

Street Challenge Pedagogy: How Walking Down Main Street Broadens Entrepreneurship and Ecosystem Perspectives

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Abstract

Street Challenge is a community engaged, place-based, experiential learning pedagogical framework that heightens students' understanding of the ecosystems entrepreneurs work within. Entrepreneurship courses often focus on students as future entrepreneurs, taking the perspective of business owners as independent agents. Ecosystem awareness, however, allows students to develop broader perspectives about entrepreneurs and their own goals by adding a broader context. We present an overview of several exercises and projects used to explore the facets of a business district, which we use as an example and an analogy of business or community ecosystems. Implementation of Street Challenge in different locations, courses, and modalities demonstrated that the method can be adapted and customized to fit a variety of entrepreneurship education needs and intended learning outcomes. Using local neighborhoods as tangible contexts for teaching entrepreneurship within ecosystems, as well as primary research and effective communication skills, is highly effective. Equipping students with perspectives and conceptual frameworks to address future career situations as self-employed professionals or entrepreneurs is a worthwhile endeavor in itself; with Street Challenge students also discover the

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value of civic engagement and a sense of agency in addressing ecosystem or community challenges.

Keywords

ecosystems, community-engaged pedagogy, civic engagement, experiential education, place-based pedagogy

Introduction

Successful entrepreneurs employ individual entrepreneurial initiative, deployed within a broader context of businesses, institutions, and infrastructure that contribute to their success. In short, they do business within a community. We believe that communities matter and are an ecosystem, an interconnected network of institutions, businesses, people, activities, and resources that interact in ways that are cooperative and competitive (Granstrand & Holgersson, 2020). But we don't always teach it that way. Often those ecosystems are local in nature, sometimes they are virtual, and they can scale across regional or national borders. Regardless of their size, ecosystems enable entrepreneurial opportunities, establish infrastructure to make them possible, inform entrepreneurial strategy, and provide resources to accomplish entrepreneurial goals. Yet, as entrepreneurship educators, we often frame the entrepreneurial path as a hero's journey, positioning an individual entrepreneur or a group of founders as solitary figures who, through hard work and individual initiative, surmount incredible obstacles in order to create a business, to the exclusion of the community that supports and enables that success. We highlight, praise, and value agency and industry on the part of successful entrepreneurs; note their ability to develop a strategic vision of their industry and market segments; and, frequently, we identify individual entrepreneurs as exemplars of entrepreneurial thinking, competence, and prowess.

There is a lot of value in emphasizing the hero's journey. The world needs heroes, and students need models to emulate and follow. But a limitation of the entrepreneur as solitary hero approach of entrepreneurship education is that it ignores the point that we establish businesses, and we create value, for and within a community or business ecosystem that both benefits from our efforts and also contributes to their success. In other words, we build things together.

An ecosystem approach also enables deeper discussion about the empowering effects of entrepreneurship on distinct and often underrepresented groups of individuals, such as women (Orser et al., 2019), minorities (O'Brien et al., 2019), or those leveraging entrepreneurial activity as a means of piercing social or economic boundaries (Santos et al., 2019). An ecosystem approach allows for the exploration of intersectionality (Dy & Agwunobi, 2019; Romero & Valdez, 2016). Community ecosystems are made of people, and

people wear multiple stakeholder hats. The Street Challenge approach also has the benefit of amplifying those underrepresented voices within a community, and within our classrooms, who are often overlooked in traditional approaches to entrepreneurship education (Neumeyer et al., 2019).

Many entrepreneurship educators address entrepreneurial ecosystems in the context of discussing value or supply chains, opportunity identification, customer discovery, resource acquisition, or a combination of the above; we do as well. We frequently focus attention on students' own projects and development of their individual business models. From that perspective, we also often highlight competition, rather than cooperation, as a norm. There is also value in that approach. However, because the focus is on the individual, many students miss the holistic view of the ecosystem and struggle with seeing how their concept of an entrepreneurial endeavor intersects with the broader perspective of a community ecosystem. The discussion of ecosystem is often an abstract concept, the value of which is overlooked or minimized in favor of more "concrete" or "relevant" skill development students often ask for. When we make the individual the reference point rather than the community, we narrow the view that our students experience ecosystems through. This leaves students without an important conceptual framework and analytical skill set. Using Street Challenge pedagogy we address this gap by situating the students' perspective within the context of a given community ecosystem. We feel that shifting the level of analysis from the individual to a local community allows students to develop a different perspective. By doing so, we provide the students with a holistic view of the ecosystem, allowing them to see how businesses interconnect in a broader context.

In addition, when we focus on the individual as the unit of analysis the entrepreneur's role as a civic leader, or the role of business in community, is often overlooked or diminished. Yet entrepreneurs are an integral part of civic life, and the entrepreneurship classroom is an opportunity for discussing that narrative. Instead of the community as a stakeholder, we view the community as the central concern, with the entrepreneurs as stakeholders within the ecosystem. This is an important distinction, because continuing to focus on the individual reinforces the hero's journey rhetoric. Part of our job as educators is to remind students that we need to understand a community in order to contribute value to a community; that in order to extract value, we have an obligation to contribute value as well.

The Street Challenge

The Street Challenge pedagogy is a set of place-based exercises and assignments that provides a menu of options for entrepreneurship courses. The pedagogy combines experiential learning with a focus on place-based contexts. The framework is designed to introduce concepts of ecosystems to entrepreneurship

students with an emphasis on civic engagement. We have created an Open Educational Resource (OER), <http://streetchallenge.ca>, that organizes them in seven distinct modules that provide lessons and materials to guide instructors in employing the pedagogy. Module one introduces the concept of community ecosystems, and introduces the focal places. Module two details the design a mall exercise, which introduces students to concepts of complementary businesses and customer targets. Module three explains how to use secondary research to understand communities. Module four describes the field observation trip. Module five provides a template for conducting consumer survey research and data analysis, and includes a discussion of research ethics. Module six develops competency in entrepreneur interviews and digital story telling. Module seven is the framework for the final recommendations project. Figure 1 details how they fit together.

The modules could be used as the foundation for a course, but the exercises can be used independently as well. We present two examples of these approaches in this article. The first employs lessons from modules two and four for several class sessions in an introductory course; the other uses the OER as the framework for a semester-long course. We have posted module two as an online appendix in both face-to-face and distance formats.

Theoretical Overview

The Street Challenge framework applies experiential learning techniques within a place-bound ecosystem setting. This is a valuable approach, as the operational emphasis and applicable unit of analysis shifts from the individual entrepreneur to the community ecosystem. By shifting their perspective to that vector, students are able to develop a different mental model than a traditional experiential approach might convey.

We operate with a definition of ecosystem as the interconnected network of institutions, businesses, people, activities, and resources that interact in ways that are cooperative and competitive (Granstrand & Holgersson, 2020). We suggest that community ecosystems, which can be physical or virtual, have distinct characteristics that give them a unique sense of place which informs those interactions (Pearsall, 2013). From the perspective of entrepreneurship educators, we feel that broadening entrepreneurship education to include both innovation ecosystems (Isenberg, 2010) and our community-focused definition of ecosystem allows the students and instructors to widen their focus and consider the entire business ecology.

The Street Challenge uses “main streets” (i.e. commercial business districts) as the place for studying community ecosystems, allowing students to apply the abstract concepts of an ecosystem in a concrete and applied form. Neighborhoods are an easily accessible and highly relatable context for students to experience, as while they may all have different backgrounds and experiences,

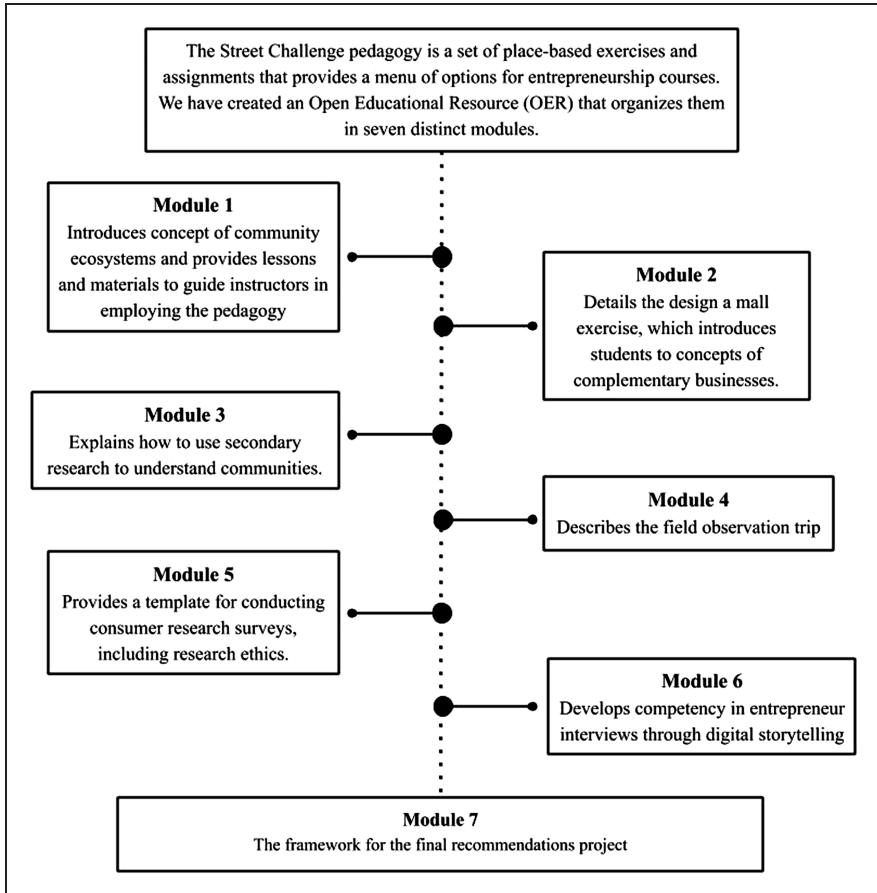


Figure 1. The Street Challenge Project Roadmap.

a neighborhood is a common element to all. Accordingly, students are better able to see the connection between an individual business (firm or micro- level analysis) and a broader environmental context (community or meso- level analysis). Development of this skill set is important for students, not only because it strengthens and hones their strategic ability, but also because it strengthens the communities they are a part of.

Providing experiential learning opportunities for students is a hallmark of entrepreneurship education that produces significant results for students (Kuratko, 2005; Malach & Malach, 2014). Experiential approaches are well-represented within the universe of entrepreneurship pedagogical research (Neck et al., 2014; Pittaway & Cope, 2007a). Experiential projects are typically designed to allow students to learn-by-doing in a semi-controlled environment

where students are exposed to actual business experiences with the opportunity for coaching and structured reflection (Baden & Parkes, 2013; DeSimone & Buzza, 2013). Experiential models often include consulting projects, internships, pitches, plans, rapid prototyping, field interviews, and a variety of other experiences (Bécharde & Grégoire, 2005; Cope & Watts, 2000; Noyes, 2018; Vincett & Farlow, 2008), as does the Street Challenge pedagogy. Experiential education practices are high-impact ones that have a profound influence on student development (Cooper et al., 2004; Kuh et al., 2013). Often, experiential approaches provide hands-on opportunities for students to engage in the work of being an entrepreneur (Vincett & Farlow, 2008). Sometimes, these projects also take the form of service-learning (McCrea, 2010). It should be noted that experiential education practices are not limited to entrepreneurship courses, and that entrepreneurially-themed exercises often appear in management, law, and accounting classes (Hodge et al., 2014; Koval, 2013).

Place-bound ecosystem approaches are also an established conceptual and pedagogical practice in entrepreneurship education (Ferrandiz et al., 2018; Hechavarria et al., 2016). These approaches are rooted in the belief that understanding the impact of relationships, networks, and interconnected communities is an important component of entrepreneurship education (Feld, 2012; Isenberg, 2010). As noted by Spigel and Harrison (2018), this work is an extension of well-settled research on the importance of clusters (Porter, 1998) and network theory (Hoang & Antoncic, 2003).

The Street Challenge Method: Overview

The framework for Street Challenge is place-bound experiential learning that combines a mix of approaches emanating from experiential education and places them within an ecosystem context. Should the instructor desire, it may also have a service-learning component. The pedagogy is scalable - applications can range from a single class lesson or workshop to the pedagogy forming the basis of a semester-long course. To implement, the instructor chooses a local commercial district as a focal place (or perhaps more than one for larger classes), and then selects elements of the Street Challenge to deploy a set of exercises, lessons, and assignments. Ideally, at least some part of the Street Challenge should require students to visit the focal street and interact with entrepreneurs and customers in the area. Regardless of the scope of the Street Challenge, a number of core learning objectives for students may be achieved:

- To describe an entrepreneurial ecosystem;
- To appreciate the complexity and variety of the many types of entrepreneurs;
- To map and categorize the businesses and main stakeholders in a business district;
- To investigate how the networks of stakeholders interact with businesses;

- To identify opportunities for cooperation and competition within an ecosystem;
- To develop competency as an entrepreneur building a stronger entrepreneurial ecosystem and/or creating value for a community;
- To discover the interaction between the growth of the entrepreneur's business, and the resources and success of the ecosystem.

While the pedagogy was initially developed for a classroom of entrepreneurship students, it can also be used in a variety of disciplinary settings that explore the interaction of entrepreneurs and communities, such as urban studies, sociology, or public policy. Depending on how the pedagogy is implemented, additional learning objectives may be added to the Street Challenge, such as demonstrating primary research skills or conducting target market analysis. In this article, we describe the overarching logic and process of the Street Challenge, detail two approaches to employing the pedagogy within a course, and provide several resources to assist faculty with implementation.

Street Challenge has a focus on the importance of the ecosystem in entrepreneurial success, enabling students to have a perceptual shift. This shift is often accomplished by working with a community partner or partners, as in a service-learning setting, but it does not have to be. By orienting the focus of an experiential project away from the individual student, concepts of service, care, community, coopetition, and reciprocity can be introduced and explored. For example, the value of an assignment to make recommendations for improving the street ecosystem is that students must think beyond the immediate needs of one business and instead focus on the ecosystem as a whole. Taking that perspective allows them to see how the ecosystem fits together and how interdependencies affect the success of individual businesses.

This is an important concept often overlooked in traditional approaches to entrepreneurship education, where the focus is often on skill or competency development without mapping those competencies to a broader context. Shared context matters in an ecosystem approach and is the glue that binds successful entrepreneurial communities together. Several recent papers address this point: Audretsch (2015) urges the "strategic management of place" (p. 12) as a necessary function of developing successful ecosystems. Argote and Miron-Spektor (2011) speak to the importance of localized culture that emerges from entrepreneurs interacting with one another. Spigel and Harrison (2018) encourage us to consider that "thick networks between entrepreneurs based on a supportive culture" are necessary for the successful operation and resilience of a given ecosystem; and, by implication, those networks contribute to the success of the entrepreneurs within that ecosystem. This approach also provides instructors opportunities to explore ethical questions from a meso-level perspective, as the discussion of what is good, right, or just within the context of entrepreneurial activity unfolds differently when community impacts are the focal point,

rather than applying firm-level analysis. As a result, analysis of stakeholder effects is also often more robust.

While the pedagogical focus of Street Challenge is on a place-bound ecosystem (e.g., a local downtown business district) the skills developed within the pedagogy are transferable to assessing industry ecosystems, supply chains, or other examples of interconnected entrepreneurial networks. The pedagogy also extends beyond a typical entrepreneurship classroom and can be effectively deployed across disciplines. It is particularly attractive because it is portable, and interdisciplinary faculty from law, social work, urban planning, education, design, and medicine, for example, can adapt the pedagogy to introduce entrepreneurship and innovation content in their courses. Many universities are emphasizing entrepreneurial thinking across the curriculum and/or locating entrepreneurship courses outside of the business school. Regardless of the students' discipline or career path, the lessons that flow from the pedagogy to participants are useful ones. Further, even if a community partner is not formally involved, the value of engaging in a clearly bounded project with a service component - such as developing a business inventory, or crafting and presenting a set of recommendations for a discrete area - allows the instructor to explore the core ecosystem concepts and observe their effect on students. This lesson is consistent with what many academics argue is a central premise of an ecosystem approach to entrepreneurship - that the creation of value for society by entrepreneurs is a primary goal and outcome (Spigel & Harrison, 2018; Stam, 2015). That said, entrepreneurs both contribute value to and depend on ecosystems, and assessing ecosystems and developing effective strategies within an ecosystem are essential skills for creating entrepreneurial business success. Both these objectives can be realized through the application of the Street Challenge pedagogy.

Application: Building Entrepreneurial Awareness Through the Street Challenge

The overarching pedagogy of the Street Challenge is *iterative and reflective engagement* within a specific location. In the semester-long version, starting with readings and exercises describing ecosystems, continuing with a variety of exercises and assignments focusing on one or other aspect of the location, and culminating with final recommendations for success in the location, participants return to the same place to examine the different elements and interdependencies. In a single-class session model, similar concepts about the nature of ecosystems and the value of appreciating them can be explored. The journey of the pedagogy is flexible both in the path taken as well as the time spent. To make the pedagogy clearer, in the next two sections we will describe the short module approach of an in-class exercise and field study trip, and the longer, full-course

approach of the pedagogy integrated into a course about new venture startups. We have provided the module for the mall exercise, which can be used as a stand-alone introduction to the ecosystem concept. It can also be used as one component of a course module or semester long implementation. We then provide an overview of a course-long implementation. In a later section, we describe practical hints for how an instructor could implement the Street Challenge pedagogy in their own context, using the set of activities.

The Short Version: Mall Exercise and Field Trip Course Module

Using the Street Challenge pedagogy in an Introductory Entrepreneurship course, students were asked to engage in a series of exercises over three class periods to introduce the concept of ecosystems and interconnected business relationships.

First, students were given an in-class team assignment where they “designed a mall” by combining stores at three distinct status tiers (high end/boutique, mid-range, discount) across five different retail categories (department store, restaurant, coffee shop, specialty electronics retailer, women’s fashion). Working together in a group, the students used their own experiences and consumer knowledge, as well as that of their classmates, to assign the available stores to each archetypical mall. Through the activity, students were able to explore and connect to the concept of appropriate “fit” within an ecosystem.

The students were then asked to construct an individual narrative of a prototypical customer shopping at one of the three malls. Using techniques of thick description adapted from Geertz (1973), they had to describe the customer’s day, the car they drove, the job they had, and the community they lived in. The assignment was due the next day, and the descriptions were shared and circulated among students prior to the next class session. Students were able to see how their peers constructed narratives and related to the hypothetical ecosystems they had designed.

The students were then introduced to the field research portion of the pedagogy. In this context, the students were asked to construct a “business inventory map” of a local community’s downtown business district in four steps. First, the location was named, and we discussed whatever first impressions or preconceptions we had about the community. Then, we explored the demographic information available on census databases to get a sense of median family income, age/gender/education ratios, etc. Next, we conducted a “virtual walk” of the neighborhood using Google Street View and YouTube videos. After that preliminary work was done, we then arranged to make site visits over a weekend.

Site visits were done on two separate days due to conflicting schedules, but each group followed the same process. Students met the instructor on a corner at one end of the street, and we began the field observation process. The

students were assigned into 3-4 person teams, one for each side of the street. One team member took photographs, the second recorded the business name, address, and location in a notebook, and the others assisted by developing preliminary classifications for each business type. Students were encouraged to walk into the businesses and talk to the owners and staff, both about the project and the neighborhood.

The field study teams met every two blocks to compare notes and discuss their overall impressions. At the first juncture, this meeting was used to make sure that everyone was using a similar note-taking approach. At the second juncture, the students and instructor engaged in a 5-10 minute long structured activity. First, each student wrote down 3 words or phrases to describe their impressions of the site. Next, each student read their list aloud, and one student acted as the scribe to record everyone's contribution. Then, the group reached consensus on what consistent themes emerged (a form of on-the-fly qualitative coding) and noted where there might be divergence. Finally, the students were asked to think about whether any businesses that would "fit" the ecosystem were missing, and to think about where natural alliances and/or complementary businesses might exist. The teams then continued with data collection.

When the fieldwork portion of the project was completed, the students were asked to create a shared google document and to collectively develop the business inventory and map. They then used the next class period to assign the businesses to categories and to prepare holistic observations and recommendations. The final deliverable was a map, an inventory, and a short report giving recommendations.

While this approach was a multi-class course module, a simpler version consisting of the mall exercise and a single field observation site visit followed by reflection and discussion could be used.

Using the Street Challenge to Structure a Course

By combining in-class exercises, individual and group assignments, and individual reflections described in the OER, an instructor can design a student learning experience that builds conceptual and applied insight into community ecosystems. In the previous section, we discussed how two modules, module two and four, were used for several class sessions of an introductory course. In this section, we take the perspective of designing a whole course using all the modules in the OER. Table 1 details how the OER would be used in that design. We then close with a general discussion of how the pedagogy can be applied to other types of courses with different conceptual foci within the entrepreneurship curriculum.

Using the Street Challenge pedagogy in a New Venture Startup class, students learned the concept of entrepreneurial action within an ecosystem through many aspects of doing startups. Before the course starts, two "main streets" in

the urban area of the university are selected as focal places, providing opportunities to compare and contrast the distinct ecosystems. In a small-town setting, focusing on one main street is also feasible, using secondary research to provide insight through comparisons. The course outline is then built to link the conceptual learning objectives to the readings, in-class discussions and exercises, guest speakers, and field experiences and assignments of the Street Challenge. Our goal is to not sacrifice the learning objectives by using this pedagogy, but rather to amplify them by grounding the lessons in a concrete context.

Through the readings in the course, we introduce themes related to startups, and connect them to the Street Challenge. After introducing the concept of ecosystems (Granstrand & Holgersson, 2020; Isenberg, 2010; Pearsall, 2013; Spigel & Harrison, 2018), we cover target markets (Ashkenas & Finn, 2016; Thiel, 2014, Ch. 11); resource acquisition, effectuation and planning (Fisher, 2012); challenges of growth of young firms (e.g., Churchill & Lewis, 1983; Gerber, 1995; Onyemah et al., 2013); finance issues (Block et al., 2018); and similar themes. We use readings available through open educational resources such as the library; a good textbook focusing on running a business would be an equally effective complement to the Street Challenge approach (e.g. Bamford & Bruton, 2015). The initial lectures and discussions are linked to the Street Challenge by using Google Street View and students' past experiences in the districts, and as the course continues we discuss the concepts in relation to students' active and ongoing research.

Rather than one large project for the course, we use a series of bounded exercises and assignments. The first assignment is an individual research paper about the place, focusing on the businesses in the area. To support students' ability to understand complementarity, the design a mall and/or field experience could be used here. Next teams of two students sign up for two-hour slots to survey a minimum of 20 people on the street. Part of the assignment is to put the collected data into an excel spreadsheet template, so that all the surveys can be combined into one large database for use later in the class about data analysis and visualization. Another assignment is for teams of two or three students to visit and interview business owners on the street, all of whom are pre-screened to ensure they are available and willing to participate. Students focus on the history of the business and the entrepreneur, but also include reflections on the business ecosystem and how the businesses relate to others on the street. They then create photo essays using MS Photo Story or similar software for sharing in class. The last assignment is completed by teams of four or five students, four teams for each business district. The teams are asked to do an in-depth analysis integrating the past assignments from everyone in the class, and to prepare and justify recommendations for both improving the entrepreneurial ecosystem and for recommending a new business that could leverage existing resources in the area (cf. effectuation strategies). These

Table 1. Sample 12 Week Timeline for Semester-Long Street Challenge Project.

Week	Topic	Deliverable
1	Launch Street Challenge Description of Selected Neighborhoods	
2	Lecture/Discussion: Business Ecosystems Design a Mall Exercise Launch Street Preview project	
3	Field Observation Trip (may be outside of classroom time)	Reflection
4	Launch Consumer Research Surveys	Street Preview project due
5	Launch Entrepreneur Interview/Digital Story	
6		Consumer Research survey report and Excel file due
7	Workshop: Analyze combined survey data	
8	Launch Challenge Recommendations project Teams discuss individual Street Preview projects	Interview Digital Story due
9	Watch Entrepreneur Digital Stories	
10		
11	Challenge Recommendations Project Demonstration Fair	Challenge Recommendations Project due
12		

recommendations are presented in a project demonstration fair set-up, and people from the area and other students are invited to attend and discuss the ideas with the students. Students find that pitching their recommendations to a series of small audiences of 1-3 people is a good experience. An alternative would be team presentations.

The student teams in the Street Challenge pedagogy vary in size according to the activities, raising the challenge of how to build effective teams over the arc of the course. Our solution was to organize the students into two main groups, one for each 'main street' location, for the entire semester. Each group is broken into teams of four or five members. When a smaller team is needed for an assignment, such as the interviews, the team breaks in half for that deliverable. The same team works together for most of the in-class exercises and assignments, sharing insight and contributing to the final team project each step of the way, thus building cohesion through class activities. The exception is the pairs of students conducting surveys, who are allowed to self-select any partner within their location group, in deference to the difficulty of coordinating schedules around courses and jobs. Other approaches may also work; in our situation,

we find that assigning teams ensures a balance between students pursuing business and non-business majors.

Guest speakers are a key part of the process, and every speaker is connected to the Street Challenge districts or to local entrepreneurial ecosystems. For example, we invite a local city council politician to discuss concerns about economic development and regulations that help or hinder our focal places. A leader of a municipal economic development office or business improvement association discusses specific and typical challenges and how they are being addressed. Local entrepreneurs who are leaders in their communities discuss their businesses and their hopes for their street. A lawyer and an insurance specialist covers concerns of startups more generally; and a local financing specialist discusses financing options for all sizes and types of growing young firms. A few speakers discuss other entrepreneurial ecosystems in the area, such as startup networking events and industry specific resources to develop business models and action plans.

We conclude the speaker series with a technology entrepreneurship specialist to discuss how the concepts and experiences of the Street Challenge maps onto a specialized industry niche. For example, although the companies and related stakeholders of an industry may be scattered across office towers and industrial districts, startups need to understand the network of the industry, key players, market dynamics, key regulatory issues, inter-dependency among the businesses, resource acquisition strategies, and so on. Using the Street Challenge as a metaphor, students see how to apply what they have learned to their own areas of interest.

One advantage of combining community speakers with the place-based exercises and assignments is the impact the community has on the students, and conversely, the students have on the community. Through interacting with guest speakers and interviewees, the students learn the names and faces of the local leaders, and the ways they individually lead change and provide services/value to their communities as politicians, activists, professionals, and entrepreneurs. The students, in return, provide direct value to the communities when they converse with the individual business owners, and when they share their data analysis and recommendations to community members. We expect – or perhaps hope – that the students will have a longer term, indirect impact on the community, as the pedagogy inspires them to engage in their own communities to lead change.

As this example of a semester long implementation of Street Challenge shows, the course becomes a series of connected exercises and assignments towards the course objectives. For instructors who want to apply this approach, they could start with just one or two elements, and add or create other additional activities over time. For example, in an Introduction to Entrepreneurship course, we have experimented with conducting field observation trips that highlight conversations with business owners, conducting a needs assessment, and drawing on government census data. The assignments may be linked to different

learning objectives and research skills, which allow instructors to curate the experiential learning to the students in the course to fit the needs of their program. If an instructor wanted to emphasize primary research skills, they may emphasize the field observation trip, consumer research survey, and entrepreneur interviews, but not require the street preview report or data analysis. Conversely, an instructor wanting to inculcate a strong sense of physical place might emphasize field visits but limit interaction with local people through interviews or customer discovery activities.

Results: Outcomes and Broad Applicability

Student Outcomes

Through the Street Challenge, we found students develop a greater awareness of business ecosystems as an operating concept, gain an increased sense of empowerment, and broaden their understanding of the range of people who are entrepreneurs. Engaging with the community - either through walking a business district as an out of class activity or speaking with an entrepreneur or other in-class speaker from the neighborhood - allowed students to tangibly connect their concept of entrepreneurship to multiple types of people.

I have never actually walked through the downtown area so it was nice to see everything that [city] has to offer. Our group made it a point to interview some store owners and get their exact input on the downtown area. I think that the Street Challenge helped me get out of my comfort zone by talking and working with different groups of people. (Comment from student reflection).

An additional shift in perception occurred when students no longer saw the street from the perspective of consumers but instead shifted to the perspective of business owners. Employing that lens, the students considered the cumulative effect that a set of interconnected businesses have on one another. This allowed them to see both the ecosystem and the entrepreneurs in a new light.

I learned about how certain businesses can compliment or conflict with each other. It is very important in areas, such as the downtown area, that the businesses compliment each other and there is some kind of flow in that area. I think [it] has a nice look to it and is quite appealing to the eye. I never really thought about how well everything fit until we spoke about how if you tilt the buildings sideways the top of the building should fit nicely on the other side of the street. Downtown does this very well and everything seems to fit comfortably. (Comment from student reflection).

Through exploring the impact of proximity and network effects, the students became more capable of making other conceptual connections between a given business and an extended set of related business that may be partners or competitors, for example. This approach helped them adjust their perspective on what can often be abstract concepts and ground them in a concrete and tangible reality.

Getting to know local business owners is important, it gives you an idea of who your neighbors will be and an opportunity to learn about what it is like to be a business owner in downtown [city]. I had the opportunity to speak to one owner, who was very kind and curious as to what our class was about and also gave me a little insight into the business district. She said it is important to stay open all year in order to remain stable. She also said that the business tend to work together to get their voices heard and to make changes in the community to help nurture and grow new and old businesses. (Comment from student reflection).

The approach also provided an opportunity for students to observe their own changing opinions about entrepreneurship. As this shift occurred, students' artifacts in the form of reflective discussions and writing demonstrated a greater sense of individuality and agency in how they described their own futures as entrepreneurs. Through the use of a variety of reflective exercises, we were able to observe emerging confidence and increased focus on the part of a number of students as they began to "see" how they themselves would be entrepreneurial. Some identified with particular entrepreneurs they came into contact with, while others were able to adapt their own nascent projects and see them fitting within a relevant ecosystem.

It's a small world; to make a long story short, here's the basic rundown of my experience. After our class lunch downtown, I met my friend who's a fellow guitar player that graduated a year or so ago, I told him I'd be in [city] so I gave him a call. He told me he was at Art Haven across from the police station, I knew where that was at, and I was there real quick. I got through the entrance of Art Haven, and I see these dudes and a girl putting up sheetrock, one of them being Steve. I asked him, what was going on? He told me he was building a music room for the kids. He went further on to say that, because of the budget cuts in [city] schools the arts have been eliminated and now he's set-up of a nonprofit to supplement arts for the school. This is not the first time I've had experiences like this, but it's a cool feeling the find out that people you know, or your friends are part of their communities [sic] business scheme. My train wasn't coming for a bit so, I hung out and helped put-up sheet rock for a while. (Comment from student reflection).

Applicability to Broad Scope of Students

The Street Challenge has primarily been used in undergraduate courses, but would be equally effective in masters' level courses. The Street Challenge could be used as a scaffolding framework for several types of courses, including introduction to business or new venture startup. The pedagogy has the benefit of using a common experience to teach entrepreneurial concepts, and thus can be equally effective with students registered in a business school or in non-business faculties. Indeed, this approach is particularly useful in situations where many of the students in a class study entrepreneurship without a business background or outside of a business degree program. As the Street Challenge uses a common frame of reference for all students in a course (they may not have all been to the specific neighborhood under study, but they have all been in neighborhoods), it lowers an important disciplinary barrier. This allows students to share a common access point through which to study and apply entrepreneurial concepts (Pittaway & Cope, 2007b). The pedagogy can also be employed in a number of disciplinary concepts, as the project and assignments are easily adaptable to courses in disciplines ranging from healthcare studies and social work to public policy and urban planning. As entrepreneurship education often takes shape and form outside of the business curriculum, this is an important characteristic.

Discussion: Practical Insights for Implementing Street Challenge

As described above, we think Street Challenge can be applied in many contexts and many ways. The approach can be used in undergraduate or graduate programs, solely with business students or with students having a minimal business background and understanding, or a combination of the above. Within an instructor's specific context, the selection of which assignments to use, whether to focus on a small-town main street or a combination of urban business districts, and who to engage as community stakeholders is also customizable. Instructors may even choose to emphasize different learning objectives, depending on the focus of their course or program.

In the rest of this section, we address three specific challenges instructors may face when implementing Street Challenge. First, we discuss the conceptual challenge of helping students see how they can generalize from the Street Challenge to understanding other types of business ecosystems. Second, logistical concerns of transportation, weather, class size, and online learning require consideration. Third, student engagement is required for classroom and team work.

Conceptual Challenge: Helping Students Generalize Insights to Other Contexts

Street Challenge was designed to help students understand how an entrepreneur or a business related to other people and organizations within a business ecosystem. The pedagogical challenge is to make sure students do not limit their insight and learning to retail environments or place-bound entrepreneurship, but see how the concept of an ecosystem can be applied to any area or industry entrepreneurs might target. One way to help students make the connection is to invite guest speakers to address how they work their industry networks within a given ecosystem to launch and grow their businesses. Alternative approaches may include class discussions, based on a case or students' interest areas. We also worked with local economic development offices, and reviewed with students the various networking events, industry clusters and other support resources for entrepreneurs. By explicitly linking the example of the Street Challenge experiences to these other contexts, students are more likely to extend their understanding of business ecosystems.

Street Challenge can also be connected to the ecosystem of specific professions through class discussions and reflections. Our students often aspire to become accountants, engineers, or trainers, and the concept of connecting as an individual to a broader ecosystem of professionals is relevant to their success. Employing Street Challenge as an analogy, students can be guided to examine how to 'enter' a profession, connect with key players and organization, contribute to the quality of the ecosystem and at the same time compete for resources and customers. They also have practical exposure to concepts of administrative law, as neighborhood zoning regulations are often analogous to laws and regulations that affect their chosen professions. This key understanding of the interconnectedness of an industry or of a profession may lead to strong career and business strategies as an entrepreneur.

Logistics

Transportation may be an issue. One challenge we faced was transportation options to our target neighborhoods. Whether the target is a nearby town, or a neighborhood poorly linked to public transit options, the extra time and expense of traveling could affect students who do not have cars or funds for traveling. Some universities have restrictive risk-management policies that limit faculty driving students in their own vehicles or require costly hiring of buses, increasing the logistical challenge. Optimally, the Street Challenge activities should require at least one visit to the place and, depending on the specific assignments implemented, more than five. If only one visit is required, as in a field observation trip linked to the mall exercise above, we group students in teams of 5-10, and carpool to a selected neighborhood for a faculty-facilitated visit. If students are required to visit the place to conduct surveys, interviews,

and other activities, then some care is needed in selecting the neighborhoods to consider accessibility. In many instances, districts may be accessible by bicycle, walking, or local transit. These practical concerns could sabotage a semester, so we recommend transportation be included as a criterion for selecting the locations and/or team membership.

For many faculty teaching in northern schools, weather might be a factor. Scheduling outdoor portions of the Street Challenge project, such as surveys of consumers or field observation trips, will require thinking through what the typical weather pattern of a semester might be and locating the project within a timeframe that has less chance of adverse weather or class cancellation. Students in one class were valiant in collecting surveys on the street in -20 degree Celsius weather, but some flexibility in scheduling activities like surveys may be preferred. In another semester, multiple university-wide cancellations due to severe weather affected both the project itself as well as the rhythm of the course. The flexibility of the Street Challenge is that specific activities can be taken out of the course if necessary to cope with weather conditions, without losing the conceptual benefits of the overall approach.

An additional consideration is the level of involvement of a faculty member in the Street Challenge activities themselves. Depending on how the pedagogy is used, a faculty member might want to accompany the students as a participant/guide (particularly in the initial field experience) so that student activities can be properly orientated and redirected to connect to learning outcomes. If the pedagogy is implemented with multiple field visits, however, it may not be feasible for the faculty member to participate beyond a single visit. In these cases, we found class debriefing discussions, and pre- and post- reflection assignments were effective alternatives to spending time in the field with students.

Additionally, the experience of rapidly adapting to the challenges of a global pandemic has provided an opportunity to think about how to further leverage the pedagogy in an online or virtual environment. One recent version of a course employing the pedagogy completely online adapted many of the resources and produced strong student learning outcomes. In addition to adapting course materials for use in a virtual environment, instructors can also adapt the materials to think about virtual, or digital, ecosystems (Elia et al., 2020). As a result of rapidly adapting to the Covid-19 environment, we reshaped the Street Challenge to contain both in-class and online modules that can be used in either a synchronous or asynchronous teaching environment. Both formats are available on the OER website.

Student Engagement and Commitment

In order for the Street Challenge to be successful, students must commit to engaging in the projects and process, and have multiple levels of dependence on one another. This can be a challenge when students have multiple

responsibilities and competing obligations. Attendance can also be a concern. Students who have spotty or irregular attendance can have a negative effect on the class dynamic and work product. Motivating students to remain engaged, particularly students who are taking the course as an elective outside of their major, will require the instructor to demonstrate how the lessons add value for students. Further, choosing a site location that is visually engaging and/or has other appeal for the students will serve as a motivator.

Any class activity that requires team projects runs the risk of having free riders. This is particularly true when the project requires students to perform out of classroom or field work with their peers. One way we combat the free rider problem is to employ a peer evaluation assignment within which team members hold one another accountable for the project. We have also employed team contracts for that purpose. We have also found that devoting time for teams to work on projects within the class environment is a useful strategy, as instructors can both observe and correct issues of team dynamics as well as provide clarification and guidance.

Conclusion

The Street Challenge framework offers instructors support to create community engaged, place-bound, experiential learning that heightens students understanding of community ecosystems. The framework starts with the premise that local neighborhood main streets, or urban commercial districts, are ecosystems, with analogies to other types of industry or professional ecosystems. Entrepreneurship courses often focus on the students as future entrepreneurs, focused on the perspective of business owners as agents. Ecosystem awareness allows students to develop broader perspectives and locate opportunities to add value, making them even more effective entrepreneurs. By discussing two distinct examples that we have used for different courses, we present an overview of the various types of exercises and projects used to explore the facets of a business district.

The benefits of the Street Challenge approach go beyond the classroom. Universities are being increasingly asked, both by external accreditors and other stakeholders, to document and demonstrate how our work has a positive impact within our own communities. Street Challenge provides a robust example of a civically-engaged pedagogy that supports evidence of innovation, engagement, and impact (an AACSB priority), and demonstrates commitment to and engagement with our natural constituencies. For those institutions that have or seek Carnegie Community Engagement classification, the pedagogy provides an evidence-based approach to a commitment to effecting meaningful change within communities.

Implementation of Street Challenge in different locations and with different courses has demonstrated to us that the general model can be adapted and customized to fit a variety of programs and courses, as determined by instructor needs and intended learning outcomes. Our experience has shown that conceptual

learning objectives of entrepreneurship and ecosystems, and skills of primary research and effective communication can be addressed through courses or modules, using local neighborhoods as tangible contexts. Equipping students with the perspectives and conceptual framework to address their future career situations, as professionals or entrepreneurs, is a worthwhile endeavor in itself; with Street Challenge students also discover the value of civic engagement and a sense of agency in addressing ecosystem or community challenges.

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