



Jamii: A Virtual Incubation Platform for Entrepreneurs

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ABSTRACT

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This paper discusses the design and pilot testing of a virtual incubation platform, Jamii. It provides a user-centric experience, specifically developed to support entrepreneurship, which integrates concepts such as “just-in-time” learning and supporting social networks. An underlying concept of Jamii is an Event-Gate process, providing feedback to strengthen the business concepts and assist entrepreneurs in moving their ideas forward. Several pilot programs have been undertaken using this approach. The collaboration with University of Strathmore in Kenya will be discussed further.

1. Introduction

Jamii is a virtual incubation platform (Sparkes et al, 2016a) that is challenging current online education by providing an engaging, learner-focused experience specifically developed to support entrepreneurship education across the globe. Jamii has been shown to impact entrepreneurs on a global scale by sharing knowledge with geographies that would not otherwise have access to focused entrepreneurship content and support. Unlike Massive Open Online Courses (MOOCs), Jamii is structured to provide participants with the opportunity to customize their learning within “just-in-time” learning modules, supporting networks of peers and vetted external mentors. In this way, larger cohorts of learners may be provided with a more personalized learning experience. This requires a change in how teaching is approached, since the traditional role of ‘teacher’ now becomes that of a partner in, and facilitator of, learning. We believe that platforms such as Jamii, which means ‘community’ in Swahili, represent the next generation in the evolution of online education that we refer to as Massive Individualized Learning Environments (MILE).

2. Background of the Jamii Project

In April 2012, the Graduate Management Admission Council (GMAC), through its Management Education for Tomorrow (MET) Fund, presented more than US\$7.1 million in grants to 12 organizations around

the world as part of its Ideas to Innovation (i2i) Challenge¹. The purpose of the fund was to “invest in strategic initiatives that benefit business and management education globally”. The University of Waterloo proposed the creation of a Virtual Incubation Program that would consist of a global, online network of students, community groups, local entrepreneurs and international university partners, designed to virtually support the development and launch of new businesses. Of the 12 universities that obtained grants, the University of Waterloo proposal received the most extensive funding.

The five-year project, covering the period 2012-17, is administered by the Conrad Business, Entrepreneurship and Technology Centre (Conrad), a Centre within the Faculty of Engineering at the University of Waterloo. In its submission, Conrad’s stated goal was to establish a program with international outreach to build prosperous business ecosystems around the globe. The goal would be operationalized by establishing Jamii in a systematic way. First, it would be introduced internally to University of Waterloo students in its Master of Business, Entrepreneurship and Technology (MBET) program. Next, the program would expand to include other academic interest groups at UWaterloo, of which the university has a uniquely large pool of entrepreneurial students and groups that could benefit from VIP. Upon successful adoption by groups within Waterloo, Jamii would then be offered to community groups (other

¹ <http://www.gmac.com/why-gmac/giving-back-met-fund/met-fund-i2i-challenge.aspx>

academic institutions in Waterloo Region and local start-ups). In its final and most intensive phase, Conrad would work with international partners to form a web of worldwide universities utilizing and promoting Jamii to its stakeholders.

UWaterloo was chosen by GMAC's MET Fund because it was well positioned to manage a program of this nature and scope. The university has achieved global reputation for excellence in academics, leadership in innovation and entrepreneurship and has a history of success in the transfer of ideas into commercial ventures. Further, the Conrad Business, Entrepreneurship and Technology Centre is well equipped to manage a program of this stature. Conrad currently serves as the flagship business and entrepreneurship academic unit at UWaterloo. Its programs offer students, from all disciplines, the opportunity to build necessary business skills, knowledge and networks that will advance their ideas and careers. Finally, location is critical. Business and community support is powerful in Waterloo Region evidenced by a booming tech sector, strong manufacturing and finance companies, engaged advocacy groups and entrepreneurship support organizations. Conrad has drawn from this local business ecosystem to build a sustainable virtual incubation program with strong potential for replication and connectivity in external environments.

In short, the MET Fund's RFP came at a most opportune time. The fund's goals aligned well with UW's Conrad programming. MBET was the first master's level program in Canada designed specifically for graduate students wishing to pursue an entrepreneurship speciality and had been successful in carrying out that mandate. In 2012, MBET celebrated its 10-year anniversary of offering a unique business education experience to entrepreneurial students by providing them with the combination of academic content, commercialization practicums, mentorship, networks and incubation to launch a new business. The knowledge gained from these formative years could now be leveraged in a virtual manner to nurture the development of new businesses and create enduring alliances among universities, partners and business communities around the world.

3. The Jamii Project

The initial underlying conceptual foundation for the Jamii initiative was based on an Event-Gate process shown in Figure 1. Proof-of-concept activities were carried out with students in the MBET program. They replicated, in a virtual environment, what students had been receiving in more traditional face-face encounters with faculty members, mentors and investors. At that time, a core feature of the MBET program was its Commercialization Practicum. Within the Practicum, teams of MBET students pursued a business idea to further develop it. Practicums could originate externally from local start-ups or larger companies interested in launching new business units, processes or products. They could also originate internally at the university through faculty interested in commercializing research, or through the MBET students themselves arriving in the program with their own business in the making.

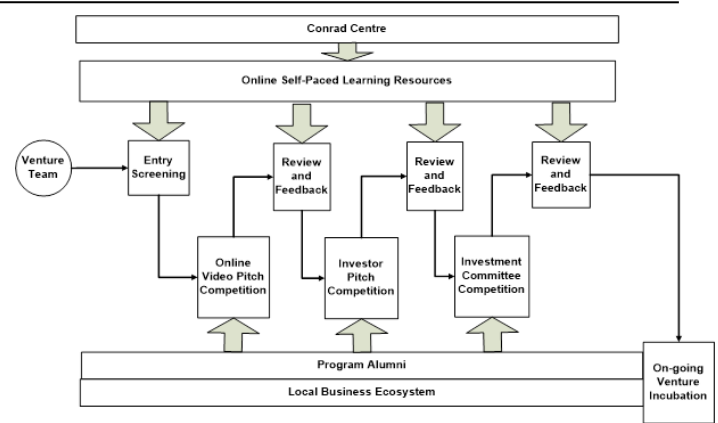


Figure 1: Event-Gate process

As shown in Figure 1, the event-gate process consists of an online pitch competition, an investor pitch and an investment committee competition. Each event is judged virtually, by panels comprised of program alumni and members of the local and Waterloo business community.

This served two important functions. First, it provided feedback to the venture team which helped them strengthen and develop their business concept. Following each event, the team was involved in a review providing feedback on the strengths and weaknesses apparent from their performance and presentations. To continue to the next event, a venture must have reached an acceptable level of performance based on predefined judging criteria, with a set number of retries allowed for a venture. If the venture failed to progress past a gate after its allowed number of attempts, it exited the program.

Second, the venture developed a support network. The network provided support and advice and became a potential source for early stage financing. Each event gate was intended to "raise the bar" for participating ventures providing constant access to mentoring and configurable learning resources to prepare participants for the next stage. The second event, the investor pitch competition, was conducted using our proprietary web conferencing technology and required the team to virtually present a short overview document describing the business and a presentation to another judging panel. Again, this panel provided valuable feedback to the venture and had a set of assessment criteria for allowing the team to move forward.

The final event gate was the investment committee competition. At this stage, the assessment panel had the ability to provide access to financing and/or resources (for example: ongoing venture incubation in physical space through partnerships in one of Waterloo's many incubators and accelerators and other incubators around the world once a network was established). Prior to this event, the venture must have provided a business plan that included full financials and be presented online. As with the previous event gates, ventures were given valuable feedback after the event. While ventures exited the program following the investor review stage, they continued to be engaged in the program as alumni, allowing them to continue building and developing their network, and in turn strengthening the network inside the program by remaining active.

The integration of the event-gate process into the MBET Practicum served a number of important functions, such as:

- Providing key milestones for the venture teams
- Providing realistic investment experiences

- Embedding the ventures more firmly into the local business community to establish ongoing support.

And allowing the designers to begin the next stage of Jamii's growth by:

- Providing the platform to run a business plan competition for SHAD – a national youth leadership and innovation program with chapters in all Canadian provinces
- Assisting with Faculty of Engineering 4th year capstone projects

During Jamii's formative years, considerable experience was gained through these pilot sessions with the design being continually enhanced through user and mentor feedback. As the project unfolded, dedicated space for the program champions was acquired and articles and presentations about Jamii raised the interest of colleagues in national and international locations.

Beginning in 2014, Jamii began expanding into the international environment with successful programs completed in partnership with Strathmore University in Nairobi (Kenya's leading out-come driven entrepreneurial research university), and the Information Technology Institute (ITI) in Cairo (Egypt's world-class ICT training institute). In summer 2017, a collaboration with the new MSc in Entrepreneurship, Innovation & Technology program at the University of Strathclyde, Glasgow, Scotland will begin².

3.1 Example of an International Collaboration - Jamii in Kenya

The first international offering of the platform took place in Kenya in partnership with the University of Strathmore. Strathmore was chosen because the Conrad Centre had been involved in an earlier entrepreneurial training initiative in East African. Part of this initiative was to determine and develop relationships with leading entrepreneurial universities in the region. Strathmore was a clear leader in this respect. Following a period of negotiation and collaboration between champions at both universities, the first international collaboration was launched in 2014. The collaboration's goal was to provide entrepreneurial teams in Kenya with the support, tools, learning materials and most importantly, the connections needed to successfully launch ventures and build a global support system. To achieve this goal, the collaboration was structured as a hybrid approach (Sparkes et al. 2016b) with the Jamii team providing virtual support to Strathmore University's @iLabAfrica incubator.

Since a key objective of the collaboration was to encourage the creation and development of new technology-based ventures, the Strathmore program began with a "challenge question" of interest in the Kenyan context. Specifically, student teams were asked to respond to the following challenge:

"Address agricultural issues in sub-Saharan Africa using mobile and social networking technologies."

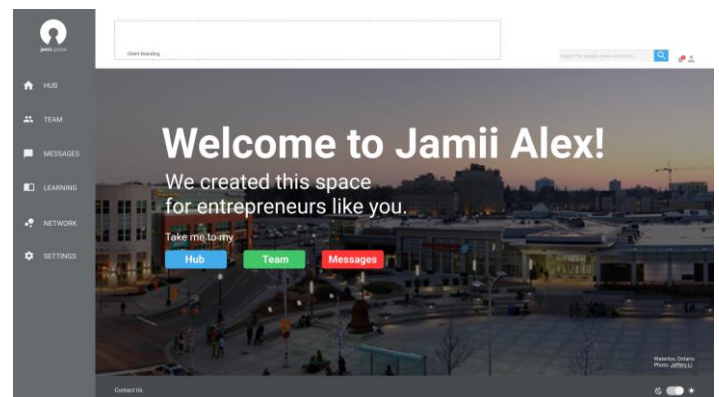
Why this topic? Because it focused on a significant problem that, with the right support, could be solved by existing technological strengths in the area. Various forums, such as the Davos World Economic Forum, have recognized that food security is a major issue facing this region in East Africa. Mobile technologies are transforming sub-Saharan Africa, with Kenya at the forefront of this technological revolution. Individuals in this

region now have previously unimaginable access to information, significantly impacting the economies of the region, and redefining the so-called "bottom-of-the-pyramid"³.

The challenge attracted hundreds of students from which proposals from approximately 50 teams were chosen to continue. Through the process, teams were able to obtain access to core entrepreneurship content, Waterloo-based mentors, and most importantly for long-term survival, to build a local support network. Those who successfully progressed through the event gates were provided space in the @iLabAfrica incubator at Strathmore University and the opportunity to make subsequent pitches to business and political leaders in Kenya. A number of the ideas developed are expected to become serious businesses that have the potential to make sustainable contributions to East Africa's agriculture sector. The winning team will be coming to Waterloo in the summer of 2017 to participate in the Waterloo's entrepreneurial ecosystem.

4. The Jamii VIP Platform in Detail

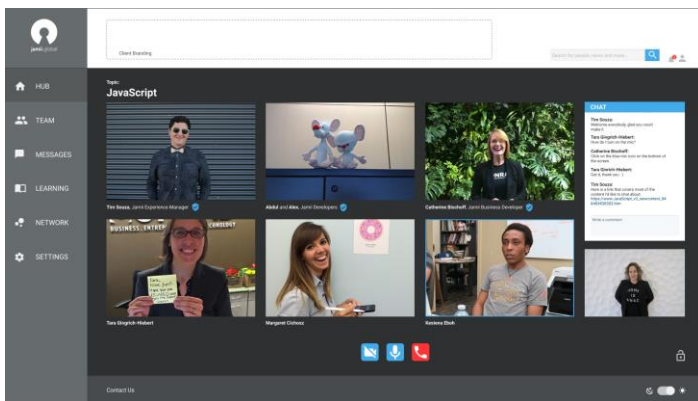
Jamii is truly democratizing the entrepreneurial experience that one could traditionally only find in places like Silicon Valley, New York, Boston, Tel Aviv, and Waterloo Region by offering tools, mentorship and a support network to anybody participating on the platform. Jamii is not designed as a standard online course, rather a platform that supports entrepreneurs wherever they need or want to work. Connecting to team members or mentors is facilitated easily and without friction via the Jamii platform.



The Jamii interface was built with the busy entrepreneur in mind. We wanted this to be a calm place where people feel encouraged to get things done, but also to get a chance to unwind. Given that we are a global platform with users all around the world, we made sure the visuals support that. The outside world is always present through background photos from the regions that our users currently come from e.g. Kenya, Egypt, Scotland, and Waterloo, Ontario.

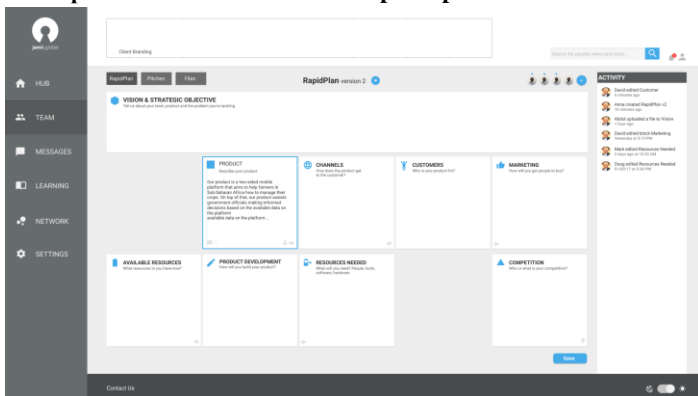
²<http://www.strath.ac.uk/courses/postgraduatetaught/entrepreneurshipinnovationtechnology/>

³<https://uwaterloo.ca/conrad-business-entrepreneurship-technology/blog/post/problems-matter-collaboration-between-conrad-centre-and>



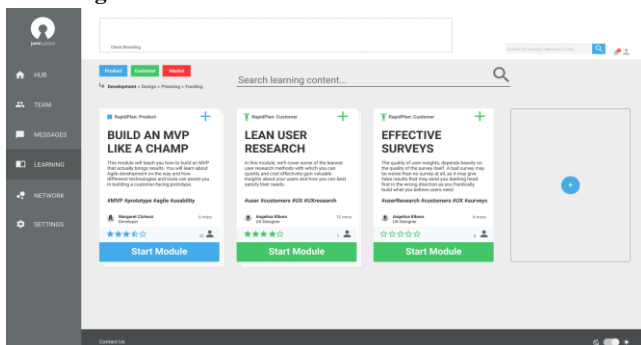
By combining traditional communications features (email inbox, chat, and video-conferencing) that emulate real world interactions, Jamii provides a virtual space where entrepreneurs can come together, test their ideas, learn from one another, compete in challenges, and receive both international and local mentorship that help start, build and grow their venture concepts. Based on the idea of getting like-minded people together in meetups, we developed virtual meeting spaces where users can get together to discuss topics of their choice. A simple click on a button allows participants to enter a room and join the conversation. There is no need to install software or schedule skype meetings.

4.1 RapidPlan™ – A Business Concept Map



RapidPlan is a business concept map for teams developed by Professor Doug Sparkes. It is intended to help entrepreneurs to think about their business idea in a step-by-step approach. RapidPlan consists of components which pose simple questions that might be posed by a mentor. The answers to these questions can then be used when developing the business plan document, financial plans, and when using other tools such as the Business Model Canvas or Lean Canvas. The primary goal of RapidPlan is to assist the team in telling a coherent story about its business concept.

4.2 Learning Modules



Learning modules are short and to the point. We understand that entrepreneurs often need just-in-time information. The modules are the steps that lead a team to a complete RapidPlan and eventually a complete business plan. Given that the Jamii focus is to connect people, we added a few social gestures to our learning space - users can rate modules, save them to a team book shelf and develop their own modules. The content is then verified by topic experts and posted to the platform.

4.3 The Pitches

At the core of Jamii are three event gates, or pitches. After each pitch, teams receive feedback from the Jamii mentors and get a chance to refine and resubmit their pitch.

4.3.1 The Video Pitch

The first pitch is a 90 second Video Pitch where teams have a chance to introduce their project for the first time. Think of this as the promo video to get the audience excited about the project.

4.3.2 The Investor Pitch

Following the 1st pitch, is a virtual Investor Pitch to judges from all the countries represented on Jamii. A more detailed market analysis and sales strategy is the focus on this pitch. Teams receive feedback and suggestions on how to improve their pitch.

4.3.3 The Investment Committee Pitch

As a final step, teams present their virtual pitches live to a panel of industry experts from the host country and Canada. In this Investment Committee Pitch, teams are expected to have a fully-fleshed out business plan, including financials and a go-to market strategy.

5. Jamii Client Base

5.1 Universities

The Conrad Centre sees potential to expand the Jamii user base by engaging with entrepreneurially minded organizations across the globe. Beginning with universities, this method of iteratively developing ideas through a milestone-driven program can be used by any faculty to support venture creation. There are a variety of business opportunities including licensing the platform as an embedded component of Undergraduate or Graduate programs or as a stand-alone competition.

In 2017, the Conrad Centre will deliver Jamii to the University of Strathclyde's Business School, named Times Higher Education Business School of the Year 2016. The platform was customized to meet the requirements and milestones of Strathclyde's capstone project within the MSc Entrepreneurship, Innovation & Technology. Strathclyde students will experience an engaging approach to venture creation whilst creating a valuable network in Glasgow, their home countries and Waterloo, accessible long after termination of the degree. The Rapid Plan business concept map tool and our three event gates will keep students on track for the eight-week program and communication tools will allow team members, faculty and mentors located in disparate regions to stay in constant contact. The Conrad Centre looks to offer this type of subscription service to universities in UWaterloo's partner network as well as outside of it.

5.2 Incubator Programs

The market potential for the Jamii platform extends beyond the academic realm to incubator and accelerator programs. Incubators and accelerators have to deal with complex relationship management and scheduling with a multitude of clients, internal and external mentors and funding parties. Jamii could alleviate and streamline many of the processes of those

programs by virtue of its easy to use functionality. Entrepreneurship focused organizations can customize the platform with their branding, content, milestones and encourage their mentor network to engage online when unable to meet in person.

5.3 Corporations

Market research has identified several large corporations that require a network building tool that streamlines internal or external innovation projects or programs. Industry competitions like Johnson & Johnson's "Africa Innovation Challenge" or Airbus' "Fly Your Ideas Competition" provide a unique opportunity for students to work together in diverse teams to tackle the most important challenges facing a specific industry. Jamii could be utilized for this type of activity purely as a technology and communications platform.

6. Jamii in the Future

In December 2016 Jamii was selected to present the virtual incubator concept and platform at the QS Stars Reimagine Education Conference at the Wharton Business School University of Pennsylvania. This edtech-focused event and competition provided an excellent opportunity to pitch the platform to dozens of universities and higher-ed content producers. It was noted that the Jamii concept was unique in its user-centric intent of skill building and knowledge transfer. While many massive online learning courses exist, they are not able to personalize the experience which may result in delivering an unengaging experience. While Jamii incorporates learning modules alongside communication features and entrepreneurial guidance, it also takes a novel approach by amplifying the student's ability to learn. Jamii is harnessing the power of community and using it in an intelligent way to grow the network of participants and enhance long term success.

7. Conclusion and Future Research

The Jamii project has led to several areas of research related to Human-Computer Interaction (HCI) and learning in virtual environments. While our current focus is on validation and improvements to the platform, we expect that potential research areas will expand as we move forward.

Currently a major research focus has been on the design aspects of Jamii and validation of the system. To this end, we have been reviewing the results of our pilots in Kenya and Egypt and applying the lessons learned to our next project with Strathclyde. This includes improving our ability to capture data for post activity review. Interesting future research would be to conduct a longitudinal study of the individuals who participated in the initial Kenya pilot, since we have the opportunity to track both a treatment and non-treatment cohort. Our next pilot has raised several new issues for investigation, specifically the integration of Jamii onto the curriculum of existing entrepreneurship programs. This can be challenging as it requires an integrated approach within a project-based learning environment, rather than the "siloed" approach common in most programs.

In more general terms, Jamii is an example of "human computation"⁴. This approach integrates crowdsourcing and artificial intelligence (AI), and is ideal for complex, ill-structured problems. While this approach can have a wide range of applications, with Jamii the context provided is entrepreneurship education with a core concept map, RapidPlan. This

leads to the potential for individualization of the learning experience, hence the concept of Massive Individualized Learning Environments (M.I.L.E). The crowd aspect relates to the interaction of peers and mentors in the development of the venture concepts, while AI is used in various aspects of managing the interactions. This opens several exciting areas of research including the human-AI interaction, team processes in virtual and hybrid environments, development of social networks, and learning in virtual environments.

Acknowledgement

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⁴ Pietro Michelucci and Janis L. Dickinson (2015) The Power of Crowds. *Science* 351 (6268), 32-33.