Singapore, SMU's faculty worked largely to publish rigorous research within their disciplines. Research centres were also largely mono-disciplinary.

Since then, we have grown substantially and has since evolved to a specialised but more complete social sciences university. We have now 7,500 undergraduates, 1000 postgraduates and 25 ICLIs (Initiatives, Centres, Laboratories and Institutes).

The question that we have in our mind is how to reform our education to prepare students for the economies of the 21st century as the scale and complexity of the challenges facing the world and our graduates today are unprecedented. Sometimes, solutions will nott come from any single field, but from collaboration between innovators who can see beyond the way the world is to the way it could be.

Also, the student profile has also changed. The millennial student is different, anyone with a teenager at home can attest to this. An SMU student today sees the need to connect across school boundaries and uses technology with ease and wants the university to keep up with their learning on the go. More learning takes place out of classroom today. A student on campus spends almost twice the time (5h) working out of classroom than in class (3h).

It is timely then that SMU prepares students sufficiently to face these challenges. With that in mind, SMU zoomed in on how we

could improve on our interactive pedagogy and make learning more pertinent and pioneered an innovative educational model called SMU-X.

Approach

Mind-set: First and foremost, SMU-X is a mind-set; One that gets SMU members to collaborate and step out of their current silos. Universities have traditionally been slow to innovate and collaborate; are good at the "deep" but rarely look at problems that are Ã¢ÂÂbroadÃ¢ÂÂ. There is merit in encouraging group effort in solving complex issues. With SMU-X, we want to be a better city university and for our students and faculty to work actively with the community as well as our research centres. Each party brings with them their expertise and industry-specific viewpoints in a collaborative approach using both disciplinary knowledge and multi-faceted perspectives. To do so, we have two strategies: SMU-X pedagogy and Space.

A pedagogy: SMU-X pedagogy comprises four principles: i) experiential learning through tackling real world problems and issues; ii) inter-disciplinary learning; iii) active mentoring and; iv) a tripartite learning loop for the faculty, student and industry partner.

An SMU-X elective is a structured 14-week course which combines academic theory with experiential learning through the heavy use of real unresolved issues and projects that students work on. It is interdisciplinary either in the topic or approach and/or the student mix to ensure that the problems are viewed in from multiple angles. We partner with the industry, non-profit and government-sector organisations to develop and teach our courses and projects. Our partners and our faculty are involved in active mentoring so that the students benefit most out of this deep relationship. Lastly, an SMU-X course serves to help our students get a better

understanding of what it means to use theory learnt outside the classroom, our faculty on how real world adapts theory and our partners to build up a culture of learning. This inculcates in our students and our partners the value of continuing education which is imperative going forward given our rapidly changing economic conditions.

Space: Finally, it is also about space. Physical space is still relevant and important even as we move towards an increasingly virtual world. We think that there is scope to improve the learning environments, both in-class and out-of-class to create 24h, co-working, learning hub with active learning classrooms. This caters to the differing learning styles and at the same time, extends space through time where student can now work on their projects with their industry partners even till late in the evening. We have adopted a lean approach by creating learning spaces prototypes (SMU Labs) in the university.

Engagament
Since August 2014, SMU has started pilot SMU-X electives to test out the SMU-X methodology of providing an environment for all of SMU that acknowledges experience-based learning and doing as part of all activity. To us, 'SMU-X stands for many things: experimentation, experiential, excitement, cross-interaction, collaboration and the unknown.

To date, 11 electives have been designed. Two were launched in Jan 2015 and nine in August 2015. SMU estimates that these electives will benefit about 700 students, almost 10% of SMU's enrolment. These courses follow SMU-X's four principles of i) experience-based learning through real projects; ii) interdisciplinary learning activities; iii) active mentoring both by the faculty and the industry partner and, iv) a closer

tripartite relationship between the Faculty-External partner and student.

An example of the course is the MGMT 317: Managing Process Improvement. The course teaches the six-sigma method to improving operation processes. The students work with Clients e.g. Singtel, Infineon, Essilor, Decathlon, Liberty Insurance, Rentokil, APL, Microsoft and LVMH (Louis Vuitton Moet Hennessey) for the full 12 weeks of the course with deliverables often from the 2nd week onwards. In the LVMH project, the students worked with the LV outlet in Marina Bay Sands to schedule staff rosters based on foot volume in the store so that this leads to an increase in sales. After the changes are made, the results are immediately implemented.

All students who successfully complete the projects are awarded with the six sigma green belt certification. The feedback from our industry partners was very positive, Partners were keen to also send their staff who was mentoring the students for the course and potentially also be green-belt certified. We are excited about the possibility to also bring in the industry partners into class as a participant. This brings about a richer discussion in class where the industry will bring in their experience on a discussed issue while our students view the same issue with fresh new perspectives. (Other courses and details are attached in the supplementary materials as well as the presentation)

Impact

The feedback on the courses gave SMU many insights. Students commented that such courses were intensive, time consuming and gave them challenges from the beginning and till the end as they had a real client to manage and expectations to live up to in addition to academic success; students were stretched. At

the same time, students were positive as the electives made their learning experience much richer. Students loved that they were doing work that had a real impact and could see application. One example is a Koh Chiu Yee who did a course on Global Migration and Human Security, working with UN agencies and Relief.sg and then went on to an internship at regional IOM Office in Bangkok Thailand.

Industry partners were also overwhelmingly positive. They welcomed this initiative and saw that SMU-X was a way to bridge the gap between academia and industry and found it interesting to look at their businesses from fresh perspectives. They felt that it often took time for students to adjust to the working environment coming from the university but SMU-X electives acted like a guided internship and allowed students experience working on substantial projects with staff under the direct supervision of faculty. Companies also got to know potential hires better and vice versa. This enhances the cultural fit for both the hire and the company. (Please see media interviews and reports.)

Faculty who has piloted the SMU-X electives also benefited from the experience. Many felt that the rich data from the industry projects and through working with the companies gave them ideas and/or supported their own research in the University. The university is looking at supporting this as some faculty were not used to forming relationships with the industry and required handholding to maintain the partnership. SMU sees this as an opportunity to further bring the faculty closer to practice.

Next Steps

Currently both the courses and space are in pilot phase. Most of the courses are over-subscribed (~2.25 times vacancy). We will like to scale this SMU-X pedagogy and offer all our undergraduates an opportunity to do an SMU-X course if they choose to. At the same time, we are planning to embed this methodology into our graduate courses by introducing SMU-X elements into our masters programmes. This means that the team is actively growing the courses and supporting faculty with the design of the courses as well as identifying and reaching out to industry and community partners to enhance our relationship with them. This is also an opportunity for SMU to support our faculty and staff with professional development by creating a community for experiential learning to share best practices and also upgrading opportunities for our faculty to teach using the SMU-X methodology. We have just started the interest group.

The SMU-X team has also applied for a competitive grant from the Singapore government to study whether (and how) the integration of four SMU-X pedagogical principles may produce positive student learning quality and whether they sufficiently prepare an undergraduate student well for future work challenges. This will allow us to improve on the SMU-X pedagogy further. We are also planning a detailed study to see how out-of-classroom environments play a role in impacting students' academic performance and whether such use of an environment with collaborative elements can better support experiential learning in the classroom as well as look at whether these courses will positively impact job placement. We also look forward to creating more prototype collaborative space to support the SMU-X learning experience.

If done well, we want to be Asia'Âs leading university to scale up experiential learning and to share this knowledge with aspiring institutions in Asia.

Other Information

PDF - Click to download (https://s3-eu-west-1.amazonaws.com/pedagogical/projects/410/Course outline - IntelligentAccountingFunction.pdf)
PDF - Click to download (https://s3-eu-west-1.amazonaws.com/pedagogical/projects/410/SMU-X Press Releases.pdf)
PDF - Click to download (https://s3-eu-west-1.amazonaws.com/pedagogical/projects/410/About SMU.pdf)
PDF - Click to download (https://s3-eu-west-1.amazonaws.com/pedagogical/projects/410/Managing Process Improvement.pdf)
PowerPoint Presentation - Click to download (https://s3-eu-west-1.amazonaws.com/pedagogical/projects/410/SMU-X for QS Wharton.pptx)
Project Website - Website on SMU-X (www.x.smu.edu.sg)
YouTube Video - Video showing the prototype spaces for SMU-X (SMU Labs) (https://www.youtube.com/watch?v=Pq6KmOvA3QM&feature=youtu.be)

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