

**VIRTUOUS CYCLE OF ENTREPRENEURSHIP:  
DEVELOPING A STUDENT-CENTRIC APPROACH TO TEACHING AND LEARNING  
ENTREPRENEURSHIP**

**John Dobson (Associate Professor, Clark University)**

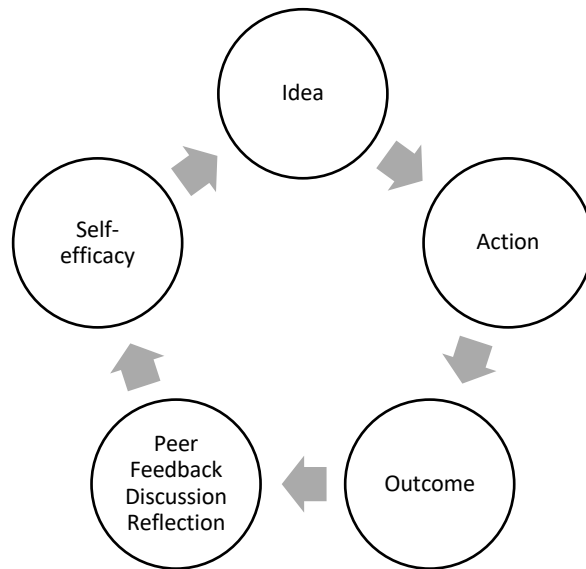
**Lisa Dobson (Director of Learning, DYME Institute)**

**Introduction**

Minimal attention is paid to the impact of entrepreneurship teaching approaches (Kamovich & Foss, 2017) and a lack of understanding exists on how best to approach entrepreneurship education (EE) to develop entrepreneurs (Morris, 2014, Wu & Gu, 2017). This chapter presents the **Virtuous Cycle of Entrepreneurship** (VCE) as a novel teaching approach to increase students' intention to become entrepreneurs. The impact of current process-based approaches of EE are reviewed. We then explore experiential problem-based theories of adult learning that were used in the development of the VCE, an approach that focuses on student-agency, autonomy, and accountability, while positioning faculty as facilitators of learning. This chapter ends with some thoughts on how to stimulate student learning in entrepreneurship.

**The VCE** (Diagram 1) was developed out of frustration using process-based approaches such as business plans, models, and canvases in creating student entrepreneurs. The foundations and principles were based on reflections of the author's personal experiences on how they developed their businesses, and on research on how entrepreneurs learn. Thus, a simple yet effective tool

was designed to create a student-centric EE classroom that mirrors the entrepreneurial journey by combining experiential, problem-based, and adult learning elements.



**Diagram 1.** The Virtuous Cycle of Entrepreneurship

The VCE is a 5-step iterative cycle. Each student comes up with a **1) IDEA** and spends 4-6 hours weekly developing their idea; according to their understanding of a market problem they will try to solve using their *knowledge*, skills, and *abilities* (KSAs). Students act according to what they *can do* and not focus on what they *can't do*, or *don't have*. Next, they engage in **2) CONCRETE ACTIONS** to develop a product or service and attempt to sell it. In the following week, students *present* in class their idea, the actions they took, and the **3) OUTCOME**, or results of their efforts. Some students will be more successful than others, and mistakes will be made. Using a cohort model, students will engage in **4) PEER FEEDBACK DISCUSSION AND REFLECTION** learning from what others did that worked, and what did not work. Relying on peer feedback and support, students work together to build **5) SELF-EFFICACY**. Students recognize their assumptions, learn through experience, and reflect to create new knowledge and improve their business. Revised ideas are developed and tested in the following week. Through multiple iterations students develop a stronger product/market fit. Student ideas are developed and tested on a weekly or bi-weekly basis. This *limited time-frame* gives students opportunities for '*quick wins*', which can build self-efficacy. Or if they are going to '*fail, fail fast*', prior to investing extensive time and effort on an idea that doesn't resonate in the market.

**Reflective learning** is essential for entrepreneurship and is embedded into the VCE because knowledge is not learned from experiences but from reflection on experiences (Dewey, 1938). Reflection enables sense-making based on developing connectedness from purposeful experiences (Cope 2005; Kolb & Kolb, 2008; Marsick & Watkins, 2001; Rogers, 2014). Therefore, students use VCE to present, discuss, and receive peer feedback weekly on their concrete experiences, followed with journaling on their experiences. These activities offer real-time comparison against actual outcomes to enable deeper learning; moving students past assumptions to develop pattern spotting skills, essential to new ways of thinking (Cross, 2007; Rogers, 2014; Hägg & Kurczewska, 2019). Moreover, new conceptual knowledge developed through exploration, recalling, and reflecting on ones' actions and emotions, including fear of the unknown and fear of failure (Moon, 2004) help student adaptability and resilience.

**Recreating entrepreneurship in the classroom for student centric learning** evolved from our research on the impact of theory and process-based courses using business plans and models. Prior work with students engaged in such type of entrepreneurship education found a flatline on student intention to become entrepreneurs at four universities around the world: Colombia, Malaysia, Mexico and USA (Dobson, Castro Nieto, Dobson, & Moros Ochoa 2021; Dobson and Dobson, 2022). While real life entrepreneurs engage in little formal planning (Kisfalvi, 2002), most academic programming today follows a linear process-based approach, and is still focused on how to use business plans and models (Morris, 2014; Goldsby, Kuratko, Matthew, Marvel, & Nelson, 2017).

The VCE allows students to develop ideas based on their hunches, aligning with inquiry-based learning (Dewey, 1938) and creating ownership of learning using reflection. The VCE process moves EE away from a linear pre-determined process to an iterative non-linear dynamic process without pre-determine outcomes. Action-learning ensures students have concrete experiences of both failures and successes to reflect on. Learning from failures increases confidence (Pittaway & Thorpe 2007; Cacciotti, Hayton, Mitchell, & Allen, 2020) and perception of behavioral control for students as they overcome missteps. Furthermore, faculty guide students'

performance and practice of adult self-directed learning and problem-solving with learning theories present but invisible to the students.

**Startup opportunities** are not identified nor pursued in an experiential vacuum (Gartner, 1985), and entrepreneurs learn from mistakes (Macmillin & Dimov, 2015). Hence, VCE structures *cohort learning* and *ecosystem* engagement as learners go out in the greater university and wider community, in the quest for new knowledge (Walter & Block, 2016). Weekly assignments are designed to get students out of classrooms and test their assumptions in the marketplace, learning like real entrepreneurs: from customers, suppliers, and competitors; both from what works and what doesn't (Smilor, 1997).

This hands-on approach increases comfort with the inherent uncertainty in the entrepreneurial process (Knight, 1921). With time and cumulative concrete experiences (Cope, 2005; Pittaway & Thorpe, 2012) students gain experience mitigating risks, dealing with emotions, and learning to solve problems. Students move away from *learning about* entrepreneurship and *learn to become* entrepreneurs. Self-directed (Knowles, 1980) actions include: *Develop and test their assumptions; evaluate and reflect on feedback and outcomes; and make changes to their business to deliver greater value to the customers*. These actions are messy and chaotic and go against the assumptions of process-based courses and how things 'ought to be done'. Instead, students focus on developing novel innovations designed to destroy current 'best-practices'. Using VCE students can pursue their ideas, within their context, and with their agency to solve meaningful problems, driven by intrinsic motivation, and learn through chosen concrete experiences (Kolb & Kolb, 2008).

To assist faculty with the actionable and iterative action learning of VCE that moves beyond textbooks and hypothetical coursework, a conceptual model (Diagram 2) identifies the interplay of learning activities of students: *Learning by doing, from others, and by working together*. Whereby, students construct strong knowledge in entrepreneurship and develop problem-solving skills as they learn to navigate ambiguous situations (Pittaway & Thorpe 2012). In addition, today's students have a great need for feedback, but more importantly peer feedback (Bye,

2018), and so the VCE prompts cohort learners to collaborate and cooperate to propel learning journeys.

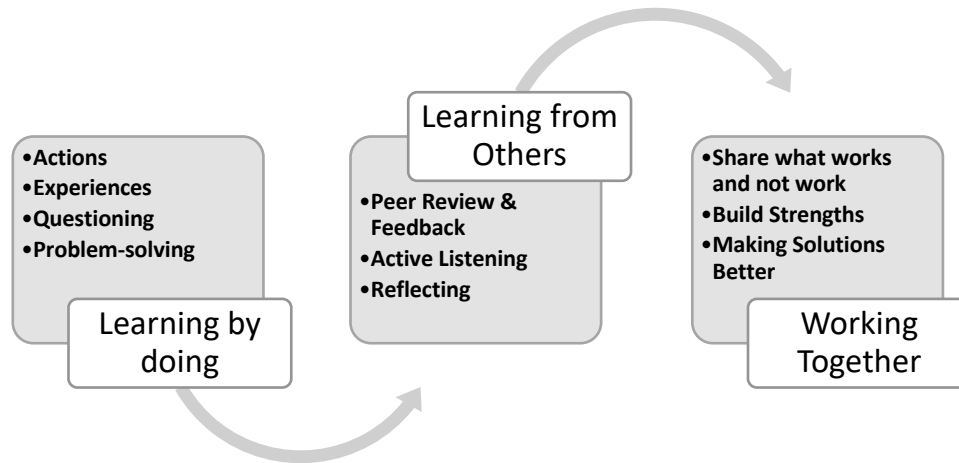


Diagram 2 The EE classroom - Interplay of learning by doing, from each other, and together

**Faculty become facilitators** of EE by developing self-directed students. Learning is free from lectures and eschews advice. Instead, using the five-step VCE faculty actively listen, monitor learning, and formulate appropriate inquiry-based questions from students' experiences to probe and help draw out meaning. Facilitating the cohort through VCE iterations creates a learning environment that values diversity of context, background experiences, and taking action. As agency and accountability grow, students learn to provide robust peer-feedback and help each other succeed. As a safe space is created by faculty, trust develops, allowing students to deal with the emotional roller coaster often associated with entrepreneurship.

Criteria for student businesses are that; they must be legal, abide by the school code of conduct, and align with their moral compass. Faculty should be comfortable not fully understanding the student's ideas, or if they will be successful or not. Principally, telling students what to do, or giving advice, reduces student's agency and accountability.

**Assessing Learning** using the VCE recognizes that the vast majority of businesses fail, so it is unreasonable to expect the success of all student businesses. Fear of business failure, coupled with a fear of failing the course, will inevitably lead to learning paralysis. Students need to trust that the success or failure of their business will not adversely impact their grade (Dobson,

Jacobs, & Dobson, 2017). Assessments and grading rubrics are based on three elements: *Time/Effort* spent working in their business, *Tactics/Strategy*, and *Progress* in developing product/market fit for their idea. Entrepreneurship is a leap into the unknown and once success of the business is de-coupled for the grade, students will feel comfortable developing novel solutions to 'sticky' problems that are meaningful to them, which they will pursue with passion and vigor.

Formative and summative assessments form student's weekly entrepreneurship actions using VCE steps. At the start of the semester students are tasked with the *Make a Million Dollars* activity, to make as much money as they can in one week, using one dollar. The dollar, a 'red herring', has students work within resource constraint; or they can ignore the dollar to create non-cost ways to make money. After presenting, discussing, peer-reviewing, and reflecting on the business ideas and outcomes from week one, each student takes someone else's idea and tries to do it better using the *Rinse, Lather, Repeat* activity in week two. Over the course of the semester, fifteen unique activities build soft-skills, entrepreneurial competencies, and develop problem-solving engagement (Biggs, 2011). At the end of the semester, students submit a reflective essay and video allowing deeper sense making of their learning journey and the knowledge in entrepreneurship.

Facilitation of the VCE builds an inclusive learning by creating challenging yet achievable tasks meeting students where they are, not where faculty believe they should be. Student-centric learning focuses on adult-learning approaches to develop problem-solving skills, personal agency (Merriam & Bierema, 2013), and creates autonomy of one's learning (Hase & Kenyon, 2013). This approach transforms students from passive recipients of knowledge transfer, to active learners in constructing their knowledge. This course is an action-learning lab and often results in students continuing their businesses post semester.

### **Final thoughts**

There are conundrums between theory and practice (Neck, Green, and Brush, 2013) and questions regarding EE's effectiveness (Naia, Baptista, Januario, & Trigo, 2015) in developing the next generation of entrepreneurs. We argue that it is in the real-life practice of

entrepreneurship that students reflect and learn from their experiences and build entrepreneurial competencies.

If EE produces successful entrepreneurs, faculty should structure courses that facilitate student agency, autonomy, and accountability. Curricula designed to expose students to concrete experiences, with subjective failure may help EE form more entrepreneurs. The VCE facilitates the development of ideas through action and iterative learning of concrete experiences (Cope, 2005) and offers both the faculty and students a simple yet effective approach that fosters learning entrepreneurship.

## References

- Biggs, J. B. (2011). *Teaching for quality learning at university: What the student does*. McGraw-hill education (UK).
- Bye, D. (2018). Beyond stereotypes: How to manage & motivate millennials. *HR Specialist*, 16(3), 7.
- Cope, J. (2005). Toward a dynamic learning perspective of entrepreneurship. *Entrepreneurship Theory and Practice*, 29(4), 373–398. doi:10.1111/j.1540-6520.2005.00090.x
- Cross, J. (2007). *Informal learning*. Pfeifer, San Francisco, California, I.
- Cacciotti, G., Hayton, J. C., Mitchell, J. R., & Allen, D. G. (2020). Entrepreneurial fear of failure: Scale development and validation. *Journal of Business Venturing*, 35(5), 106041.
- Dewey, J. (1938). *Experience and education*. New York, NY: Collier Books.
- Dobson, J. A., Castro Nieto, Y., Dobson, L., & Moros Ochoa, A. (2021). Success Through Failure: Towards a Problem-Based Approach to Entrepreneurship. *Entrepreneurship Education and Pedagogy*, 4(3), 225–260. <https://doi.org/10.1177/2515127419884132>
- Dobson, J and Dobson, L. (2022 In Press). Success Through Failure. In Guillermo J. Larios-Hernandez, Andreas Walmsley, Itzel Lopez-Castro (Eds.), *Theorising Undergraduate Entrepreneurship Education: Reflections on the development of the entrepreneurial mindset*. New York, NY. Springer International Publishing.
- Dobson, J. A., Jacobs, E., & Dobson, L. (2017). Toward an experiential approach to entrepreneurship education. *Journal of Higher Education Theory and Practice*, 17(3), 57-69.



Gartner, W. B. (1988). "Who is an entrepreneur?" is the wrong question. *American Journal of Small Business*, 12(4), 11–32. Retrieved from <https://wuecamous2.uni-wuerzburg.de>

Goldsby, M. G., Kuratko, D. F., Marvel, M. R., & Nelson, T. (2017). Design-centered entrepreneurship: A four stage iterative process for opportunity development. *Journal of Small Business & Entrepreneurship*, 29(6), 477-490.

Hägg, G., & Kurczewska, A. (2020). Guiding the student entrepreneur—Considering the emergent adult within the pedagogy–andragogy continuum in entrepreneurship education. *Education+ Training*.

Hase, S. and Kenyon, C. (2000). From andragogy to heutagogy. Ultibase, RMIT. <http://ultibase.rmit.edu.au/Articles/dec00/hase2.htm>

Kamovich, U., & Foss, L. (2017). In search of alignment: A review of impact studies in entrepreneurship education. *Education Research International*, 2017.

(Kisfalvi, 2002). Kisfalvi, V. (2002). The entrepreneur's character, life issues, and strategy making: A field study. *Journal of business venturing*, 17(5), 489-518.

Knight, F. H. (1921). *Risk, uncertainty and profit* (Vol. 31). Houghton Mifflin.

Knowles, M. S. (1980). *The modern practice of adult education: From pedagogy to andragogy*. Englewood Cliffs, NJ: Prentice Hall Regents/Cambridge Adult Education.

Kolb, A. Y., & Kolb, D. A. (2008). Experiential learning theory: A dynamic, holistic approach to management learning, *Education and development*: 101(20), 42-68.

Marsick, V. J., & Watkins, K. E. (2001). Informal and incidental learning. *New directions for adult and continuing education*, 2001(89), 25-34.

- McMullen, J. S., & Dimov, D. (2013). Time and the entrepreneurial journey: The problems and promise of studying entrepreneurship as a process. *Journal of management studies*, 50(8), 1481-1512.
- Merriam, S. B., & Bierema, L. L. (2013). *Adult learning: Linking theory and practice*. San Francisco, CA: John Wiley & Sons.
- Morris, Michael H., (2014). *Annuals of entrepreneurship education and pedagogy*. Edward Elgar Publishing Limited. Northampton, Mass, USA.
- Naia, A., Baptista, R., Januário, C., & Trigo, V. (2015). Entrepreneurship education literature in the 2000s. *Entrepreneurship education literature in the 2000s*, (1), 111-135.
- Neck, Heidi M., Greene, Patricia G., & Brush, Candida G. (2014). Practice-based entrepreneurship education using actionable theory. In Eds Morris, Michael H., *Annuals of entrepreneurship education and pedagogy*. Edward Elgar Publishing Limited. Northampton, Mass, USA. doi:10.4337/9781782540564.
- Pittaway, L., & Thorpe, R. (2012). A framework for entrepreneurial learning: A tribute to Jason Cope. *Entrepreneurship & Regional Development*, 24(9-10), 837-859.
- Rogers, A. (2014). *The base of the iceberg: Informal learning and its impact on formal and non-formal learning*. Leverkusen-Opladen, Germany: Barbara Budrich Publishers.
- Smilor, R. W. (1997). Entrepreneurship: Reflections on a subversive activity. *Journal of Business Venturing*, 12(5), 341-346.
- Walter, S. G., & Block, J. H. (2016). Outcomes of entrepreneurship education: An institutional perspective. *Journal of Business venturing*, 31(2), 216-233.

Wu, H., & Gu, J. (2017). Rethinking What Is Entrepreneurship Education: A Macro Integrative Perspective. *International Education Studies*, 10(6), 150-158.