

Curriculum Design Principles and Process

Entrepreneurship Curriculum Team

September 17, 2008.

Introduction

In some ways, the process of designing curriculum is not unlike the process an architect goes through to design a new building and, because of the sheer scope of the endeavour, he or she needs a way to share the vision in such a way that others can build it.

In order to develop our vision for the entrepreneurship curriculum and communicate it to future teachers of the program, we have found it useful to take off our teacher’s hats and put on a designer’s hat.

This is a working document that captures the principles and process guiding that effort.

It is intended primarily for our own reference but written knowing that it might come in handy to share with others interested in how we are proceeding.

Contents

Our Assumptions and Design Principles	2
What Does a Finished Topic-Level Curriculum Design Look Like?	3
Okay, So How Do I Carry Out a Topic-Level Design?	5
Step 1: State the overall outcome(s) for the topic	5
Step 2: Define the curriculum objectives for the topic	5
Step 3: Design the Teaching and Learning Activities (TLAs) for the topic	6
Step 4: Design the assessment tasks for the topic	7
Step 5: Review with the team early and often (even between steps)	8
Step 6: Engage other faculty as expert reviewers	8

Our Assumptions and Design Principles

1. **Modularity.** We will design the curriculum in a modular way using *topics* as the main building block:
 - a. A topic can span less than a single scheduled lecture period or may span several lecture periods, depending on the specific teaching and learning situation
 - b. The topics in the first two courses (ENTR 3301 and 3302):
 - i. Set the foundation for the remainder of the program
 - ii. Are only delivered within the context of those respective courses, but provide a reference for students to use in later courses
 - c. The topics in the latter four courses (ENTR 4331, 4332, 4343 and 4344):
 - i. Are organized by phase of the entrepreneurial venture
 - ii. Have a home base in one course, i.e. they will show up in the outline for that course, but depending on the situation may be delivered at different places within the program
 - iii. Are analogous to (and take the best elements of) the topics already being delivered in the Entrepreneurship Applied Degree program, e.g. entrepreneurial marketing, entrepreneurial finance, etc...
2. **Consistent building blocks.** When fully developed, the following will have been designed and documented for every topic in the program:
 - a. Curriculum objectives
 - b. Teaching and learning activities (TLAs)
 - c. Assessment tasks

A format for documenting this design is given on page 3.

3. **Constructive alignment.** The principle of *constructive alignment*¹ is adopted in order to envelop students in a web of aligned consistency, thereby optimizing the likelihood that they will engage in the appropriate learning activities, but paradoxically leaving them free to construct knowledge in their own way.

As described starting on page 5, our design activities are guided extensively by this principle and are expected to result in strong alignment between the following critical components of the teaching and learning experience:

- a. Curriculum objectives
- b. Teaching and learning activities (TLAs)
- c. Assessment tasks
- d. The climate we create with our interactions with the students
- e. The institutional climate (i.e. rules and procedures we have to follow)

It is assumed in the rest of this document that the team has already identified the topics that are required and the order in which they will be delivered within the program.

¹ See: Biggs, J. (2003). *Teaching for Quality Learning at University*. Open University Press. 309 p.

What Does a Finished Topic-Level Curriculum Design Look Like?

Let's start at the end – with a look at the final product. The following shows a model curriculum design for a topic on *Vision and Mission for Entrepreneurs*. When we complete our work, every topic in the program will be documented using a 1-2 page document like this.

With this as a guide (and perhaps with a copy of Quiz 1), you can imagine how a teacher would prepare to teach this topic.

Topic: Vision and Mission

Topic Highlights

(What you will learn)

- The value of a good concise vision
- How to discover and articulate vision and mission, and how to help others do the same
- The role vision and mission play in setting the stage for a company's strategies, and perspectives on the usefulness of vision in strategic entrepreneurship
- The role they play in guiding the company's external and (especially) internal messaging
- Various perspectives, including that of the new entrepreneurial start-up and that of the larger established firm

Introduction and Motivation

(Why learn it)

Guy Kawasaki urges entrepreneurs to "forget mission statements" because "they're long, boring and irrelevant^[1]." And he should know what he's talking about; he lists senior positions at Apple Computer Inc. on his resume, he's been a columnist for Forbes Magazine, and he's well known today in Silicon Valley and around the world as an author and as the managing director of his own early-stage venture capital firm called Garage Technology Ventures^[2].


Jim Collins and Jerry Porras, on the other hand, speak about the critical role a well-articulated vision plays for companies that achieve superior long-term performance^[3]. They should know what they're talking about too; they are well-known business professors who have consulted to hundreds of companies and carried out large-scale research projects to develop fundamental insights for executive leaders^[4].

At first glance, these perspectives appear to lie at opposing ends of a spectrum. In this topic, we will examine each in detail and explore the conditions where each might be correct, whether both are correct, and why it is so important that they are understood by the entrepreneur.

Teaching and Learning Activities

(How the levels of understanding will be gained)

Learning activities for this topic

Type	Name	Direction
Reading	Read before class: <ul style="list-style-type: none">■ Building Your Company's Vision	Self-directed
Reading	Read before class: <ul style="list-style-type: none">■ Pages 1-9 of Chapter 1 of The Art of the Start	Self-directed
In-class discussion and lecture	<ul style="list-style-type: none">■ Visioning - Look Inside, Find Your Purpose, Follow It ■ Other activities TBD:<ul style="list-style-type: none">■ Bring a vision statement from a company of your choice	Instructor and peer-directed
Personal activities	e.g. Reflection, review and studying	Self-directed

Learning Objectives

(Levels of understanding to be gained)

Learning objectives for this topic	
Level of Understanding	Objectives (presented as self-assessment questions)
Very best	<ul style="list-style-type: none"> ■ Am I able to coach someone else to help them create or improve their vision and mission? ■ Do I think a good vision should be changed in response to a change in the environment? ■ Upon reflection, can I identify any shortcomings in how the authors arrived at their conclusions? Will these impact how I will apply the concepts?
Highly satisfactory	<ul style="list-style-type: none"> ■ Can I discuss the differences and similarities between the concepts and advice given in the two readings? ■ Now that I've completed the readings, what is my own definition of vision and mission? ■ Could I apply the concepts to create a vision and mission for my own company? ■ If Kawasaki advised me to "forget mission statements," how would I respond? ■ Do I understand the importance of <i>alignment</i>, as we discussed it in class?
Satisfactory	<ul style="list-style-type: none"> ■ Can I recognize a "bad" vision, or cases where the terms <i>vision</i> and <i>mission</i> are misused? ■ Can I find examples of "good" vision and mission statements? ■ In the view of Collins and Porras, how does a vision ground a company in its past and guide it in its future? ■ Do I understand who the vision statement should be written for, e.g. customers, employees, shareholders?
Maybe just enough to pass	<ul style="list-style-type: none"> ■ Can I name and define the two main components of a vision, according to Collins and Porras? The subcomponents of these components? ■ Kawasaki also identifies two components. Can I name and define those?

Assessment Activities

(How you will be assessed on your level of understanding)

Learning activities for this topic		
Type	Name	Direction
Self-assessment	Review and reflection using the self-assessment questions above under Learning Objectives	Self-assessed
Quiz	Quiz 1: In class, open book	Teacher-assessed

References

(These references may not all be required reading for your course. See above for the reading assignments.)

1. ↑ Kawasaki, G. (2004) *The Art of the Start: The Time-Tested, Battle-Hardened Guide for Anyone Starting Anything*, Portfolio Hardcover, 240 p.
2. ↑ <http://www.guykawasaki.com/about/index.shtml> 
3. ↑ Collins, J. and J. Porras (1996) *Building Your Company's Vision*, Harvard Business Review, Sep-Oct, 1996, pp. 65-77.
4. ↑ <http://www.jimcollins.com/bio/index.html> 

Okay, So How Do I Carry Out a Topic-Level Design?

We just saw the final product. Now let's document how we go about creating it.

Again, it is assumed that by this point the team has already identified the topics that are required and the order in which they will be delivered within the program.

For each of those topics we follow the basic curriculum design process described in the sections below in order to:

- State the overall teaching and learning outcome(s)
- Express the curriculum in the form of clear objectives that specify the level of understanding required (rather than as a list of subtopics to be covered)
- Choose teaching and learning activities (TLAs) that are most likely to realize the objectives; you get the students to do the things that the objectives nominate
- Set assessment tasks that address the objectives
- Seek feedback from each other and expert peer faculty members

Step 1: State the overall outcome(s) for the topic

Method:

- a. Document the overall outcome for the topic at hand, detailing what will be learned
- b. Express it using verbs the students need to enact, e.g. Will be able to lead development ...
- c. If not obvious, document the relationship of the topic with the rest of the curriculum, e.g. its place with respect to other topics in that functional area, its place in the course, ...

Outcomes of this step:

Minimum: A few simple sentences describing (to a student audience): *What you will learn*

Best: An explanation of motivation: *Why learn it*

Step 2: Define the curriculum objectives for the topic

Notes:

- You need to start here – by defining the curriculum objectives – because they are so central to the design process (get them right and the activities and assessment tasks will follow more easily)
- Your overall goal is to express the required levels of understanding for the topic in a qualitative manner using verbs that the students have to enact
- Take off your teacher's hat and put on your designer's hat: Like an architect designing plans for a building to be built by others, you need to think of your role here (and in the steps that follow) as communicating with future teachers of the program

Method:

- a. Express the topic objectives in terms of the students' learning activities that are most likely to achieve the desired outcomes
- b. Express them as self-assessment questions (for the student) using verbs they need to enact to ensure a quality of teaching and learning

- i. In doing this, use levels of engagement appropriate to the seniority of the student or course, as shown in the table below, e.g. memorize vs. reflect
- c. Arrange the objectives by intended level of understanding into a hierarchy that corresponds to the categories given in the table below, i.e. very best, highly satisfactory, satisfactory and maybe just enough to pass

Outcomes of this step:

A simple table containing curriculum objectives that meet the desired outcome(s) of the topic

Level of understanding	Curriculum objectives
Very best	e.g. Can I apply, hypothesize, reflect?
Highly satisfactory	e.g. Am I able to explain, solve, analyze, compare, apply?
Satisfactory	e.g. Can I classify, elaborate, comprehend (idea)?
Maybe just enough to pass	e.g. Am I able to identify, memorize, name, comprehend (sentence)?

Step 3: Design the Teaching and Learning Activities (TLAs) for the topic

Notes:

- Here you are designing / selecting the activities (a.k.a. teaching methods) that are most likely to encourage the students to engage in the verbs used in the objectives
- Recall that some activities are relevant to the curriculum objectives and others are not
- Further recall that lecturing is just one of many types of activities – see the table below – and in our program may only be suitable some of the time
- Recall from our program-level discussions that as the curriculum progresses we want to make students increasingly comfortable with peer- and self-directed activities
- Recall from the principle of constructive alignment that we want to ensure that the type of TLA aligns with the learning objective, e.g. if the objective is to be an effective public speaker then don't have them only reading about public speaking

Method:

- a. Review the curriculum objectives you just created (above) and identify the ideal TLAs the students would carry out in order to meet your objectives
- b. Design the actual TLAs you will use by modifying the ideal TLAs such that they meet any constraints imposed by the program or our institution, e.g. class size, group size, project type, prerequisite knowledge, etc...
- c. Classify each of your TLAs as one of the following:
 - i. Teacher-directed
 - ii. Peer-directed
 - iii. Self-directed

Outcomes of this step:

Minimum: Table of TLAs and the corresponding classification, as shown below

Best: Descriptions, handouts, teachers' notes, grading guides, etc...

Activity name	Type of activity	Direction
Descriptive name	e.g. lecture, discussion, lab, tutorial, excursion, guest speaker, in-class activity, project, note-taking, reading, podcast, concept map, reflection and review, etc...	Must be one of: <ul style="list-style-type: none"> • Teacher-directed • Peer-directed • Self-directed

Step 4: Design the assessment tasks for the topic

Notes:

- Here you are designing the way in which the teacher will know whether and how each student can meet the criteria expressed in the objectives
- You should consider both summative and formative assessment tasks
- You should also consider peer and self-assessment in addition to teacher assessments
- For our program most assessment tasks should be criterion-referenced in nature
- You should provide information about the timing of the assessment within the course and with respect to the TLAs
- Recall from the principle of constructive alignment that we want to ensure that the type of assessment task aligns with the learning objective, e.g.:
 - Don't set a test asking students to list the various methods of idea generation if your objective is to have them identify ideas
 - Don't assign a written quiz if trying to test the student's ability to speak in public

Method:

- Describe the assessment tasks including:
 - Type of assessment task
 - Curriculum objective(s) being tested
 - Criteria for assessing the work
 - The evidence that needs to be 'submitted' for assessment
- Classify each assessment task as one of the following:
 - Teacher-assessed
 - Peer-assessed
 - Self-assessed

Outcomes of this step:

- Table of assessment tasks, objective(s) and the corresponding classification, as shown below
- Statement describing the submission evidence (if not self-evident) and the criteria for assessing the work

Assessment name	Type	Objective(s)	Direction
Descriptive name	e.g. written exam/quiz, oral presentation, project etc...	Refer to the curriculum objectives table	Must be one of: <ul style="list-style-type: none"> • Teacher-assessed • Peer-assessed • Self-assessed

Step 5: Review with the team early and often (even between steps)

Step 6: Engage other faculty as expert reviewers