

# Crossing Boundaries and Redefining Roles: Humanists as Academic Entrepreneurs

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## Abstract

We present an adaptive approach to academic entrepreneurship that we show to be successful for faculty working in humanities departments at public regional Master's universities. At such institutions, faculty need to forge new roles as entrepreneurs that center on pedagogical concerns and student learning so that their work can be recognized as legitimate by colleagues and contribute to their central roles as teachers and scholars. Additionally, because these institutions offer less robust, established support for such endeavors, faculty need to cross numerous boundaries and locate resources and assistance from a variety of campus offices and institutional initiatives. Our article outlines two pilot entrepreneurial projects that we incorporated into professional and technical writing internships and courses that can serve as exemplars for faculty who seek to pursue entrepreneurial activities within similar institutional contexts.

Keywords: Academic entrepreneurship, boundaryless careers, regional Master's university, humanities, higher education

JEL Codes: I23, L26

## Introduction

As Jain, Gerard, and Maltarich (2009) argue, faculty need to balance their workloads carefully when engaging in entrepreneurial activities because those activities may be perceived to interfere with their central roles as teachers and scholars. We argue that the challenges involved in forging a successful entrepreneurial role are magnified in institutional contexts such as ours where faculty have high teaching loads and less access to institutional support for entrepreneurial activities, including release time, funding, and technologies. As professional and technical writing faculty working within an English department at a regional Master's university, we cross disciplinary, pedagogical, and other boundaries to pursue entrepreneurship while fulfilling our faculty obligations that are directly required for achieving tenure and promotion. To integrate entrepreneurial activities into our workloads successfully, we developed an adaptive approach that is flexible, pedagogically centered, and functions well within our institutional context by allowing us to focus on benefitting our students' learning through entrepreneurial activities.

Below we discuss traditional models of business and academic entrepreneurship and illustrate how we adapt the aspects of each to our local context. We contextualize our approach within the pedagogical needs of our discipline, professional and technical writing, and within our humanities department and regional Master's university. We then describe two pilot projects designed around an adaptive approach to academic entrepreneurship, presenting them as cases that can be built upon and enacted in similar academic contexts. This approach to academic entrepreneurship facilitates the crossing of all sorts of institutional and disciplinary boundaries and encourages faculty to create multifaceted roles that help them to demonstrate to students how to manage the sorts of boundaryless careers that they will have as 21<sup>st</sup>-century knowledge workers. The instability of future organizational contexts will require students to employ skills such as creativity and flexibility that are central to entrepreneurship.

## **Models of entrepreneurship**

Different approaches to entrepreneurship abound, including economic, environmental, social, and sustainable (Richomme-Huet & De Freyman, 2014; Tilley & Young, 2009). Our focus, academic entrepreneurship (henceforth AE), is unique in that it includes within its structural framework capacities for knowledge creation where students can participate in entrepreneurial processes (Grimaldi, Kenney, Siegel, & Wright, 2011; Siegel & Wright, 2015). Before examining the challenges that we face within the context of our institution with regard to engaging in AE, we provide an overview of the central features of AE and our adaptive approach. Our discussion is inspired by the perspectives of Stokes, Wilson, & Mador (2010) regarding dimensions of entrepreneurship, including the related processes, behaviors, and outcomes. The distinctions between the approaches can facilitate a dialogue about the workable AE structures appropriate for our institutional context. Further, as pointed out by scholars, defining a concept thoroughly is imperative when identifying a new trend in the field (Richomme-Huet & De Freyman, 2014). As we outline below, our adaptive approach is unique in the sense that it is a departure from conventional forms of AE, one that is productive for faculty at regional Master's universities who seek to cultivate entrepreneurial ambitions within humanities departments.

### *Large-Scale Academic Entrepreneurship*

Large-scale AE is a variable of the broader concept of institutional entrepreneurship wherein individuals or groups leverage resources to build or transform existing business structures within an institution (Maguire, Hardy, & Lawrence, 2004). AE differs from business entrepreneurship in that the latter centers on entrepreneurship involving "self-interested economic actor[s]" utilizing scarce resources mainly to enhance profits (Montanye, 2006, p. 500). Like other types of institutional entrepreneurship, AE highlights the potential of "actors and agency in the institutional change process" (Battilana, Leca, & Boxenbaum, 2009, p. 68). Insofar as large-scale AE is concerned, we recognize such agency in the role of individual actors, faculty researchers who work within the administrative structures that influence and shape their entrepreneurial efforts. In large-scale AE, these efforts result in creating and supporting

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dedicated facilities that produce spin-offs developed from university-generated intellectual property. Such large-scale AE projects originally appeared at institutions that are classified as Doctoral or Research 1 universities (depending on the terminology used by the Carnegie classification system in a particular year); AE projects taking place at Master's universities developed more recently and, as we detail below, encounter particular challenges (Harrington & Maysami, 2015; Howgrave-Graham, 2009).

With its social science influence, entrepreneurship is a process that involves the work environs of the entrepreneur, including the “company” or the “start-up team” on one hand, and buildings and the surroundings as more concrete variables on the other; it also incorporates human capital (Osiri, McCarty, Davis, & Osiri, 2015). In this way, AE is similar to business entrepreneurship in that it involves assembling the required factors of production such as human, physical, and information resources (Lazear, 2005; Osiri et al., 2015). The academic model, however, is complicated by traditional as well as emerging perspectives and makes use of a resource-based orientation, including technology transfer offices (TTOs), patents, licenses, and start-ups/spin-offs. Traditional models of large-scale AE are built on commercializing innovations and research to generate funds for universities thereby treating entrepreneurship as a source of revenue. An emerging model, on the other hand, privileges the overall ecosystem in which the university is situated by highlighting the social benefits of entrepreneurship. Toward that end, this model encourages curricular changes to support courses and programs in entrepreneurship for students, involves public participation by bringing in a “surrogate entrepreneur” who is external to the campus (Franklin, Wright, & Lockett, 2001), utilizes alumni support, and promotes an entrepreneurial culture both on campus and in the surrounding community. This emerging paradigm reflects policy developments centering around social responsibility and “a greater emphasis on teaching” (Siegel & Wright, 2015, p. 585). These strategic shifts inform the role of universities in broadening the scope of entrepreneurship from economic to social platforms and affecting the structure in positive ways, allowing faculty, students, and staff to assume entrepreneurial roles.

*Adapting Academic Entrepreneurship for Our Local Context*

As mentioned in the previous sections, Doctoral universities and even larger Master's universities focus their AE on creating spinout companies, involving academic scientists and business faculty who pursue their AE within a supporting ecosystem of TTOs, technology managers, and science/research/technology parks (Grimaldi et al., 2011). Although not strictly motivated by profit, this model of AE proves to be largely unworkable for ventures within an institutional framework like ours. We work in a mid-sized, regional, Master's university that is geographically isolated from other significant urban centers; central industries in our metropolitan area are health care, pharmaceutical clinical trial administration, and tourism. Additionally, we teach professional and technical writing within an English department and have teaching loads of three courses per semester. These contextual factors shape the manner in which we can participate in AE.

Our approach to AE is certainly informed by recent scholarship that focuses on large-scale AE as discussed above (Grimaldi et al., 2011; Jain, Gerard, & Maltarich, 2009; Nabi, Holden, & Walmsley, 2010; Siegel & Wright, 2015); however, we also learned much from scholarship focused on regional Master's universities like ours (Harrington & Maysami, 2015; Howgrave-Graham, 2009). The emerging trends in the contemporary AE model have created spaces of opportunity for faculty at public regional Master's universities, but these opportunities come with significant costs that need to be mitigated through readjustments in professional structures, including curriculum, personnel considerations, distribution of workloads, students' motivations, departmental support, and institutional endorsements (Howgrave-Graham, 2009). Unlike large-scale ventures conceived in research universities that can leverage permanent infrastructure at all levels, AE can survive within our institutional context only if it can justify itself as a source of legitimate knowledge claims at the institutional and departmental levels through connecting entrepreneurial activities to the teaching mission central to our type of institution and department. In light of this, we developed our adaptive approach to integrating academic entrepreneurship that differs from

the existing models in that it (1) involves research aligned to pedagogies of applied and service learning and (2) includes projects initiated and managed by faculty housed in humanities departments.

All paradigms of large-scale AE share the common goal of exploring and steering an idea toward commercial possibilities with differences in the degree of commercial returns (Yusof & Jain, 2010). However, the most interesting aspect is underlined not by this common approach to a problem but by the outcomes each generates. At large public or private universities, the core goal is to commercialize the research by projecting its intellectual capital within the larger academic domain and to create social purchase in the wider community of government, industry, and society. In the case of our adaptive approach, the incentive is largely pedagogical rather than commercial with a strong focus on student learning outcomes; this focus motivates epistemological change, allowing the activities to be revised as appropriate to align with the mission of our institution. For our students and us, cultivating an entrepreneurial mindset may be more central than aiding students to learn specific entrepreneurial skills, however necessary they may be. As Newman (2013) explains in her review of AE scholarship, experts agree that the liberal arts are uniquely poised to foster students' entrepreneurial thinking and character—in other words, their entrepreneurial mindset. Students' recognition of their growth as potential entrepreneurs and their abilities to articulate that growth in written reflections are central to our pedagogical approach and to the assessments of our efforts. This connection is significant as the resources for our projects come primarily from connecting our AE activities to the applied learning initiatives supported by the institution's mission. As such, the "entrepreneur mix" which looks at the *Who, Why, What, and How* (Osiri et al., 2015) gives way to what we call a "epistemological mix" that presents a very different matrix of convergence, including departmental faculty and administration, the motivated entrepreneurial individual or group, the quality of students' learning experiences, the nature of the courses, the institutional support structures, and the overall educational environment.

### **Pedagogical motivations for pursuing entrepreneurship**

Our adaptive approach to entrepreneurship addresses the unique challenges and benefits resulting from engaging in AE at institutions like ours. Recently, students in higher education have shown significant interest in entrepreneurship. The U. S. Small Business Administration now spotlights millennial entrepreneurs and provides online resources and support (Contreras-Sweet, 2016). A 2007 Intuit Future of Small Business Report asserts that the current generation of college students “will emerge as the most entrepreneurial generation ever,” a sentiment echoed by *Forbes* (Asghar, 2014) and *Time Magazine* (Trunk, 2007) and suggested by research into students’ entrepreneurial intentions (Birdthistle, 2008; Davey, Plewa, & Struwig, 2011; do Paço, Ferreira, Raposo, Rodrigues, & Dinis, 2011; Nabi & Holden, 2008; Nabi et al., 2010; van Gelderen, Brand, van Praag, Bodewes, Poutsma, & van Gils, 2008).

Universities have responded to this burgeoning student interest through different forms of research and support. The humanities in general and the field of writing instruction in particular have explored aspects of workplaces and their documents. Nevertheless, research reveals that entrepreneurship communication presents unique challenges that remain largely unexamined (Brender, 2005; De Clercq & Voronov, 2009; Martens, Jennings, & Jennings, 2007; O’Connor, 2002). Spartz and Weber (2015) explicitly identify a “knowledge deficit about entrepreneurial writing” (p. 429) regarding the variety of specialized genres that entrepreneurs employ. The authors surveyed entrepreneurs about the documents they produce and their attitudes toward writing, and the study reveals that education in entrepreneurial writing is often focused on the business plan and other pre-launch documents (Spartz and Weber, 2015). These researchers also found through this study that less attention is devoted to the communication genres required by entrepreneurs to successfully continue their operations and handle the unanticipated circumstances that emerge during an enterprise’s lifecycle.

More importantly for us, the proficiencies that make entrepreneurs successful are increasingly needed by graduates of programs in professional and technical writing. In a post-industrial age, an entrepreneurial mindset and entrepreneurial skills are increasingly important for all knowledge workers, including technical and professional writers. Many highly skilled workers will find that their workspaces and careers are boundaryless, located across organizations and shifting with opportunities (Jablonski, 2005). To be successful in such careers, which are not anchored in specific organizations, Jablonski argues that students will need to be able to network and learn to improvise:

“To enact boundaryless careers, individual workers use a number of strategies, including improvisation and sense making, adaptation and learning, and agency and communion. Careers are not the predictable achievement of an abstract goal; they are rather a series of improvisational adjustments to unfolding events, such as changes in technology, chance meetings offering new opportunities, or flash recognitions of disenchantment.” (p. 24)

Through the pedagogically-embedded entrepreneurial projects we piloted and discuss in detail below, we demonstrate that we can aid students to develop these proficiencies. Our projects are by nature open-ended and present students with unexpected challenges. These projects are designed to help students to develop the essential foundation on which to build an entrepreneurial mindset, including “higher-order thinking skills [and] the ability to deal with complexity and ambiguity” (Higdon, 2005, p. 34). Specifically, the projects asked students to work in a range of contexts on and off campus, prompted them to learn and use new technologies as needed, and spanned the traditional academic boundaries of departments and semesters. As the faculty, we modeled the appropriate improvisational skills by assuming heterogeneous roles of teachers, mentors, and supervisors. Our courses and borrowed lab spaces functioned as hubs of entrepreneurship, and we both guided our students and worked alongside them, interacting with the clients as we aided our students to develop these marketable skills.



### **Pilot projects built around our adaptive approach to AE**

Our projects reflect the qualitative changes necessary for AE to be successful at regional Master's universities. Despite the limitations mentioned earlier, the usefulness of these ventures is measured by highlighting the benefits that students experienced. The globalized, distributed, and interconnected realities of workspaces highlight the need for skills in "negotiation, teamwork, and cross-boundary management" (Jablonski, 2005), which can be effectively cultivated through AE. In our roles as instructors and mentors, we have attempted to facilitate pedagogically-embedded entrepreneurial activities and create instructional modes for students to meet emerging challenges. Below in the form of case studies, we detail two pilot projects that reveal how boundaries separating roles, classroom spaces, courses, and semesters became permeable when we engaged entrepreneurship within the contexts of professional and technical writing courses, a humanities department, and a regional Master's university. We present our adaptive approach to AE and these cases as exemplars for faculty, specifically those in writing and communication, who teach and work in similar institutional contexts.

#### *Case 1: Establishing a Professional Writing Laboratory*

Our first initiative involves a collaborative faculty start-up that launched in summer 2015 and offered professional writing services. During this enterprise, faculty directly supervised small teams of English graduate student interns as they performed document usability studies, website user experience (UX) analyses, and grant proposal consultation for community clientele. This applied learning experience gave the students instructor-mediated interaction with local businesses and a nonprofit organization, affording them opportunities for client negotiations and networking that persisted after the internship's conclusion; a student subsequently undertook paid freelance work with one of the clients, and another student obtained a grant writing position with the nonprofit. During the internship, students used a range of specialized professional resources, including eye-tracking hardware, usability testing software, a comprehensive grant research database, and open source design programs. This entrepreneurial experience helped them prepare for boundaryless work environments, in keeping with the Association of 48 American Journal of Entrepreneurship

Departments of English report *Rethinking the Master's Degree in English for a New Century*, which argues that students need post baccalaureate training in professional composition and communication skills valuable for careers outside of academia (ADE Ad Hoc, 2011). After its conclusion, the experience was rigorously assessed by an institutional unit outside of the department, which determined that it provided appropriate educational benefits.

In order to initiate and administer this pilot project effectively, we had to fill multiple concurrent roles, some of which were unlike those normally assumed by faculty. Humanities fields tend not to have the sort of reciprocal relationships with entrepreneurship that science, technology, engineering, and mathematics (STEM) disciplines do, so an important task for us was to advocate for the value of entrepreneurial endeavors while mediating the potential disruptions. In our particular case, there was some trepidation within our department that faculty-student entrepreneurship may not fit the shared educational mission or even that it may be somewhat antithetical to it (Wright, 2013). Moreover, there was a lack of consensus about how such endeavors might count toward a faculty member's professional advancement. For example, internal policies provided explicit guidance about how the department should value grant and award funding in annual reviews, but they did not address revenue derived from services or patents.

We assumed an intermediary position consistent with our adaptive approach when engaging our department by championing entrepreneurship's pedagogical potential while minimizing its commercial imbrications. Consequently, it was important to communicate the experience's intended Student Learning Outcomes (SLOs) and how they would be assessed. Additionally, we established that all entrepreneurial activities would be non-profit; any revenue generated would directly fund current and future pedagogical initiatives. By highlighting these aspects, we were able to frame our entrepreneurial endeavors in terms of our department's explicit policy and implicit ethics. Our teaching practices and resulting research products would be valued professionally, but financial or commercial production per se would not. This middle position helped allay apprehension that faculty-student entrepreneurship could compromise academic

integrity or disciplinary practice (Jain et al., 2009; Lipinski, Minutolo, & Crothers, 2008; Wright, 2013), which is a common concern within the humanities. In our experience, internal resistance was not significant or intransigent; rather, it presented a rhetorical situation that required us to address legitimate concerns that can arise in disciplines where entrepreneurship is uncommon.

In order to advance this project, we had to enlist the assistance of units outside of the department, and this obliged us to use adaptive rhetorical strategies different from those we employed internally. For example, when addressing potential funding sources on campus, we often had to demonstrate competence with entrepreneurship and emphasize our project's commercial suitability and ongoing solvency rather than its pedagogical import. This required us to shift roles and become learners, because we did not have meaningful experience with practical commercial matters such as collecting revenue. We also were compelled to learn how to navigate applicable legal matters, such as our state's explicit prohibition against government agencies—including public universities—competing with private entities. Partnering with other units was necessary to address such gaps in our experience. Although building a coalition with external groups required us to assume multiple, sometimes unfamiliar roles, the resulting collaboration was valuable not only for the access to specialized knowledge and material resources it provided, but also because it demonstrated cooperation with other units, which helped establish the project's legitimacy.

An important partner for this project was our institution's Center for Innovation and Entrepreneurship (CIE), a joint public and private incubator that connects members of the regional business community with university faculty and students. Crucially, the CIE provided information, workspaces, meeting rooms, and contacts with appropriate local clients. In order to secure this assistance, we had to resolve rhetorical challenges, such as generating proposal documents and participating in pitch meetings with the CIE board. We had to accomplish much of this labor before the project could begin in earnest, so students could not contribute to these initial activities; however, once the startup launched, students shared in ongoing management, demonstrating how boundaries separating instructor from pupil, employer from employee, and schoolwork from commercial labor dissolved.

Although the CIE provided physical space and client introductions, we needed to form other partnerships to supplement the initiative's material resources and ensure its rigorous academic assessment. The group that administers our university's Quality Enhancement Plan (QEP), ETEAL (Experiencing Transformative Education through Applied Learning), proved to be an important ally in this regard. A QEP outlines a focused course of action aimed at improving student learning and is required by our institution's accrediting body. Our institution's QEP focuses on fostering applied and experiential learning, which includes the kind of entrepreneurial internship experience we sought to provide. Securing grant funding from ETEAL allowed our team to obtain print and electronic resources. Additionally, at the project's conclusion, ETEAL collected separate student and instructor critical reflections and evaluated them according to criteria from the National Society for Experiential Education's *Eight Principles of Good Practice for all Experiential Learning Activities*: Intention; Preparedness and Planning; Authenticity; Reflection; Orientation and Training; Monitoring and Continuous Improvement; Assessment and Evaluation; Acknowledgment (NSEE, 2013); as well as ETEAL's own internal SLOs: Intention; Application of Knowledge; Critical Reflection. The results of this evaluation indicated that the entrepreneurship experience appropriately satisfied all of the scored criteria, which helped support our claim to internal parties that the project had pedagogical merit.

Other campus units also contributed vital support. Our institution's Center for Teaching Excellence (CTE) provided laptops for our students, which were necessary because our startup used specialized hardware and software not available in campus computer labs. Our university library also provided access to a major grant research database, which was crucial for our consulting services. These collaborations with units across the campus impressed upon us the importance of forming partnerships when engaging in entrepreneurship within the humanities, where the entrepreneurial resource pipeline is often less developed.

Our roles as internal and external liaisons continued throughout the project's duration, and new ones emerged as it developed. We both supervised our students and worked alongside them as they interacted with clients and developed marketable skills. As the boundaries between our roles as advocates, learners, partners, teachers, and workers dissolved, so too did the spatial boundaries of our classrooms and workplaces. The internship occurred in off-campus conference rooms and client sites more than in our computer classroom. This blending also was reciprocal, as clients, community members, and campus personnel were invited into our normally discrete learning spaces. In addition to hosting client meetings, we, as supervising faculty, offered a series of functional workshops open to the public covering professional writing topics: visual rhetoric and information design; the use of eye-tracking software in usability studies; search engine optimization (SEO); and the basics of grant and proposal writing. By removing spatial separations we were able to imbue our entrepreneurial endeavors with an element of community outreach and involvement. This aspect fit well with the project's service to the nonprofit sector, and such outreach is often a core facet of humanities fields, which suited our context appropriately.

At the conclusion of the internship's original iteration, we turned to assessment. Most educational experiences include some form of evaluation, but we also incorporated structured student and instructor reflection as a condition of our involvement with ETEAL. This helped articulate the experience's pedagogical import, and being audited and deemed pedagogically effective by a third party was an important step in justifying entrepreneurship's value to internal audiences. Such documentation may help pave the way for similar endeavors in the future.

This experience helped prepare students for boundaryless careers through direct participation in entrepreneurial activities that required students and faculty to take an adaptive approach. The blending of roles also carried into our spatial arrangements, reflecting the heterogeneous nature of contemporary work environments and practices. Although the particular support structures discussed in this case study are not ubiquitous to all institutions, we believe the highlighted methods of gaining internal and external support through rhetorical negotiation and collaboration are broadly applicable.

*Case 2: Development of an App to Prevent Campus Crime*

Our second venture, a multi-semester project in professional and technical writing, involved preparing undergraduate students for applied civic engagement through a range of interrelated modules for the development of a digital tool. The tool was a campus-specific social utility mobile app developed on common language infrastructure (CLI) technology for cross-platform implementation. The tool was conceived as an additional support to the existing mechanism on campus for crime prevention through environmental design (CPTED)—an active crime prevention measure through maintenance of campus assets including grounds, buildings, and beautification structures.

With a very strong entrepreneurial vision, three sections of two undergraduate courses—ENG 204: Introduction to Professional Writing in fall 2015 and ENG 319: Document Design in spring 2016—were involved in the app development cycle. The curricular framework was aligned to the mission for developing “social innovation ecosystems”—a priority advanced by North Carolina Forward, an initiative between the statewide UNC system and Forward Communities. North Carolina Forward’s defining goal is to enhance the state-wide collaborative initiative to develop and exchange various learning resources through meeting new challenges and sharing these experiences and processes widely to create a larger impact on social entrepreneurial ventures (Institute for Community & Economic Engagement, 2014). Titled “Designing Social Utility App for Tagging Campus Crime,” our project connected classroom learning to the development of a digital communication tool for the prevention of campus crimes at the University of North Carolina Wilmington (UNCW). The digital tool, a cross-platform app for students, staff, and faculty, is currently being developed with a \$7,000 funding budget from ETEAL and the UNCW Office of Innovation and Commercialization (OIC).

The project was launched in and funded at two stages; stage one involved a semester-long research and content development project by students in the two sections of ENG 204. They collected inputs from campus organizations such as Collaboration for Assault Response and Education (CARE), the UNCW Police Department, and UNCW’s Substance Abuse Prevention and Education Program (Crossroads). The students

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also met with faculty members from the Department of Sociology and Criminology and collected data through a survey of over 175 campus students. In addition to primary research, the students also conducted market analyses of existing apps and produced 10 sets of wireframes as scamp designs, a preliminary design sketch, for the app's next developmental cycle.

In the spring 2016 semester, ENG 319 students developed collaboration and negotiation skills to advance their peers' primary research from the fall semester and designed app mockups. Importantly, they were able to leverage the existing institutional support through regular and dedicated meetings with a team from the university's branch of the system-wide Small Business & Technology Development Center (SBTDC) and a subject matter expert (SME), a computer science student, who coded the app from the wireframe to its interactive prototype stages. The structure underpins a learning process that involved knowledge for both the internal and external workflows. At the internal level, the students acquired relevant technical skills to design and develop the content for the app. This included a range of design concepts and principles, including image resolutions, bit depth, hex code conversions, and raster and vector images. On the external level, the students obtained skills for managing their project in line with the grant's objectives, developing sharable content, as in copy and visuals that could be used by the SMEs, and identifying institutional and community framework qua campus organizations for relevant technical and research support such as the university's Technology and Assistance Center (TAC) and CARE.

The systematic integration of classroom pedagogy with an institutional entrepreneurial ecosystem underscores the uniqueness of our adaptive approach to AE. As is made clear, the driving factor behind the initiative is to extend applied learning opportunities to align with the evolving climate of the workplace. Spanning the two courses and multiple semesters, the initiative made students accountable for understanding a curricular framework involving externalities that directly impacted their performance in a complex way.

What makes this project truly entrepreneurial is its conceptual structure. The effort highlights the two central features of our adaptive approach to AE in general: (a) it involves a larger ecosystem and (b) it emphasizes teaching. The first is a macro orientation involving externalities, such as the various support infrastructures, while the second factor is a more micro-level understanding of the project.

Starting with funding, the infrastructures enabled the classroom practice to be seen in the larger context of a community and stakeholders engaged in creating a network of support. For instance, the student business plan competition, mentioned earlier, was facilitated by the SBTDC, and a team of students was able to participate at the UNC system-wide Social Entrepreneurship Competition in February 2016. The preparation for this competition involved meeting with personnel at SBTDC, drawing up a business plan, understanding market analytics, and presenting dry runs before business people and other campus faculty members—the last being a defining feature of AE. According to the “Carolina Express Licensing Agreement,” developed at UNC Chapel Hill in 2005, a business plan must be approved by a business school faculty member (Grimaldi et al., 2011). As such, it was imperative to factor this requirement into the curriculum so that the student entrepreneurs could prepare a legitimate business plan for a goal-oriented outcome—the Social Entrepreneurship Competition—rather than for a standard end-of-semester project proposal assignment.

Similarly, it was important to bridge the gap between these students trying to design the app and the SME involved with coding the app. The instructor prepared the groundwork by creating documentation in addition to an assignment description to explain and articulate the shared responsibilities of the two sets of actors involved in the project. For instance, classroom time was used to allow the SME to share expectations regarding the workflow process and the formats of deliverables. Additionally, the instructor created modules to educate the students about content development and sharing, including selecting file formats, converting images, and preparing style sheets with hex codes, among many other topics.



The micro-orientation of teaching focused on developing materials and mapping the course syllabus and SLOs to the course's pedagogical outcomes and the granting agency's goals. The first challenge was to map a project, entrepreneurial in definition, to the expected SLOs required in the two undergraduate courses. For ENG 204, the instructor incorporated the final proposal requirement into the research aspect for the project. The students were asked to conduct primary and secondary research to establish support for developing a dedicated digital crime prevention tool for the campus. The research involved producing Strengths, Weaknesses, Opportunities, Threats (SWOT) analyses, market analyses, and feasibility reports for a potential design based on existing market research as well as conducting interviews and surveys on campus with various stakeholders, including organizational staff, students, and professors. Relatedly, the pedagogical approach for ENG 319 primarily focused on utilizing the research conducted by ENG 204 students to inform the initial planning and design of the apps. This involved training the students to understand the process of translating theoretical or research-based information into a product-based artifact.

The second challenge was to align course materials with the relevant training requirements for students to develop and share content with the SME. The instructor played the key role of a symbolic analyst (Johnson-Eilola, 2005), articulating the value of a distributed peer production process at two distinct levels—intradisciplinary and interdisciplinary. The main function of the instructor was to facilitate the decision-making process and communicate ideas between the two sets of knowledge workers—designers (students in ENG 319) and the developer (the SME). Besides using the standard mode of instruction for the two teams of specialists, the instructor prepared several custom materials, both text-based and visual, to create a common vocabulary for both sides. For instance, to help create interface mockups using the techniques of affinity mapping, the instructor designed a five-step process diagram to conduct usability testing. Following this, a simple line diagram and a style sheet template were created to explain how the students could share their design wireframes and specifications with the SME, who was also trained to read

these documents. Finally, as all teaching includes assessment, the project's success was evaluated through progress reports, storyboards, A/B testing, and a final critical reflection.

The usability reports focused on the concept of measurable goals defined by federal regulations, which included testing for accuracy (number of attempts for task completion), speed (duration of task), success (percentage of completed task), and satisfaction (the overall sense of fulfillment) from using the app prototype. All the users were students ranging from 18 to 25 years of age with 75% female and 25% male. The testing scenarios were informed by the primary and secondary data collected in the previous semester and focused on four potential elements of campus crime: (a) bike theft, (b) drug use, (c) sexual assault, and (d) mugging. The overall response for using an app was positive with over 95% of the users feeling the need for a digital, "close-to-hand" option. The highlights of the findings recommended incorporating a drop pin feature for location identification; adding one-touch dial to campus police; separating emergency from non-emergency situations with appropriate labels on home screens; placing the emergency button on the bottom, center-half of the screen for quicker access through a thumb press; including features for anonymous crime reporting to concerned campus organizations; and integrating a customization feature for frequently accessed numbers.

Because this project, like the one discussed above, received ETEAL funding, the evaluation included structured reflections from both students and the instructor from these two courses. The critical reflection highlighted the importance of applied learning in general where students take ownership of their work and practice translating concepts to tangible outcomes and the effectiveness of fostering critical and professional skills for the market in particular through real-life projects. The evaluation tools helped to determine that students gained valuable skills while participating in robust learning experiences.

Although the project identified appropriate contexts for the application of the app, it was limited in attracting a wider cross-section of users. Given the scope of the project, mainly as a curricular initiative, the user base was limited to student samples that were either self-recruited or recruited through personal contacts. It is also worth mentioning that some of the constructs used to describe campus crimes

oversimplify a more nuanced understanding of violence taking place on campus; for instance, sexual assault may not sufficiently characterize a testing scenario to portray the extent of brutality inflicted upon an individual and consequently may not get reflected in the actual prototype. However, we see this as a valuable opportunity for experiential learning where students negotiate interdisciplinary and cross-functional boundaries as part of learning their process. We hope that beyond adding a résumé line, the skills will also serve as a competitive advantage for students in and outside their professional situations both in the short and long terms.

### **Conclusion**

Our case studies described above illustrate that in addition to fulfilling larger epistemological responsibilities, there was a binding obligation to connect classroom learning to the institutional mission of supporting AE. The notable shift in our adaptive approach to AE is epitomized in our efforts to align our entrepreneurial goals with the missions of our department and institution. We, therefore, assert that our adaptive approach to AE can provide a successful pathway for other faculty who work in the humanities at public regional Master's universities like ours. The pedagogical focus of our pilot projects has allowed us to operate within our institution's instructional focus and assuage our colleagues' concerns that entrepreneurial activities might distract us from our teaching and research responsibilities. Additionally, we demonstrate that faculty can forge alternate roles and work across numerous institutional barriers to make complex entrepreneurial projects feasible and successful. Our study does not critique standard practices of AE; it suggests the possibility of creating unique environments for AE to thrive within institutions where faculty are willing to engage students professionally through successful qualitative changes in the curricula. We present our adaptive approach and these pilot projects as exemplars for faculty and as points of departure for further innovative approaches to AE.

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