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| **2017 OBTC Teaching Conference for Management Educators** |

1. Entrepreneurial Tools and the i-Generation: Suggested Pivots

Despite calls for innovative pedagogy and program content, a persistent gap between head knowledge and behavior exists in college of businesses. This is particularly true when attempting to teach entrepreneurial students. Courses in entrepreneurship have added cases, and updated assessments through the use of information technology. These have not been true “pivots” but rather minor tweaks. They do not enhance the depth of thinking and problem solving needed by future entrepreneurs. We compare several entrepreneurial analytical and/or generative tools and demonstrate how they can be used to facilitate the acquisition of the type of thinking needed by future entrepreneurs.

Entrepreneurial Thinking, Entrepreneurial Problem Solving, i-Generation

1. Teaching Implications:

Some areas of the entrepreneurial curriculum require a major pivot to enable the i-generation to gain skills needed to become strong entrepreneurs. This session compares several traditional, recent and current entrepreneurial tools purported to help entrepreneurs move through the entrepreneurial process and makes suggestions on where and how there can be pivots taken to meet the needs of the incoming new i-generation.

## Student Learning Objectives

At the completion of this lesson and associated homework, the student will…

### be able to explain a general entrepreneurial new venture development process.

### describe the components of a traditional business plan and why developing one might be valuable to an entrepreneur.

### describe the components of a feasibility study and why developing one might be valuable to an entrepreneur

### describe the components of a Business model canvas and why developing one might be valuable to an entrepreneur.

### Compare and contrast the values of an elevator pitch, Pecha Kucha Talk, Ignite Talk, Ted Talk, Entrepreneurial Pitch and why each might be valuable to an entrepreneur.

Relevant Management Topics

This unit is useful as a short session in the following typical undergraduate management courses:

* **Introduction to Management** as an illustration of how different management areas provide different valuable deliverables.
* **Business Communications** as a demonstration of how topics and types of formal presentations are related.
* **Any Macro-level Project Oriented course** to be used either as a project planning tool or as a self-assessment tool to determine what will be needed or has occurred.

As we teach tools, it is important to update the aspects of the tool being taught but it is also important to update tools based upon their identified value added use. Formally assessing the types of macro level assessment and development tools and their typical means of being taught along with the needs of a targeted audience is an important exercise in self-reflection.

1. Session Description and Plan:

This session pulls on the participants experience in teaching i-Generation students and, after the exposure to the various tools available for small business and entrepreneurship, links the tools with various oral presentation styles. Suggestions for changes to the traditional forms are generated and mapped against suggestions from facilitators.

| Minutes Used [**[[1]](#footnote-1)**] | Activity Description |
| --- | --- |
| 0-7 [0-1] | (7 minutes) Welcome to attendees, Introduction of facilitators & participants. |
| 7-10 [7-14] | (3 minutes) Overview of Session and formal forms of written and oral communication. |
| 10-15 [14 –21] | (5 minutes) Detail Traditional Business Plan |
| 15-18 [21-27] | (3 minutes) Participants use Oral Presentation Handout and determine value added presentation forms and why.  |
| 18-21 [27-35] | (3 minutes) Detail Feasibility/Commercialization Study |
| 21-24 [35-41] | (3 minutes) Participants use Oral Presentation Handout and determine value added presentation forms and why.  |
| 24-27 [41-47] | (3 minutes) Detail Business Model Canvas  |
| 27-30 [47-50] | (3 minutes) Participants use Oral Presentation Handout and determine value added presentation forms and why.  |
| 30-35 [50 – 55] | (5 minutes) Mini-Lecture on i-Generation Handout |
| 35-45[55 – 65] | (10 minutes) In- Session small group discussion * Additional attributes of most recent traditionally aged students not included in lecture.
* What aspect of i-Generation does each form of written work and associated oral work address? How can it be made more valuable to the i-Generation?
* What changes should participant make in own courses?
 |
| 45-50 [65-70] | (5 minutes) Exercise Debriefing  |
| 55-60 [70-75] | (5 minutes) Final wrap up and Q &A |

Take Away Topics & Handouts

This session addresses the needs of our students from a faculty perspective also addresses how to bring the i-Generation on board and how to make more aspects value adding for our students. Handouts supporting this self –reflection and innovation generating process are:

* Comparison matrix across the three entrepreneurial planning documents.
* Comparison matrix detailing qualities of formal oral presentation types
* Qualities of i-Generation
* Reflection and discussion of the above three and comparison to personal experiences/teaching
1. Application to Conference theme (*Navigating the Changing Currents*?)

Several changes to the education context (advanced uses of information technology and new sources of educational experiences), availability of entrepreneurship programs (reduced rareness in the market), in skill sets of students, in expectations of students, changes in expected levels of professionalism by broader community have happened and continue to happen. All contribute to a need to revisit our content and processes involved in teaching the entrepreneurial process. This session provides both a summary of available tools and a self-reflection for participants.

1. Unique Contribution to OBTC:

This session is arising out of our processes to update our entrepreneurship courses and program. We found the summary and reflection process enlightening and believe that others will also find it helpful.

Appendix A: Handout of “Systems Thinking and Causal Loops”

# Systemic Thinking and Causal Loops

For our purposes, a system is a group of people, things, actions, and/or beliefs that are connected to each other by influence or causal links. They can be described and drawn. This allows us to move from thinking of things happening in a static linear fashion (such as reading a book from beginning to end) to a more complex fashion that even allows for change!

A system diagram is the result of our taking an event and the patterns of behavior involved and working backwards to the people and things involved and their relationships to each other (Kirkwood, 1998). When we detail this out or draw it, we have a representation of the system structure (Anderson & Johnson, 1997).

 A system has inputs, processes and outputs. From our earlier reading on Toulmin’s Argument Model, we can see that it represents a system with concepts and our thinking as elements of the system as shown in the figure to the right (Richetti & Tregoe, 2001).

But that format is a relatively general and open way to view the activities their influences. When we create a closed loop diagram (as when we add feedback and make changes on it), the loop begins to allow us to continue to add parts until we see the whole system and can track the desired and inadvertent changes that may happen. Because we are interested in systems where the parts influence or affect each other, we are interested in causal loops. Causal because the existence of one element and its involvement in the system impacts one or more other elements in the system. Element A causes something to change about Element B. To better understand this, we look to behavior over time graphs.

## Behavior Over Time Graphs

We begin by identifying the system that we are interested in examining. Remember that our system includes people so it will also include their behaviors and the results of those behaviors can often be graphed across time. Systems have multiple layers. We can view our entire world as one big system or we can view our personal life and the time we have for free time as a system. The second system is s sub-system of the first. It is not the only subsystem. Subsystems can be nested. We expect that there are many additional subsystems interacting in between your personal one and other subsystems which then ultimately makeup the first! Each of these systems has behaviors which can be environed as performance graphs across time. It is not necessary right now to have precise information about the performance, just a rough guess will work. There are several typical behavior graphs. These patterns can indicate the following:

growth decline movement towards a mean or central value



oscillating behavior between growth and decline or growth to a level

 then a flattening .

To get these graphs made we need to write a statement that names the system behavior that we are interested in (which should be the most important or significant ones from our universal intellectual standards criteria) and describes it including some sort of measurement and time frame. This can be fairly general. A business example would be “Customer-service problems have increased 25 percent in the last year” (Anderson & Johnson, 1997). A biological example, “The rate at which sea turtle babies enter the ocean has decreased by 25% from 1990 to 2010 in Horry County, South Carolina”. The first is a business system and the second a natural biological system.

But just knowing the subsystem and the behavior is not enough to help us understand the system. We also need to know the parts or elements of each subsystem. To determine those, we look at the behavior graph and ask what might have caused that pattern. This is where having an academic background in an area begins to prepare you by enabling you to already understand what come of the concepts and variables in play might be.

In addition to that specialized knowledge, we can turn to our critical thinking elements of thought to help us identify other potential elements. Our general statement of the phenomena states our beginning purpose of engaging in this though exercise. Next, it is good to understand the point of view that you will initial take. Are you going to take the perspective of a customer or the company, of the sea turtle or a park ranger? This allows us to formulate a question to be answered. It may be as simple as adding “why” to our earlier statements or we may need to add “what can we do about” to our statement. Next, you need to determine what basic concepts and disciplinary information you need and can use along with what additional information. For example, you may know that customer service for this company is mostly customer service agents who answer phone calls. Next, you need to know what you can infer form that type of setup and what implications might be the result. If you infer that the customer service agents are low wage workers who respond to a customer’s comments based on a scripted response for pre-identified issues since that is a common phone-based organizational structure, what additional variables have you identified? By using these thought elements, you can be comprehensive as you determine who and what is involved (the variables) in the system and how they influence (link) to other variables. It is good to create short neutral names for these variables.

## Causal Loop Diagrams

Causal loop diagrams are figures that you draw that link the variables to each other. The link, remember, is how one variable influences or impacts another. There are some conventions on how you do this drawing. The first is that the link is done with a curved line that has a flat end beside the variable that is doing the influencing and an arrow at the end by the variable that is being impacted. You then use a “+” to indicate a positive influence (they both move up or down in the same direction or one adds to the other) and a “-“ to indicate a negative influence (when the first goes up, the second goes down or vise versa or one subtracts from the other).

**+**

Variable B

Variable A

**-**

When there is an even number of negative links, there is a reinforcing loop in place. It may be reinforcing positive aspects or negative aspects. Thus, the reinforcing loop shows up as an engine of “growth or collapse” (Anderson & Johnson, 1997, p. 54) . When there is an odd number of negative links, the loop is considered a balancing loop. The earlier loop is a balancing loop. You can have any number of variables and loops in a diagram. However, certain types of diagrams are associated with certain types of behavior over time patterns. Here are some examples and their associated behavior over time graph (Kirkwood, 1998).

Virtuous or Positive Reinforcing Vicious or Negative Reinforcing Balancing with Feedback

Balancing with Feedback and Delay Both Positive Reinforcing and Balancing Loops



You can create the causal loop diagrams one set of relationships at a time starting either at the beginning of the process (like when raw materials enter a factory) and work forward or at the end of the process (like the lower number of baby sea turtles) and work backwards to the beginning. The choice of starting point mostly depends upon the information you currently have and your current knowledge base in the discipline. You can even go back and forth and fill in areas as you gather information. The key here is to always cite the source of the information that you use so that others can also follow your reasoning process.

There are two more symbols and links to consider. The first is timing. You can indicate when you believe that there will be a delay in the impact of one variable on another. You do this by using two slash or hatch marks on the link line. The second is the addition of a constraint or outside feedback like an industry wide quality standard or even the capacity that is available in the facility.

Finally, after you enter all of the information that you have been able to find about the system and how it might work, you can then trace a change to the system through each part and recreate a behavior over time graph. This graph could be done to verify that you created the system correctly or you could “seed” the values with numbers to indicate what a future result of the system might be.

# References

Anderson, V., & Johnson, L. (1997). *System Thinking Basics.* Waltham, MA: Pegasus Communications, Inc.

Kirkwood. (1998, Feburary 14). *Open classes.* Retrieved August 1, 2013, from University of Arizona: http://public.asu.edu/~kirkwood/sysdyn/SDIntro/ch-1.pdf

Richetti, C. T., & Tregoe, B. B. (2001). *Analytical Processes for School Leaders.* Alexandria, VA: ASCD.

APPENDIX B: Example of Homework Handout

## Homework 4: Systemic Thinking and Causal Loops Page 1

1. Scenario: Rewrite the event or scenario in your own words by keeping only the most signficant and relevant elements.

2. System Variable Identification: From your above description, provide a short title and precise description for each of the compoenent variables of the associated system. Place a \* by the variables that are the most critical to the system. Use as many as you need but at least one of each type.

|  |  |  |
| --- | --- | --- |
| # | Short Title | Precise Description |
| 1 | input variable |  |
| 2 | input variable |  |
| 3 | process variable |  |
| 4 | process variable |  |
| 5 | process variable |  |
| 6 | quality standard |  |
| 7 | process variable |  |
| 8 | output variable |  |
| 9 | output variable |  |
| 10 | feedback variable |  |

## Homework 4: Systemic Thinking and Causal Loops Page 2

3. Behavior Over Time Graph: For the starred variables above, create rough graphs of their behavior over time. Write a sentence or two below the graph explaining why the graph has that shape.

BOT #1

Time

Reason #1 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

BOT #2

Time

Reason #2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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BOT #3

Time

Reason #3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

BOT #4

Time

Reason #4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Homework 4: Systemic Thinking and Causal Loops Page 3

### 4. Causal Loop Diagram: For the above system, draw/create a causal loop diagram that shows the relationships between the variables that are implied from the behavior over time graphs.

Remember the five main types of loops (Kirkwood, 1998) [[2]](#footnote-2) :

Positive Reinforcing Negative Reinforcing Negative Balancing with Feedback

Negative Balancing with Feedback and Delay Both Positive Reinforcing and Balancing Loops



# References

Anderson, V., & Johnson, L. (1997). *System Thinking Basics.* Waltham, MA: Pegasus Communications, Inc.

Kirkwood. (1998, Feburary 14). *Open classes.* Retrieved August 1, 2013, from University of Arizona: http://public.asu.edu/~kirkwood/sysdyn/SDIntro/ch-1.pdf

Richetti, C. T., & Tregoe, B. B. (2001). *Analytical Processes for School Leaders.* Alexandria, VA: ASCD.

1. “[]” indicates the timing adjustment for a 75-minute session. [↑](#footnote-ref-1)
2. [↑](#footnote-ref-2)