



Experiential Entrepreneurship Exercises Journal

***Enabling More Active Entrepreneurial Classrooms
Through Sharing, Learning & Doing***

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If you are passionate about increasing the role of experiential learning in entrepreneurship education, and are interested in joining the Editorial Board, please contact Doan Winkel at

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Call for Articles

Experiential Entrepreneurship Exercises Journal (EEEJ), published quarterly by Illinois State University's George R. and Martha Means Center for Entrepreneurial Studies, is a forum for the dissemination and exchange of innovative teaching exercises in the fields of entrepreneurship, innovation, and small business management. EEEJ is currently seeking original contributions that have not been published or are under consideration elsewhere.

The scope of all articles published in EEEJ is limited to experiential exercises, with maximum relevance to those teaching entrepreneurship, innovation, and small business management. The Journal appeals to a broad audience, so articles submitted should be written in such a manner that those outside of academia would be able to comprehend and appreciate the content of the material.

Format

All formatting requirements and author guidelines can be found at http://launchideas.org/?page_id=2

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All articles submitted to EEEJ will be double-blind reviewed. Authors will normally receive reviewers' comments and editor's publishing decision approximately 60 days after submission.

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Setting the Stage: Thoughts from the Ivory Tower

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Textbooks. Business plans. Feasibility studies. Guest lecturers. Comprehensive exams.

As with any good startup, the time has come to pivot.

[Lean startup](#). [Design thinking](#). [Customer development](#). [Idea modeling](#). Rapid prototyping.

The tools entrepreneurs use to build sustainable, scalable new ventures have changed, so our classrooms need to change to reflect this reality. No more do founders write business plans for bankers. They interact directly with potential customers. No more do founders spend countless hours conducting market research through their keyboard. They validate (or invalidate!) hypotheses using experimentation and rapid prototyping. No longer do they build in secret behind closed doors for years. They ship faster, and therefore learn faster.

Our classrooms must keep pace; the current approach to how we engage our students inside (and outside) the classroom must change. Entrepreneurship classrooms are the perfect breeding ground for a new education model, because we (should!) espouse collaborative experimentation and disruption, learning by doing and from failure, and creating and capturing value for customers.

Our goal with the *Experiential Entrepreneurship Exercises Journal* is to empower educators to continue changing the landscape of today's and tomorrow's classroom. We strive to collectively develop a toolkit of active learning exercises for a variety of topics relevant to entrepreneurship, creativity, and innovation. This journal is a platform for educators to share cutting edge, experiential exercises with each other in an effort to collaboratively create more impactful learning environments for students. Entrepreneurship education must focus on applied learning, and thus the core of this learning environment must be the sort of exercises shared in the issues of this journal.

Please try these exercises and share feedback on how they worked for you. Please share your exercises that get your students learning by doing. Join the community of educators working to prepare today's students for tomorrow's entrepreneurial journey.

Setting the Stage: Thoughts from the Field

Alex Cowan

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[Alex's Bio](#)

[Alex's ideas on entrepreneurial education](#)

Nothing plays like a plan.

On the one hand, it delivers on our desire for control. On the other, it allows us to fully harness ourselves to the task at hand, free from worry because our plan has provided for the 'big picture'. For the operator of a chicken feed factory in the US in the 1950's, a one-year or even two-year plan might serve relatively well.



For the entrepreneur (or intrapreneur), an A+ plan and an A+ for hard work easily and often earns an F in outcome. Granted, entrepreneurship is a risky business. That said, the dominance of plan-driven, scale-oriented business education in current curricula sets future entrepreneurs up for more and bigger failures than could be had with the alternatives.

What are these alternatives for entrepreneurship education? Some of the most important (and happily for us also the fastest-growing) are:

1. literacy in human-centered design and design thinking
2. the use of small batch experiments with explicit validation criteria
3. collaboration in flat, fluid teams that include specialists but avoid over-specialization

Another reasonable question about the alternatives: If these techniques are so effective, why aren't they already part of mainstream business education? I think there are three primary reasons.

First, powerful aspects of our millenia-old emotional wiring dislike them. Most of us are not naturally empathetic and deeply interested in others. Instead, our primal urge is to compel others to our thoughts and actions and we react with fear and caution when others challenge us. We hate the uncertainty of working in small batches, reevaluating the big picture every few weeks. Collaboration is fine, but we covet the self-esteem our expertise provides and tend to measure our efficiency locally against our own to-do list.

Second, scale-oriented business tools (like the business plan) are deeply ingrained in the way we teach, execute, and think about business. And as omnipresent as traditional methods are in our day to day, they hold geometrically larger real estate in our subconscious models about what a business is and how we relate to it.

Third, teaching the three skills above requires highly energetic, deliberate, and disruptive effort on the part of educators. To graduate entrepreneurs with a 21st century skill set, the educator must both lower the barrier to applying these new techniques through practice and fundamentally change the way students think about new ventures to motivate their use.

The *Experiential Entrepreneurship Exercises Journal* is dedicated to delivering against this third challenge. While the case method improved on pure theory, today's cutting edge educators use experiential learning to deliver key skills for today's entrepreneur. The journal's goal is to build up a critical gravity for the use of experiential learning in applied entrepreneurship.

We hope you'll consider trying these techniques in the classroom, telling us how they work for you, and sharing your ideas on how to help today's entrepreneurs create better ventures.



Got A Minute? An Experiential Frame Exercise in Entrepreneurial Ecosystems

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Abstract

This exercise utilizes an experiential learning approach coupled with a frame game to challenge students to develop attributes of a theoretical entrepreneurial ecosystem. Students have six sixty second intervals to ideate unique recommendations for a theoretical ecosystem, grounded in theory. Unique ideas are rewarded at a higher rate than ideas that are common among groups. The goal of the exercise is to facilitate creativity through brainstorming and problem solving under time constraints.

Keywords: Entrepreneurship, Ecosystems, Frame Game, Experiential Exercise, Policy Development, Brainstorming

Manuscript Subject Area: Entrepreneurship

Manuscript Subject Topic: Entrepreneurial Ecosystems

Student Level: Undergraduate and Graduate

Time Require: 45-60 minutes (depending on class size)

Recommended Number of students: 25-50

Entrepreneurial ecosystems are communities consisting of many stakeholders, such as governments, universities, investors, mentors, service providers, media, and large companies that can play a key role in the development in the start-up community (Feld, 2012). Entrepreneurial ecosystems have a positive effect on venture creation because of their unique character, the co-existence of competition and cooperation (Romero and Montoro 2008). There are three main explanations relating to the formation and functioning of ecosystems.

The first explanation, based in economic theory, is agglomeration economies (Marshall, 1920). This line of analysis argues that companies located in an area benefit from external economies of scale. Emerging companies need some common inputs, and by sharing a common geography companies can share the fixed costs of these resources external to the company. As the pool of start-ups in the area share the cost of specialized inputs, the average cost per start-up drops for the specialized inputs, this provides direct economic benefit to companies located within the start-up community.

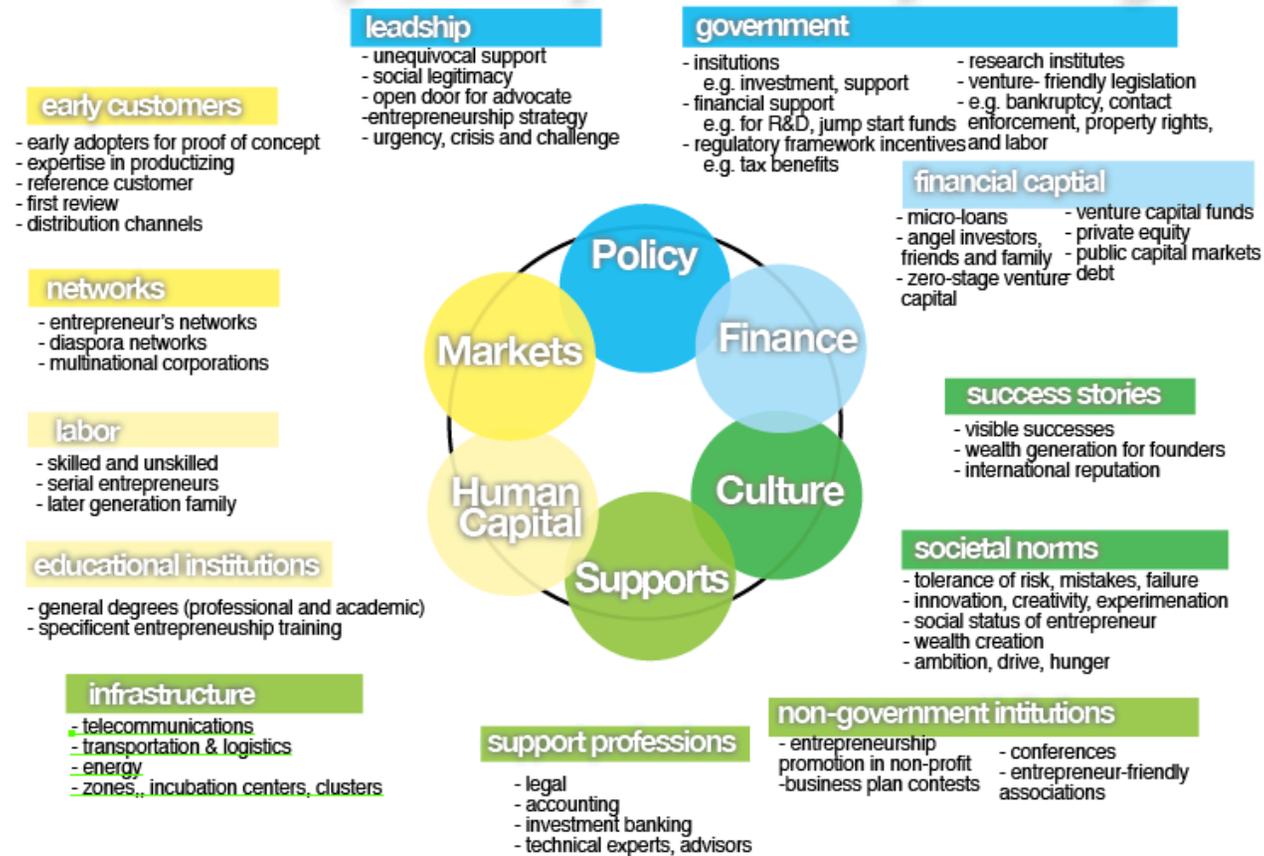
The second explanation is derived from sociology, and is based on horizontal network effects. Horizontal network effects purport that a culture of openness and information exchange among members in a system will enhance value for existing network members (Saxenian, 1994). Such attributes allow members in a network high flexibility to adapt quickly to change.

Finally, the third explanation for entrepreneurial ecosystems is based on the work of Florida (2002) in the field of economic geography. According to Florida (2002), the creative class (e.g., entrepreneurs, engineers, professors, and artists) creates meaningful new forms. The existence of a critical mass of creative class members in an area will create a competitive geographic advantage over other geographies because creative class members have a vested interest to create an environment that is pleasant, culturally diverse, and tolerates novel and contrarian ideas.

The entrepreneurship ecosystem framework proposed by Isenberg (2010) consists of six domains building off economics, sociology, and geography (see Figure 1). In reality, the entrepreneurship ecosystem consists of hundreds of specific elements that, for convenience, Isenberg (2013) groups into six general domains: (1) a conducive *culture*, (2) enabling *policies and leadership*, (3) availability of appropriate *finance*, (4) quality *human capital*, (5) venture-friendly *markets* for products, and (6) a range of institutional and infrastructural *supports*. Figure 1 expands on several of the elements, initiatives, and attributes specific to each domain within the entrepreneurial ecosystem identified by Isenberg (2010).

Figure 1. Sub-Areas of the Entrepreneurial Ecosystem¹

Domain of Entrepreneurship Ecosystem



¹ Adapted from Isenberg 2009

The goal of entrepreneurial ecosystems is to develop successful strategies for accelerating existing processes that foster entrepreneurship. Regions interested in developing an entrepreneurial ecosystem should focus on fostering mindsets among stakeholders that center on creating a sustainable and organic environment of entrepreneurship. Furthermore, entrepreneurial ecosystem development is a process, just like the process of entrepreneurship itself, which should be aimed at stakeholder collaboration in defining and achieving a common entrepreneurial vision. In order to achieve the entrepreneurial vision, regions need identify methodologies for integrating and leveraging local resources to do so. However, policymakers need to be aware that entrepreneurial ecosystems can be fostered and accelerate but you can not just create one. The mindset of policymakers should be focused on cultivation, and let entrepreneurs catalyze the effort. In order to ascertain effectiveness of ecosystems, regions should also focus on a set of programs and tools to measure potential outcomes of the entrepreneurial ecosystem (e.g., job creation, new venture foundings, wealth, etc.) Specifically, one must be mindful that practices and values vary considerably among cultures, and not all potential policies, initiatives, or mindsets that promote entrepreneurship in one culture, will fit in another.

This exercise applies an *experiential learning* approach by utilizing an instructional *frame game* in a group cooperative context. The objective of this exercise is to introduce students to the concept of entrepreneurial ecosystems developed by Isenberg (2011). The objective of an experiential exercise is to bring concepts to life so students experience them physically and emotionally (Gentry, 1990). A successful experiential exercise makes abstract concepts concrete and meaningful. Therefore, the goal of participation is to help students ascertain theory informs practice.

A frame game is an instructional game very consciously created and designed to allow content to be easily loaded (Stolovitch and Thiagrajan, 1980). The beauty of the game format is that while it is simple to understand and play, it allows for many variations in content and uses. It accepts any material, can be adapted to any level of use, and is instantly recognizable.

Learning Objectives

- To demonstrate how creativity and brainstorming techniques can approach real world problem solving.
- To develop the most uses and applications of policies to promote the development of entrepreneurial ecosystems strategically.
- To re-energize student groups with quick and playful brainstorming.
- To allow teams to challenge another on how to best develop practical applications of initiatives, policies, or programs grounded in theory.

Session Supplies

- A stopwatch or other timing device.
- A whistle or noise maker.
- Prizes (optional).

Process

For this exercise, we adapt the “Got a Minute?” exercise developed by Sugar (1998) to expose students to the entrepreneurial ecosystems concept (Isenberg, 2011). It should be noted, although we use the concept of entrepreneurial ecosystems as the concept of interest, the concept of entrepreneurial ecosystems can be interchangeable to any particular concept the instructor wishes to explore. It is important before engaging in the exercise to devote lecture time during to discuss the theoretical foundations of entrepreneurial ecosystems. Instructors should introduce the three prominent perspectives in economics, sociology, and geography (discussed earlier) whose goal is to explain why ecosystems develop.

Assign students into teams of four to seven. Try to make student teams heterogeneous. After students are in teams, assign each team a region or country for which they will develop recommendations.² Introduce participants to basic concepts of brainstorming: (1) Do not critique others ideas; (2) Do build on others ideas; (3) Do go for the greatest number of ideas; (4) Do get outrageous, it is easier to tone down an idea than create anew.

Define the task at hand: *“I will select one category of the entrepreneurial ecosystem, at random, from the different domains. Each team has sixty seconds to identify as many possible ways to develop policies, initiatives, or ways of thinking to promote and develop that particular domain of the entrepreneurial ecosystem. Record your ideas on a paper. When time is up, each team will post its list and report on items recorded. Teams are allowed to challenge items listed, if the team believes the attributes of the policy or imitative does not strategically fit within the domain of the ecosystem it is proposed for. Teams whose ideas are successfully challenged will be penalized. However, unsuccessful challenging teams will also be penalized.”*

Announce the frameworks for scoring policies and incentives: (1) Earn five points for each unique item; (2) Earn 1 point for each item found on another team’s list. (3) If an idea is challenged successfully, the team challenged loses two points. (4) If the challenging team is unsuccessful in challenging the idea, the challenging team loses five points. (6) The instructor will hear the case and defense of any challenges and deliver a judgment. Continue for six rounds in each of the six ecosystem domains. The team with the most points when play ends is the winner.

Next, time the teams for sixty seconds. Have each team turn in responses and read their list aloud. When all teams have reported, tally their scores for each round. Before moving on to the next round open the floor for any challenges.

Observed Outcomes

Students have reported that this exercise has challenged them to apply theory to develop practice. Some example unique ideas generated in class from this exercise have included: (1) *Policy*: Lottery Tax Incentives, new companies are entered into a lottery and those new ventures selected do not pay taxes for first three years of operation; (2) *Finance*: Business Angel Incubators, where business angels compete over new ventures; (3) *Culture*: Cultural Conferences, to promote among societal members an open mindedness and acceptance of values that have a positive impact on venturing; (4) *Support*: Development of business to business network that incentives established business to mentor and purchase products from new and nascent ventures; (5) *Human Capital*, create entrepreneurship Massive Open Online Courses (MOOC) in collaboration with established universities and prominent entrepreneurs; and (6) *Markets*: engage and incentive creative class members to create a first to market product review network to provide feedback on new products/markets. In sum, participants often stated how the exercise challenged them to connect the unconnected in a contrarian manner to identify high impact recommendations to support entrepreneurship among multiple stakeholders.

² It is up to the instructors discretion if teams can choose the same region or country among teams.

Student Reaction

After an introduction and analysis of business ecosystems, it is clear to see that several factors play significant roles in the creation of an environment of this scope. To emphasize this point, the class was divided into small groups each of whom represented a foreign country. The countries varied, and included Chile, Saudi Arabia, China, Singapore, New Zealand, Australia, Canada, and Brazil. From emerging economies to powerful world leaders, the diversification of nations helped broaden the ideas of different initiatives for the in-class exercise. Each group was to solve or create six initiatives within each of the different ecosystem domains, from the perspective of their country. The sections included markets, finance, culture, supports, human capital, and policy. The specific goals were outlined in front on a presentation slide in the room and teams were given a brief 60 seconds to scribble down as many ideas as possible to solve each part. Students were pressed to jot down thoughts, either feasible or seemingly impractical, to satisfy the goals in the section. Due to the speed of the exercise, students were not critical of others' ideas and continued to shout out new thoughts as quickly as possible. After the eighth minute, the top three ideas from each group for each section were combined in a large list. Different perspectives from different countries contributed to a unique hodgepodge of solutions. Concepts such as "collaborative office space to spur innovation and entrepreneurship" and "tax breaks for business who created a certain target number of new jobs" were a few of the interesting ideas generated from the exercise. In a way, the in-class exercise created a small learning ecosystem in which business students could identify key factors of these unique market environments and work together to generate ideas to cultivate and promote them into the future.

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Innovation Marketplace

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Abstract

Unpredictable innovation selection is an essential lesson for entrepreneurship students. The non-equifinality of innovation and entrepreneurial activities may appear obvious in hindsight, but is best experienced and absorbed through personal experience. This surprisingly easy and fun classroom activity simulates an innovation marketplace. Students generate a topic-specific innovation and participate in a marketplace of ideas. The results demonstrate how and why the best innovations are not guaranteed market entry or success, emphasizing the human and social nature of entrepreneurial action.

Keywords: entrepreneurship, innovation, market, nonequifinality, simulation

Manuscript Subject Area: Innovation and entrepreneurship

Manuscript Subject Topic: Entrepreneurial action and outcomes

Student Level: Any

Time Required: 10-20 minutes

Recommended Number of Students: 10-250

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Most innovations do not succeed in the market (Drucker 1965). Students of innovation and entrepreneurship often learn this lesson through hindsight. More often than not, however, examples are presented as quirks of historical context (e.g. the continued use of QWERTY keyboards) or strategic choice (e.g. the victory of VHS over Beta). In reality, the non-equi-finality of innovation process carries more important lessons in both theory and practice. Students benefit from a participatory exercise, making the learning personal rather than dependent on familiarity with a given product success or failure. Nascent entrepreneurs learn that market forces drive apparently “imperfect” and unpredictable outcomes from the first stages of ideation.

This surprisingly simple activity effectively serves a broad range of student types and classroom sizes. Students physically engage in a marketplace of ideas to learn how and why some innovations succeed while others fail. One of the most powerful aspects of the exercise is that variation in student interest, knowledge, and capacity help to emphasize the unpredictable and potentially “unfair” nature of innovation selection.

Materials and setup

The activity may be conducted with no materials or setup; the use of post-its or notecards, a flipchart, chalkboard, or A/V setup are recommended. Post-its or notecards offer a record of the full set of innovations which may be of separate value. Instructors should distribute one post-it note or notecard to each student and ensure that writing instruments are available. Similarly, instructors may prefer a learning space that facilitates ease of student movement, though key lessons may be gained in a space that restricts movement by some or many students. Background on drivers of innovation adoption may be provided at the instructor’s discretion and pedagogical preference.

Starting the activity

The instructor should ask students to generate an innovation within a short time frame (2-5 minutes maximum). It is recommended that all students generate an innovation related to a familiar topic to facilitate comparison. A useful question, which may also provide valuable feedback to the instructor or the institution generally, is: “How could your student experience [in this class / at this university] be improved?” Additional guidance is suggested:

- Encourage students to be creative or provocative, but suggest that the innovation be within the realm of reality. For example, the student experience might be improved by receiving \$1 million on completing the course, but such an outcome isn’t realistic.
- Ask students to write the innovation down in one short sentence. This helps commit the student to the idea, which plays a key role in the simulation.
- Encourage students to come up with one idea, and reassure them it does not need to be “spectacular” if they are struggling.

Running the marketplace

The instructor should ask all students to stand up. The instructor should read the rules (Appendix A) and, if possible, display them on a screen. Students should be told that the activity runs for a limited time. Recommended marketplace times are: 10-25 students → 5 minutes. 25-100 students → 10 minutes. 100+ students → 10-15 minutes.

The instructor should explicitly initiate the activity, for example by saying “Go!” As the activity starts, the instructor may choose to prompt recalcitrant students to participate. In rare cases, students might attempt to share all their ideas by broadcasting them one at a time. It’s best not to intervene, as these usually degrade to individual or small group conversations, but if it appears that true organization is emerging (e.g. sequential pitches and voting) the instructor might choose to break up organized activity by reminding them of the time limit or splitting the group in half.

Stopping the marketplace

The instructor should use good judgment to determine when to end the marketplace. Some small groups converge to a limited set of ideas quickly; large groups are unlikely to converge to only a few ideas within a reasonable time. The instructor should gain the attention of the students and ask them to stand where they are. Remind them that if student A has joined student B's team, then student A should give her notecard to student B. So some students should be holding numerous cards, some students should have their own card, and some students should not have a card.

The instructor should ask students without a card to sit down wherever is convenient. It generally improves student engagement to list some or all of the "winning" ideas. The instructor may choose to winnow down the set of "winning" ideas depending on the size of the class. For example, in a class with 100 students, there may be 50 students holding cards. The instructor might ask students to sit down if they have less than 2 cards, less than 3 cards, etc. until few enough remain to read out and record. The instructor should ask the remaining "winning" ideas to read out their ideas, and may choose to record them on a board/flipchart. For larger groups, it may be interesting to note how many supporters the top ideas had accrued.

All students may then be asked to sit down as convenient.

Teaching and Learning

The instructor may choose to comment on the winning ideas, especially if some are impossible, unusually inventive, or otherwise noteworthy. The instructor should then ask: "*Are we guaranteed that the best idea won?*" In many cases, students may note the lack of ideation time. The instructor may choose to address this or not as an unresolvable challenge, since it is not possible to know whether more time would lead to better ideas.

Below are some of the potentially useful lessons from the exercise. Sophisticated student groups may develop some or all of the lessons with limited prompting. Suggested prompts are provided. It may be useful to discuss one general concept, identify its "academic" label, and then move on to the next. The discussion should, obviously, be tailored to the type and number of students (undergrad vs. graduate, technical vs. business). Discussion may be affected by student experience or field of interest (e.g. computer science, biotechnology).

Resource scarcity - Not all innovations can be supported; entrepreneurs must compete for scarce resources (Stevenson and Jarillo 1990), including limited time. While this rule is imposed by the instructor in the activity; it is important to have students discuss whether this is realistic (it probably is) and how it affects the behavior of the participants. Prompt: "Couldn't we just implement all the ideas?"

Initial conditions. The outcome (winners) depend in part on initial conditions (Cooper et al 1994). Where students were sitting at the start of the activity might impact who they speak to or how many other students they speak to during the activity. Prompt: "Did it matter where you were at the start of the activity? Why?"

Path dependence. The outcome (winners) may be determined by the order in which interactions take place (Sydow et al 2009). For example, if the students with the two best ideas in the class happened to talk to each other first, it's possible that one of them gave up their idea right at the start. Prompts: "Are we guaranteed that the top three ideas all survived to the end?" "Is the market for innovation like a sports tournament with seeded teams? Why or why not?"

Non-equifinality. Even given the same initial conditions and paths, it's possible for outcomes to be affected by completely unrelated factors (Dew 2009). Prompt: "How could the marketplace be impacted by a student receiving an important text message?"

Opportunity recognition – Innovation and opportunities are influenced by prior experience (Shane 2000). The set of ideas generated is likely driven by the recent, personal experience of the participants. Prompt: "How many of you came up with an idea based on personal

experience? How many of you came up with an idea from personal experience in the last month? Is that important to notice?"

Entrepreneurial agency. Innovation quality may be important, but survival may be determined by the characteristics of the innovator (McMullen and Shepherd 2006). Prompt: "Did it help to be a good communicator in this activity? Why? Is that likely to be a factor in the real world of innovation and entrepreneurship?"

Legitimacy effects. Sometimes ideas are selected because they are associated with people perceived to be successful or legitimate (Lounsbury and Glynn 2001). For example, some students might surrender their ideas to a student recognized as smart or successful in this or another course. "In your discussions, were you affected by knowing some students already?"

Network effects. The survival of ideas may be driven by whether the innovator can assemble and leverage a team, and how well the team networks in the target industry (Brüderl & Preisendörfer 1998; Harper 2008). In small classes such effects may be minimal. In large classes, some students might send out converts to rapidly expand the exposure of the idea. Prompt: "Did anyone split up their team to try to reach more people?"

Innovation affinity. Inventors may become emotionally attached to their own innovation very quickly, which may then inhibit rational or objective evaluation (George and Bock 2008). Prompt: "How many of you like your original idea? Did any of you stick with your original idea even when you thought someone else's might be better? What do you think happens when someone has been working on their own idea for a long time?"

Concluding the activity

The instructor may remind students:

- Great ideas and innovations are drivers of technological and economic change.
- The best innovations are not guaranteed market success.
- The role of the entrepreneur is critical to the commercialization process, often generating unexpected or entirely unpredictable outcomes (George and Bock 2012).
- The entrepreneur does not have to be the same person as the inventor.
- Some drivers of commercialization success may be partly or entirely out of the inventor or entrepreneur's control.

The instructor may choose to collect all of the notecards, especially if the initiating question presents the potential for useful feedback. Instructors are encouraged to make the full set of ideas available to students after the activity for their own edification.

Student Reaction: Alanna Ford, University of Edinburgh

I participated in the Innovation Marketplace a Green Entrepreneurship course in Spring 2013. There were about 25 other MBA and MSc students in the class. After being asked to generate concrete ideas for ways to improve University of Edinburgh's Business School, we were then prompted to spend 10 minutes to convince our fellow classmates to back our idea – and in turn abandon theirs. After writing our ideas on post-its, the classroom became abuzz with activity as students energetically spoke about their ideas, working to win over other people as quickly as possible.

While the exercise was playing out, several small clusters started forming. My idea for innovation was more client projects to root learning to the real world. My idea required quite a bit of background explanation, especially to students from Asia and Europe where universities emphasize more theory. Other students' ideas were simple and immediately relatable to anyone in the room. For instance, one student suggested that the school should provide free tea and coffee to all Business School students. I'll admit that it was hard for me to compete with such a straightforward and attractive idea. It didn't matter where you were from, you could understand in less than 15 seconds why that idea would benefit you.

Of course there were additional factors at play that determined which ideas got adopted. Some students were louder and more outgoing than others, making them more comfortable convincing their peers. For some of the more shy or quiet students, the process of having to instantly convince their peers in real time seem to make them uncomfortable (again, this could have been a cultural issue since we had people from Germany, South Africa, China, the US, etc represented in the room). For me personally, I liked sharing my idea with others because it was something I had been thinking about and discussing with some of my peers for months. As an outgoing American, I wasn't shy in trying to bring people on board and advocate for more applied learning in our curricula.

I found that the simulation was incredibly insightful for several reasons. First, providing a movement-based activity accommodated different learning styles and a definite break from the typical university learning environment where students often spend a lot of time sitting and listening rather than doing. Because I'd been personally involved in both promoting my own idea and having to listen to other people promote theirs, I could clearly relate to the challenges of getting consensus around an innovation. Secondly, the simulation became a tangible illustration for insights that apply to not only the classroom environment and the specific lesson at hand, but also to multiple areas of 'real' life. From the importance of effective communication and initial context, to understanding network effects and opportunity recognition, I have continued to return to these ideas in the year since completing the class. For instance, when launching a new business after graduating, I understood the importance of speaking with the right people in effective ways in order to gain new clients. I also knew that I needed to be in the optimum context for my industry, prompting me to move from Edinburgh to London where I could meet more like-minded and leading thinkers. I remembered these lessons watching an Edinburgh-based fashion app startup geared toward the American market fail; the founders were in the wrong place, with the wrong product, and the wrong time.

I think this activity could also serve career services departments of universities because many of the insights can be applied to a general job search.

Appendix A: Suggested Marketplace Rules

- Talk to anyone you want.
- End conversation with that person whenever you want.
- If someone's innovation is better than yours, for whatever reason, give your notecard/post-it to that person. You are now on that person's team.
- An innovation must have at least one supporter, other than the inventor, to win

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Alien Anthropologist On Earth

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Abstract

Innovation often begins with an “eye.” Close observation of everyday behavior is one of the most important tools for discovering game-changing problems to solve for the innovator and entrepreneur in training. However, our habits and routines often obstruct our ability to see the world with fresh eyes and this limits our insights. This exercise returns energetic and creative newness to everyday perception by placing student in the role of an alien anthropologist visiting some small part of planet earth for the first time.

Keywords: innovation, entrepreneurship, observation, problem discovery

Subject Area: building discovery skills

Subject Topic: customer insight

Student Level: undergraduate

Time Required: 30-60 minute observation period, 60+ minutes to write up, and class sharing

Recommended Number of Students: any, can be done individually or in small groups

Close observation of human behavior is essential to the innovation process. This is one of the most powerful methods to discover hidden problems and novel insights that spark the development of new products and businesses. IDEO, one of the world's leading product development companies, places this skill at the center of its discovery process (Kelley and Littman, 2005).

The challenge with observation for the innovator is that the adult brain has routinized perception for most of the situations it encounters (Eagleman, 2012). The brain automatically fills in much of what it visually perceives because it is fast and efficient to do so. This frees up our mental processing to attend to more specific concerns and tasks we have not mastered.

This efficiency becomes a key barrier to close and deliberate perceiving – we look, but we do not see. This is often referred to as the “curse of the expert” or the “curse of expertise” that explains how preconception becomes the majority of our perception.

So how do we go about training new innovators to see with fresh, beginner eyes the familiar things that people do? If déjà vu is the feeling of experiencing something previously, then “vuja de” is the feeling of experiencing something for the very first time. In these first-time moments, we are more aware and attentive because these things show up as new and foreign.

While the notion of the beginner's mind seems to have wide acceptance in product development and startup circles, the specific methods for deploying this in practice appear less well-defined. The question became how do we create a classroom exercise that equips students to experience “vuja de” reliably and repeatedly so they develop close, discerning observational skills in their everyday lives?

One of our answers is the alien anthropologist on earth exercise. This exercise places students in the role of an extraterrestrial sent to study the behaviors of humans in particular contexts and develop a report of the findings. The idea is to make students shift into the role of a complete foreigner so they can see again with fresh eyes the behaviors and culture that has become all too familiar and taken-for-granted.

Step 1: Send Your Aliens on a Mission

The key to the exercise is to shift the observational viewpoint from comfortable, knowledgeable insider to naïve, inquisitive outsider. Students will accomplish this by taking on a role of alien who is sent to study the actions and behaviors of humans in selected everyday contexts. The framing of the exercise is important to activate the mindset and role of the extraterrestrial. Here's a brief example of one way we have set up the assignment:

You are an alien anthropologist and are assigned to study a small, bluish planet whose awkward (compared to our own sleek, compact physiology) looking inhabitants have evolved a rudimentary intelligence. They seem to constantly vocalize from tiny, flexible cavities situated in the lower section of their smallish cranial chambers. From what we gather planet X452679404890 is called “Urrth” by these inhabitants. It is located in the “fly over” territory of the universe. The Universe Research Council wants a first report on the behavior of the inhabitants in a specific situation.

To accomplish this, you should choose a single urrthling activity of interest and observe this in detail for over 100 solariums (approximately 1/24 of the typical urrth orbit). Because you won't understand the language, what you should focus on is what people are doing in detail. This is the first glimpse our civilization will have of this remote and primitive interplanetary outpost. We look forward to learning about this newly discovered species.

Step 2: Choose a Context

This exercise can be applied to any situation. Students might be working on a project and want to purposefully observe a specific environment and look more closely at behaviors within these. In our case, we teach a course on creative thinking that equips students with the toolkit and methods to work more creatively as individuals and within groups. The point of the exercise in this case is just to pick any context of interest and observe it in detail. The setting and activity they choose to observe is not as important as how they approach and document their observations, which we detail in the next step.

Step 3: Document from the Alien Perspective

Crucially important is to recognize the role language plays in shaping and sharing our perceptions. By making it essential to adhere to the voice and language of an alien witnessing human behavior up close for the first time, this will build in discipline so the students focus their observation and reports on details and perceiving them in a new fashion.

For example, let's say a student is observing humans exercising by walking and running around an indoor oval track. If they were to use conventional descriptions, they might report something to the effect that "one person walked around the track in 5 minutes for a total of 3 miles, he was wearing red and black running shoes..." This would have no meaning for an alien who may have a completely different morphology.

Adhering to the alien perspective forces observers to make visible and unfamiliar that which hides in plain sight obscured by routine perception. An alien anthropologist might write: "An activity humans engage in is mobilizing themselves around an ellipse, without interruption. They trace the same path over and over much like a planet orbits a star until they cease the activity. One specimen circumnavigated this route 24 times, steadily and monotonously, with a wire of some sort connecting the head with a grasping limb. This seems to be a form of ritualized behavior that has no immediate reward or result. One creature imbibed a bright liquid from a vessel upon cessation, by unfastening the vessel and tipping it an extreme angle to run into the cranial opening..."

Step 4: Report to the Alien Council

A short interpretation of the observations is required of students. This is where the students move from writing their observations to synthesizing an analysis. This part of the exercise can contain several deliverables:

- **Things never observed before:** students highlight what new things they observed that had not captured their attention previously.
- **Key insights:** these are the insights they gained that changed the way they and others might look at a specific behavior or activities moving forward.
- **New questions:** these are questions that arose because of this study that will be helpful to answer with more detailed, specifically focused observation.
- **Challenges:** students identify what they found most difficult doing this exercise, so these can be addressed to build their capability as anthropologists.

Step 5: Guess the Observed Activity

Besides sharing the highlights of the report with the class, a fun part of this exercise is for students to read an excerpt of their observation to the class and have their classmates guess what activity they observed. It's been surprising how long it takes sometimes for students to guess correctly, but this fun wrap-up also helps students see even more contexts in new, creative ways.

Student Reaction

The following student reaction was prompted by asking participants a few questions: Did this exercise improve your observation skills? What did you gain the most from it? What was most challenging? Overall, would you recommend this activity for future use...why or why not?

First, this just seemed like a fun exercise. Based on our lecture, I had already bought into the idea that I wasn't observant enough in my life, so I was missing out on discovering more problems people have, which I now know are the basis for so many business opportunities.

This alien assignment worked for me. It served as a useful way to step outside my usual, lax way of watching people do things. It helped me put on some different lenses that magnified and enhanced my vision. Paying closer attention revealed lots of small things that previously escaped my notice.

The assignment is memorable and I've noticed I've become a real advocate for doing observations. Whether it just me sitting at a coffee shop or working with my startup team, I will remind myself to study humans like an alien. It's made my everyday life a much more interesting place. I feel I'm building a real strength to observe better.

I found most challenging the massive amount of things to attend with even one small action. Say someone is drinking a cup of coffee. There is so much to look for in the details, from how they grip the cup, to the placement of their mouth on a lid, to the motion of their eyes as they tilt their head back. You aren't sure if knowing such details matter for anything, but I did develop a range of useful insights.

I would definitely recommend you use this exercise going forward. Overall the class seemed to have a blast. The part where we shared key snippets from our write-ups and had to guess on what was being observed was fun. It's like those picture puzzles that ask you to guess what everyday object it is based on a massively zoomed-in photo taken under a microscope.

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Using Twitter as a Social Listening, Research and Feedback Tool in Entrepreneurial Classrooms

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Abstract

This experiential exercise is designed to leverage the power of Twitter as a social listening and research tool within and outside an entrepreneurial classroom. The exercise actively engages entrepreneurship students through (1) continuous online research about relevant course topics, (2) sharing of research and own content on Twitter, and (3) building an audience for their own entrepreneurial ideas. Relevant class tweets are identified via hashtag (a word prefixed with # to tag a message on Twitter) by utilizing the respective college course number (e.g. #MGT4966), which gives peers and other Twitter users the ability to follow and engage with the class content online.

Keywords: entrepreneurship; Twitter; social listening; ideation; feedback

Subject Area: ideation, marketing

Subject Topic: social listening, research and feedback

Student Level: all levels

Time Required: independent student work (approximately 15-60 minutes per week)

Recommended Number of Students: no upper limit

(Lean) entrepreneurs do not operate in a vacuum. They are everywhere and continuously validate their learning through feedback loops while converting their ideas into actual products. As such, they make themselves accountable for their own learning and progress by adjusting their entrepreneurial journey based on customer validation and feedback. Subsequently, this process allows them to stay true to their path, or to “pivot” based on new information and data points available (Ries, 2011).

While this kind of entrepreneurial “reality” has been widely acknowledged by entrepreneurship educators, its “practical” implementation inside the classroom has not (or at least not yet). Entrepreneurship classrooms by and large lack practice and real-life feedback opportunities by presenting entrepreneurship as a linear process through an overemphasis of business planning (Meyer, 2011). Therefore, a theoretical and methodological realignment has to take place in order to give students ample opportunity to practice entrepreneurship in an experiential and feedback-supported learning environment. Neck and Greene (2011) talk about changing existing experiential teaching paradigms from “learning by doing” to a “doing *then* learning” approach. By definition, the latter view emphasizes self-regulatory learning (Zimmerman, 2000) through the sequential (and cyclical) alignment of learning processes that link direct experiences with feedback that result from these experiences. As such, entrepreneurship students do not only have the ability to reflect on (and learn from) their entrepreneurial actions taken but to also inform their future actions based on prior experiences.

Since starting or simulating a business may not always be feasible, we may pose the question, as to how we can create learning mechanisms that give students the ability to (1) inform their own entrepreneurial learning and development, and (2) provide feedback and validation opportunities for their entrepreneurial ideas.

Twitter, the world’s largest focus group

Since the first Tweet (= post or status update on Twitter.com with 140 characters or less) on March 21, 2006, Titter.com has grown into a social network with 255 million monthly active users that average about half a billion tweets per day, mostly (78%) using their mobile devices (Twitter, 2014). Twitter’s mission is “to give everyone the power to create and share ideas and information instantly, without barriers,” therefore providing its one billion users unlimited reach to broadcast ideas to preexisting and developing audiences, most of which are linked based on a shared hashtag (= words prefixed with # to tag short messages such as #EEEJournal).

But Twitter does not only serve as a forum to broadcast messages, it also fosters the development of communities where users (individuals and businesses alike) can exchange ideas and opinions based on a shared interest, products or services. These communities are content driven, form organically, and provide users with direct feedback to their shared content. Social feedback can be diverse in nature and can be measured based on social engagement metrics such as – to name a few – amount of followers (= other Twitter users who follow you), retweets (= a forwarded Tweet by another user who you follow), mentions (= inclusion of a user’s Twitter handle in a Tweet), replies (= a Tweet posted in response to another Tweet), as well as the sentiment that is associated with the responses to the content a user publishes online.

The opportunities to access, share and validate information seem limitless but also pose certain challenges for entrepreneurs and businesses alike. Schaefer (2012) even talks of social media (such as Twitter) as a “Darwinian hypercatalyst” (p. 13) that rewards the “fittest” who are better able to adapt and adopt to business challenges and societal pressures (e.g. reviews that are published by customers of social networks). Therefore, it seems only logical to bring “the largest focus group in the world” (D. Blumenstein, personal communication, March 15, 2012) into our entrepreneurial classrooms in order to give our students the opportunity to experience, test and validate their ideas in a real life scenario.

The Exercise

The following experiential exercise was designed to provide entrepreneurship students with a real life “sandbox” in order to leverage the power of Twitter in order to (1) inform entrepreneurial ideas and (2) provide real life feedback for those ideas. The exercise, which was developed as part of an entrepreneurship course, emphasizes principles and applications of social media and communication within an entrepreneurial context. It is suitable for both undergraduate and graduate students. It is as simple as follows:

1. Setup a Twitter (www.twitter.com) account for your course (or use an existing one) by creating a Twitter handle (= unique Twitter username prefixed with @ such as @MyTwitterHandle) for yourself or your entrepreneurial idea or business.
2. Tweet (= compose messages on Twitter with 140 characters or less) about the course, your research, ongoing trends, new developments and software, and anything else that is related to the class and the development of your entrepreneurial idea.
3. Identify and follow key influencers (= Twitter users who create/share content that yields high levels of engagement) who add value to your research and content exploration.
4. Monitor your own (growing) following based on the content that you tweet about.
5. Follow me @InstructorAccount and identify each tweet that is relevant for the class with the hashtag #COURSENUMBER.
6. You are required to tweet at least 4 times per week.

The assignment is deliberately designed to be fairly open in order to allow students to explore and experience Twitter as a tool for professional use. Based on students’ engagement online, the assignment aims to achieve the following learning objectives:

- Conduct ongoing research about relevant course content and own entrepreneurial ideas.
- Identification of key influencers on Twitter.
- Ability to monitor a topic of interest and to identify trends.
- Critically evaluate online content.
- Build an online audience through sharing of relevant content and ideas
- Critically analyze and interpret online feedback in order to inform one’s own entrepreneurial learning and development.
- Take ownership of entrepreneurial learning and progress.

To get started, I typically advise my students to monitor activities on my personal Twitter account and to experiment with different content strategies (e.g. use of different types of hashtags, mentions, retweets, etc.) to gain feedback from both course participants as well as other Twitter users who are engaging with our shared course content. In addition, I provide my students with in-class and online feedback (via Twitter as public or direct messages) about their online engagement, and require them to reflect about their experiences as part of a weekly blog on our online course management system.

Lastly, I participate in HootSuite’s Free 90-Day Higher Education Program³ (2014) where my students are able to (1) participate in a free social media training and certification program, and (2) access additional resources in order to manage their Twitter accounts, support their online research efforts and conduct basic social analytics tasks.

³ Participation in the Hootsuite Higher Education Program is not necessary to successfully implement the experiential exercise. It may be useful for instructors, however, who are interested in improving their social media skills. In addition, access to additional free resources and online certification make it a fun bonus for your students.

Student Reaction

I was a student in Professor W.'s Social Business course, where students are required to tweet at least four times a week on relevant topics. This was the first time I've used Twitter in a professional way. In the past, the only time I had tried it was for personal use and I wasn't really impressed by the platform for that purpose. So when I was reading the syllabus and saw that we had to use and interact with it, I sort of rolled my eyes and was skeptical about it. To my surprise, as the semester went on, I found the tool to actually being totally necessary; not only for searching information online but also for creating and sharing content myself. Twitter is actually a really great crowdsourced search engine, where you can enter keywords to get updates and links to some really relevant content. It is a very powerful tool.

As far as HootSuite goes, the tutorials helped me to learn how to utilize it to Twitter's full capacity. It's a comprehensive tool not only for sharing content to specific social media properties, but also for effective social listening as well as internal team communication and analytics. Leveraging such a tool is really important because it allows you to make sure that your content is engaging your audience. Just as you can use tools like HootSuite to market your business and create a relationship with your followers, you can also use them to market yourself and your brand. It is important for entrepreneurs and professionals alike to utilize social media to listen to the conversations in order to stay current. It keeps you engaged in learning and to more actively participate in the world we live in today. The second you tune out is the second you become obsolete and instantly less marketable.

Overall I've seen myself evolve a whole lot over the course of this class and how I interacted with my social media accounts and content. I'm most likely going to keep tweeting because it's an important skill to have professionally. (Jessica S.)

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Using art to trigger critical reflection in entrepreneurship

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Abstract.

In this teaching case we illustrate an example where we aim to trigger critical reflection in entrepreneurship courses through analysis of art. A 3-step example is presented along with the students' reaction on it. The approach, the example and the outcomes are discussed in the context of experiential entrepreneurship education.

Keywords: reflection, critical reflection, experiential learning, aesthetic experience

Manuscript Subject Area: conceptualization of entrepreneurship

Manuscript Subject Topic: definition of entrepreneurship concepts

Student Level: Graduate

Time Required: 60 to 90 minutes

Recommended Number of Students: up to 50

Reflection is the key process to ponder on an experience and conceptualize it. In Kolb's (1984) experiential learning model, reflective observation is one of the four learning modes. Since entrepreneurial learning is highly experiential (Gibb, Hannon, Price & Robertson, 2013; Minniti & Bygrave, 2001; Politis, 2005), reflection has been highlighted as the most effective learning mode in order to gain understanding during hands-on entrepreneurial courses.

Reflection in entrepreneurship education can become critical under circumstances where critical questions emerge (e.g. Kakouris, 2011). In order to confront critical questions, the Habermasian discourse or other methods of critical pedagogy (cf. Brookfield, 1987) can be adopted. Critical pedagogy is holistic and demands the examination of the subject from different perspectives and points of view (see, for example, Darder, Torres & Baltodano, 2009).

Art is a source for reflection and thinking. Early work of Dewey (1934) recognized aesthetic experience as a means to trigger imaginative thinking. Adorno, Horkheimer and Marcuse adopt the Kantian perspective for utilizing art as a different thinking mode to propose interaction with art for alternative and more critical thinking (cf. Adorno, 1986; Adorno & Horkheimer, 1999; Marcuse, 1978). Perkins (1994) has developed a method for systematic observation of art through his "Project Zero" initiative at Harvard University. Furthermore, Kokkos (2010) adopted Freirian perspectives for the use of art in emancipatory adult education to introduce aesthetic experience in the context of transformative learning. He developed a holistic, six-stage method for the exploration of art masterpieces thematically connected to critical questions. In sum, utilization of art in experiential learning is an open issue which receives increasing attention. In this teaching case I illustrate an empirical example in the context of entrepreneurship education. The example doesn't follow a specific methodology and the reader is committed to the previous works for further reading and theoretical foundations.

The critical question for the present teaching case is: "*Is mere trade considered entrepreneurship?*" This question can cause frustration even within the community of entrepreneurship scholars. For instance, Ketchen, Short and Combs (2011) found that half of the review board of *Entrepreneurship: Theory and Practice*, a leading journal for business venturing, rejected franchising as a form of entrepreneurship. The debate concerns Schumpeterian views of scholars who consider entrepreneurship as pure act of innovation (Drucker, 1985). Thus, educators have to address similar critical questions in innovative ways.

The Activity

The present activity took place in two different cases: (a) an asynchronous online discussion group for entrepreneurship and (b) a face to face career counseling seminar in Greece. Apparently, it can be easily replicated in formal classrooms or other educational contexts. The seminar (b) took place at the University of Peloponnese where about 70 students and alumni participated. The online discussion group was provided by *TeleCC.org – a non-profit initiative*. An online educator was facilitating entrepreneurial learning of a group of ten adult learners through a series of activities. The following activity was introduced when the students were to confront entrepreneurial motives and profiles. The participants were asked to choose one of the following three paintings:



(1)



(2)



(3)

The first step was to describe *what they see* in the painting. In face to face teaching, this phase can last for 20 to 30 minutes. The students may describe what they see individually or in small groups. In the online course, the first step lasted for 4 days. It is essential for students to just describe what they see, along with just a few formal qualities of the masterpiece (lines, colors, volumes, etc.), without explaining the meaning and the symbols illustrated in the painting. Then, the educator gathers the different descriptions or remarks and synthesizes the group's outcome. This descriptive step cultivates the art observing capability of learners (Perkins, 1994).

The second step concerns *meaning-making* and *possible explanations*. What does the painting show? What is the subject? How its different aspects (or details) can be explained? In what period it refers and what the painter wants to present? In this phase, students can individually, or in small groups, discuss not only what they see but also why that is. The different perspectives are gathered and discussed by the educator who aims to assemble the collective outcome. This phase lasted for another 3 days in the online course. In classrooms, it can last for 20 to 30 minutes.

In the second step, the process focuses on reflection. Students express their first thoughts as a reflective observation learning mode (Kolb, 1984) on the piece of art they are exposed to. Meaning making in this step is unconstrained and can refer to anything each individual retrieves as a possible explanation for the specific aesthetic experience. The goal of this step is to gather the different perspectives of learners in a common canvas. Each individual expresses his/her thoughts and also reflects on what his/her classmates understand from the first step.

The third step of the activity is the discussion of the *critical question*. In the online course the students responded individually but in classrooms they first discuss in small groups. Then, the different responses are presented to the audience facilitated and reported by the educator. The third phase can also last for 20 to 30 minutes in classrooms. In the online course it lasted for 2 days. Through the overall, 3-step process, a critical examination of the question is expected.

Apparently, the third step presupposes the educator can follow requirements of critical thinking and democratic discourse. Given its nature, the third step is open-ended with no presupposed 'meanings' and 'answers'. The educator is subjected to the process similar with each trainee. To successfully attain a productive third step, the choice of the masterpieces of art is essential and their relevance to the subject under examination. Replication of the same exercise with different audiences may not lead to unique results. In this way, the present example differs from other art-based methods which use art as a stimulus for certain reactions and behaviors.

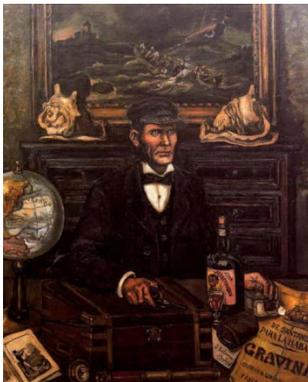
Responses to the example

Paintings 1 and 3 were chosen by online individuals while the career counseling group chose painting 3. For painting 1, the notebook, various assets on the shelves and the very formal, upright pose of the person were easily recognized during the first step. The dark dress and the person's gaze were also commented. Painting 3 offers similar details for discussion, e.g. the money on the desk, the abacus, assets on the shelves, the keys on the necklace, along with the red shirt and the long white beard of the person. Some formal qualities and the painting style of the period the pieces refer to were also commented. A participant considered the person of painting 3 "a Russian just after the revolution of 1917". Note that the more details given beforehand (e.g. the date of the piece, the title, the artist, etc.) the more the participants tend to connect what they see with these details. For this reason, only the date was given in the present example.

In the second step, participants remarked that the persons are rich. The first one was considered the wealthy person who ordered his own portrait. He shows high level of organization and a tendency to follow all the details of his job. The second one was thought a miser especially due to the way he grasps the money. Remarkably, a participant commented that “his widely open fingers show that he wants more money”. Another participant explained his necklace keys as “keys for a treasury where he has more money”. When participants were asked what the profession of these persons could be they agreed that they were watching portraits of merchants. At this point, the educator validated that the titles of the paintings (see Appendix) reveal that they are all merchants. And thus, an emerging justifiable question is: “could we call the depicted persons as entrepreneurs?”

The third step connected the critical question with the pieces of art. *Why we distinguished merchants from entrepreneurs? What else we expect from an entrepreneur?* Group discussions and comments from individuals focused on entrepreneurial motivation which exceeds usual money making. Participants spontaneously referred most of the entrepreneurial motives summarized by Shane, Locke and Collins (2003) through a bottom-up process. Beyond economic independency, the need for achievement, lifestyle, internal locus of control, creativity and social value creation were addressed. “Entrepreneurs are those who create their products and are aware about them. They don’t just sell assets...” was a remarkable comment. A young lady also commented about innovative start-ups: “There is personal satisfaction to succeed in a venture which seemed impossible in the beginning for the majority of people”. Another one critical comment was about the age period that paintings refer to: “At that age entrepreneurs were merchants. We can’t say the same for today’s entrepreneurs. But how do they really look-like in our times?”. Apparently, a critical discussion took place in both implementations which I consider an outcome induced by the appropriate analysis of the paintings.

For the completeness of the present illustration, another two masterpieces were offered to the counseling, face to face group but they were not chosen for analysis.



Discussion

The use of art in education has been extensively adopted in various contexts. The present example is an empirically developed exercise from my personal teaching repertoire. Its implementation should be inclusive in character. Hence, the analysis of the masterpieces should not focus to reveal the formal qualities of the piece, i.e. the practice pursued by experts, but it is considered open to the students. The educator just facilitates the process with discrete interventions about the qualities or other technical details and information relevant to the piece under analysis.

Chosen pieces of art must be thematically connected to critical questions and also be masterpieces. In accordance with Kokkos (2010), only high quality and rich content art (i.e. authentic art) is thought capable to induce critical thinking. The pieces of art should not just

replicate traditional assumptions and stereotypes but encompass different aspects of the subject and support different personal meaning-making. Such an open-ended perspective supposes active participation from students and educators in order to achieve remarkable outcomes. Active participation, variety of manifested perspectives, emergence of discourse, expression of emotions and questioning of common assumptions are indicative for the success of the exercise.

Entrepreneurship educators who aim to follow the illustrated approach must first identify critical aspects of their experiential teaching. Some of the critical questions in entrepreneurship have been already addressed in literature (e.g. Shane, 2008) while others may emanate from the specific audiences educators teach. The introduction of art needs step by step implementation and assessment. It is essential for educators to repeat the exercise in different audiences and for different critical questions in order to gain experience on it and self-reflect on the feedback they receive from the students. Further development of similar exercises, or enhancement of the present one, may follow more developed and rigorous methodologies in literature (e.g. Kokkos, 2010; Perkins, 1994).

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Appendix: Paintings used in the example

Masterpiece	Details
	<p>Figure 1</p> <p>German: Der Kaufmann Georg Gisze English: The Merchant Georg Gisze Date: 1532 Artist: Hans Holbein the Younger (1498–1543) Country: Germany Source: http://www.smb.museum (Staatliche Museen zu Berlin)</p>



Portrait of a Merchant

Date: 1530

Artist: Jan Mabuse (i.e. Jan Gossaert) (1478–1532)

Country: Netherlands

Source: <http://www.nga.gov/>
(National Gallery of Arts – USA)



Portrait of a Merchant

Date: 1918

Artist: Boris Kustodiev (1878–1927)

Country: Russia

Source: <http://www.wikiart.org/en/boris-kustodiev/a-merchant-1918>

(The I. Brodsky Museum, St. Petersburg, Russia)

Figure 2



The Merchant Captain

Date: 1934

Artist: Jose Gutierrez Solana (1886–1945)

Country: Spain

Source: <http://www.wikiart.org/en/jose-gutierrez-solana/the-merchant-captain-1934>



German: Die Vorsteher der Amsterdamer
Weinhändlergilde
English: Governors of the Wine Merchant's Guild
of Amsterdam
Date: 1663
Artist: Ferdinand Bol (1616–1680)
Country: Netherlands
Source:
http://commons.wikimedia.org/wiki/File:Governors_of_the_Wine_Merchant%27s_Guild.jpg
(Alte Pinakothek – Munich)
