

Entrepreneurship in Health

A Problem Definition-Solution Generation Experiential Seminar-Workshop Course

Health Sciences 4091B – Special Topics

School of Health Studies • Faculty of Health Sciences • Western University

Winter 2015

Section: 001
Component: LEC
Class #: 7138

Instructor: Dr. Steve Denniss, PhD

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In-Class Time and Location:

Mondays • 6:00 – 9:00pm • Health Sciences Building Room 240

Out-of-the-Classroom Time and Location:

Any time outside of class • Wherever you need to go to test the assumptions of your health innovation idea

Office Hours:

By appointment at times to be determined, either in person or virtually

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Enclosed: Course Outline

Course Background and Introduction:

What is innovation and how does it relate to health?

Innovation can be defined as: *a new or better way of doing valued things.*

This definition distinguishes an innovation from a discovery, a concept, or an invention, and the ideas that are inspired by them, which are necessary precursors to innovation. To innovate, then, means to change, for better or worse, in ways that a group of people, as consumers of products and services and related processes within the personal and professional organizations and marketplaces of our societies, decide to place value on.

There are three types of value to people as consumers – functional, social, and emotional value. These three types of value correspond to the functional, social, and emotional ‘jobs-to-be-done’ that expectedly or unexpectedly come up in people’s personal and professional lives that they need or want help getting done. A given product, service, and/or process that exists in a marketplace will have a value proposition that has varying degrees of functional, social, and emotional components to it depending on the particular customer(s) and how they perceive and interact with it. In free-market societies, people, using the currencies that they have available to them (e.g. money, direct exchange of products or services, good will (from government programs, family and friends, etc.), etc.), can choose to obtain and use products and services that are ‘on offer’ in the marketplace that they propose will help them more effectively and/or efficiently get the personal and professional jobs done that come up in their lives.

In strict tangible economic accounting terms, value is represented by the dollars spent by consumers on products and services that are produced at a particular financial cost, with the difference between the latter and the former equaling the monetary profit.

In non-economic terms, the functional, social, and emotional value of products and services can be represented in tangible or intangible non-monetary terms, as is the case with not-for-profit or for-profit social innovations.

Healthy, successful, and sustainable innovations are realized within the personal and professional organizations and marketplaces of the world’s societies when products, services, and processes are created and used by people in such ways that allow them to get their functional, social, and emotional ‘jobs’ done more effectively and/or efficiently, thus adding value to their lives while enabling potential opportunities for further growth and prosperity.

What is entrepreneurship and how does it relate to health innovation?

Entrepreneurship can be defined as: *seeking to create value with an initially uncertain assurance of success or reward.*

This definition distinguishes entrepreneurial activities from business-as-usual activities, the latter of which focus exclusively on managing the execution of a particular way of doing things that are known with a high level of certainty within a given context to successfully produce an outcome that is valued and rewarded accordingly, monetarily and/or non-monetarily. To be entrepreneurial, then, means to be a catalyst for innovation – taking sources that become available, either through discovery or accessibility, and searching to find new or better ways of ‘re’-sourcing them so that what is produced might be raised from a lower to a higher degree of functional, social, and/or emotional value. Such value is sought out to be created for existing or potential, direct or indirect, consumer segment(s) within the personal and professional organizations and marketplaces of the world’s societies.

In order for such value creation to be healthy, successful, scalable, and sustainable, the customer segment(s) for which the value is anticipated to be created for, at the time, or at some later time, must, from the benefits of receiving it, have the means by which to monetarily and/or non-monetarily reward the work done in creating the value in an amount that can, in the least, offset the monetary and/or non-monetary costs of creating that value, thus enabling its production to continue.

Why is it important for undergraduate Health Sciences students to gain the experience of engaging in a course focused on contemporary principles and practices of evidence-informed entrepreneurship and innovation?

Discoveries coming from the Health Sciences field of study are ripe for innovation.

How and why people live and work and become healthy and unhealthy is changing at an ever-increasing rate and in an ever-expanding number of ways, which is affecting us all, from cell-to-society. A growing proportion of sub-optimal health, and its related economic, social, and psychological burdens, is caused by chronic multi-factorial conditions that may be prevented or substantially attenuated by the appropriate and personalized modification and management of physical activity, nutrition, and other lifestyle-related factors in combination with pharmaceutical therapies and medical devices. Within the personal and professional organizations and marketplaces of our increasingly connected, accessible, and transparent world, a growing contingent of conscious consumers are seeking to find credible knowledge that may be directly applicable to the problems they need or want to solve in their lives while getting their functional, social, and emotional jobs done, and are placing more and more value on health and performance considerations when deciding which products and services to pull into their lives to help solve those problems and get their personal and professional jobs done right for them.

Respectively, then, there is both a growing need, and a growing demand, for taking ideas inspired by the latest discoveries coming from the multi-disciplinary study of the health sciences and finding creative and engaging ways to successfully move those ideas into action and productive use within available products, services, and processes to add substantial and sustainable value to people's health and well-being.

How can contemporary principles and practices of evidence-informed entrepreneurship and innovation be successfully taught, learned, and experienced by Health Science students in the context of a university course?

Entrepreneurship is as much a principled discipline following an evidence-informed scientific method as it is an artful practice, and now has related sets of tools.

The latest entrepreneurship research indicates that the most successful entrepreneurs are smart, methodical, and orderly managers of risk – running small, fast, inexpensive evidence-generating experiments to determine which parts of their ideas and related ventures are right and wrong within a particular organizational and market context, and then correcting their course of action, thereby removing risk and adding extrinsic value to their intrinsically valuable idea.

These contemporary entrepreneurship principles and practices have been observed and documented, and related sets of tools have been developed with an essential framework and necessarily flexible process. This means that entrepreneurship can now be more easily taught and learned, and then applied by Health Sciences students to drive healthy innovations that may have the best chance of optimizing health, preventing injury and illness, and extending the years of high-quality life across the lifespan for individuals and communities within target sector(s) of the world's personal and/or professional organizations and marketplaces.

The contemporary entrepreneurship tools and processes that have been developed include:

The Business Model Canvas (<http://www.businessmodelgeneration.com/canvas>):

The Customer Development Model (<http://steveblank.com/tools-and-blogs-for-entrepreneurs/>); and

The Minimum Viable Product via Agile Development Engineering Processes (<http://theleanstartup.com/>).

These tools that have been developed are designed to work together within a set of processes that have collectively become known as *the lean start-up methodology*. This methodology embraces a set of principles that tip the balance in favor of: 1) 'getting out-of-the-building' to do in-market experimentation to test the key assumptions of business model hypotheses leading to validated learning – over – elaborate planning based too heavily on untested assumptions from thinking done 'inside the building'; 2) gathering a diversity of relevant opinions gained early-and-often from customer feedback – over – bias-laden intuitions and 'in a bubble' presumptions that consumers in the marketplace can and will always make decisions and behave rationally; and 3) agile development with iterative design driven by a build-measure-learn feedback loop to determine whether to persist, pivot, or perish the product, services, or process idea – over – more rigid big-design-upfront development and execution approaches with little intermediary feedback.

Course Objective:

The primary objective of the course is:

To give students exposure to, and hands-on experience with, using contemporary evidence-informed entrepreneurial startup tools designed to facilitate the critical thinking and doing skills necessary to successfully search for the real-world value of a promising idea for an innovative product, service, or process inspired by the discoveries, concepts, or inventions that the students learned about in their undergraduate Health Sciences courses.

Course Approach and Ultra-Structure:

The course is run over a 12 week time period during the academic semester. It includes both ***in-class*** seminar-workshop style learning and ***out-of-the-classroom*** business model testing and customer development learning as it applied to each Team's health innovation idea.

During the first classes, students form into teams (e.g. 7 persons) based on common interests in pursuing a particular idea. Each team will make initial hypotheses – i.e. initial guesses – about each of the 9 components of their idea's business model: Value Proposition, Customer Segments, Distribution Channels, Customer Relationships, Revenue Streams, Resources, Activities, Partners, and Costs. Over the remaining weeks of the course, the Student Teams – in collaboration 'in class' with the other Student Teams and 'out of the classroom' with potential customers, partners, distributors, etc. – will iteratively test the assumptions of each component of their hypothesized business model and validate their learning of how they may be most successful in turning their idea into a repeatable and scalable health innovation.

The following is the tentative ultra-structure of the week-to week schedule:

Week 1:	Introduction and Overview
Week 2:	Health Problems, Trends, and Opportunities + Startup Idea Generation (Creative Ideation)
Week 3:	Team Formation and Organization + 'Get out of the Building' Customer Discovery Tutorial
Week 4:	Value Proposition
Week 5:	Customer Segments
Week 6:	Channels
Week 7:	Customer Relationships
Week 8:	Revenue Models
Week 9:	Partners
Week 10:	Resources, Activities, and Costs
Week 11:	Flex Week / Final Presentation and Reporting Preparation
Week 12:	Final Team Presentations and Reporting

Course Week-to-Week Operations:

Each week of the course has an *in-class component* and an *out-of-the-class-room component*.

The In-Class Component (3 hours):

Each week's in-class focus will be 2-fold:

- 1) **A 1.5 hour backward focus**, where each team shares with the class (in a max. 10 min. Powerpoint presentation) what specific insights they gained and what they learned 'out-of-the-classroom' by testing the hypotheses they made about their business idea with respect to the component of the business model that was a focus of the previous week (e.g. Week 6 forward-focusses on *Channels*), which is followed by an open discussion of the team's progress including constructive criticisms and recommendations for how to move forward from both fellow classmates and the Instructor;
- 2) **A 1.5 hour forward focus**, where assigned online seminar material (to be previewed at Udacity.com prior to class) on the next component of the business model (e.g. Week 7 forward-focusses on gaining a better understanding of *Customer Relationships*) is reviewed and discussed with the Instructor (i.e. using a 'flipped classroom' approach), and then in a break-out workshop format this material is applied by each Team to better inform the hypotheses they made about their business idea for that component of the business model and is used to strategize and design implementable hypothesis tests for the upcoming week's 'out-of-classroom' customer discovery activities.

The Out-of-the-Classroom Component (up to 4-6 hours per person per Team):

Each week's out-of-the-classroom work will have 4 deliverables:

- 1) Execution of Customer Discovery work to test hypotheses of business model component(s)
- 2) Synthesis of Customer Discovery work and Generation of Insights
- 3) Preparation of Weekly In-Class Update Presentation
- 4) Previewing of the assigned online seminar material at Udacity.com for In-class discussion and workshop.

Course Evaluation:

The following is a tentative evaluation framework and mark breakdown (x / 100%) for the course:

30%	Contribution to Week-to-Week Work of Team: Workshop Discussion and Planning and Out-of-the-Building Customer Discovery Work
15%	Authoring of Ongoing Customer Discovery Log Report and Narrative
15%	Oral Preparation and Delivery of 1 Weekly In-Class Team Update (Presentation + Questions)
5%	Contribution to Weekly Peer Feedback on Update Presentations by Other Teams
15%	Oral Preparation and Delivery of Final Business Model Component(s) (Presentation + Questions)
20%	Final Exam (to be Scheduled in the Exam Period)

100%	

ADDITIONAL STATEMENTS

Student Code of Conduct

The purpose of the Code of Student Conduct is to define the general standard of conduct expected of students registered at The University of Western Ontario, provide examples of behaviour that constitutes a breach of this standard of conduct, provide examples of sanctions that may be imposed, and set out the disciplinary procedures that the University will follow. For more information, visit <http://www.uwo.ca/univsec/board/code.pdf>.

English Proficiency for the Assignment of Grades

Visit the website <http://www.uwo.ca/univsec/handbook/exam/english.pdf>.

Accommodation for Medical Illness or Non-Medical Absences

http://www.uwo.ca/univsec/handbook/appeals/accommodation_medical.pdf

The University recognizes that a student's ability to meet his/her academic responsibilities may, on occasion, be impaired by medical illness. Illness may be acute (short term), or it may be chronic (long term), or chronic with acute episodes. The University further recognizes that medical situations are deeply personal and respects the need for privacy and confidentiality in these matters. However, in order to ensure fairness and consistency for all students, academic accommodation for work representing 10% or more of the student's overall grade in the course shall be granted only in those cases where there is documentation indicating that the student was seriously affected by illness and could not reasonably be expected to meet his/her academic responsibilities.

A UWO Student Medical Certificate (SMC) is required where a student is seeking academic accommodation. This documentation should be obtained at the time of the initial consultation with the physician or walk-in clinic. An SMC can be downloaded under the Medical Documentation heading of the following website: <https://studentservices.uwo.ca/secure/index.cfm>.

Documentation is required for non-medical absences where the course work missed is more than 10% of the overall grade. Students may contact their Faculty Academic Counselling Office for what documentation is needed.

Whenever possible, students who require academic accommodation should provide notification and documentation in advance of due dates, examinations, etc. Students must follow up with their professors and their Academic Counselling office in a timely manner. Documentation for any request for accommodation shall be submitted, as soon as possible, to the appropriate Academic Counselling Office of the student's Faculty of registration. For BHSc students, you may go to the School of Health Studies Office in HSB room 222.

Scholastic Offences

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following website: http://www.uwo.ca/univsec/handbook/appeals/scholastic_discipline_undergrad.pdf.

Additionally,

1. All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).
2. Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

Support Services

There are various support services around campus and these include, but are not limited to:

1. Student Development Centre -- <http://www.sdc.uwo.ca/ssd/>
 2. Student Health -- <http://www.shs.uwo.ca/student/studenthealthservices.html>
 3. Registrar's Office -- <http://www.registrar.uwo.ca/>
 4. Ombuds Office -- <http://www.uwo.ca/ombuds/>
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