StartMeUp! Stimulating Self-employment for Students in the Creative Industries

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Entrepreneurship is perceived as a powerful driver of economic growth and job creation. In recent years stimulation of entrepreneurship in education in general, and in the creative industries in particular, is high on the political agenda. The creative industries have by default of its serviceoriented focus, always been an entrepreneurial and less an employee environment. In the creative industries 80% are microbusinesses, with one to three employees1. SME's (Small and Medium Entreprise) represent the most important source for creating new jobs. The creative industries are no exception to this. At the same time, the sector is strongly projectbased and demand driven. Loose moments between projects asks for flexible employment and employment in the sector is very volatile. Still the media sector is in full transition offering plenty of appealing and inspirational role models to ambitious and creative young people. These innovative and tantalizing startups and the new business models that often come along with it, infuse new ideas and approaches in traditional companies. Classical examples are Facebook as a news aggregator or Twitter as a new form of journalism. While a lot is happening online, there is also much potential for the print industry whether in 2D or 3D printing, where 3D modeling and printing is an emerging market in product design and development. To summarize, opportunities to explore new services and products and to establish your private business in the creative industry abound.

1. Introduction

The creative industry in Flanders is subdivided in 12 sectors, based on a study from Flanders DC [10], on a European level the creative industries is defined as followed "Creative industries" are those industries which use culture as an input and have a cultural dimension, although their outputs are mainly functional. They include architecture and design, which integrate creative elements into wider processes, as well as subsectors such as graphic design, fashion design or advertising [4]. In this paper we will focus on media (design of screen and print media; PR & advertising; and the audiovisual sector) as these are the core domains of the Department of Graphical and Digital Media at the University College Artevelde Ghent, Belgium. The University College believes that an entrepreneurial spirit can and should be stimulated amongst students. By integrating innovative learning methods and creating an entrepreneurial environment/ culture, students' interest for self-employment can be triggered and nurtured. To this end, accelerator programs and boot camps are integrated in the University College's program and entrepreneurial students are encouraged to deepen their personal startup ideas and entrepreneurship in general. By doing so, the University College creates a safe but catalytic learning environment for students to explore and develop their talents individually and in a team of peers. In this process, teaching staff act as professional coaches, not as instructors. The fact that the teaching corps itself has a track record of entrepreneurship and/or are part-time professionals in their field, adds to the authenticity and ensures that the program remains in touch with the 'real world' experience.

Within this context and as part of its mission, the University College continues to look for new ways to make students more entrepreneurial sensitive. Hence the deci-sion of the Department of Business Management and the department of Graphical and Digital Media to join forces and to invest in the mindset and capacities of students and to develop a mobile application called "StartMeUp". This mobile application is a buddy application based on behavior design principles, taking into account the needs of a pre-starter and early stage starter and attempting to guide and coach him/her through the critical early stages.

While students are eager to think about starting up their own business and taking their learning, career and life in their own hands, they often don't succeed to get over the first hurdles or seem to be unable to outlive the first three years. A lot of people quit, resulting in personal frustration and a loss of self-esteem. Actually, starting up a business is not only hectic but also chaotic. During this process there are highs and lows, stability and routine is not really there as pre-starters and early starters are often pushed out of their comfort zone. Research shows that starters and pre-starters often feel alone in their endeavor. 'Being an entrepreneur is one of the loneliest jobs in the world' (Hwang & Horowitt, 2012, loc1883). This app aims to overcome this hurdle and

in-tends to create a conducive and supporting environment by linking them to their peers, hereby occasioning new networks and new matching arrangements with other starters to co-create certain (technical) aspects of their startup. And why not even find co-founders or investors? With this application we would like to monitor their behavior, anticipate where required and provide individual coaching. At the same time, we learn more about their entrepreneurial behavior and we can data mine for further research to improve our coaching meth-odology. This paper will explain the motives for designing the application, how it was effected and how the behavior design component was elaborated. It will then conclude with describing our future plans and specifically the use of this application in a broader educational environment.

2. Student entrepreneurs

Stimulating entrepreneurship in higher education has been on the agenda for some time now. A great number of policy documents underscore the EU's interest to further this objective. At a time when Europe's international competitiveness is at stake and high hopes are placed on strengthening the knowledge society, the question of fostering entrepreneurship in the creative industry presents itself. Over the years, numerous reports commissioned by the EU concluded with summing up a number of recommendations aiming at stimulating entrepreneurship, especially for young people. This culminated in 2013 in an action plan adopted by the EU[9].

HEI's (Higher Education Institutes) are allocated a specific and active role in this process of continuous innovation and of widening the skills portfolio of individuals to better cater for future qualification needs and lasting economic success. Research shows that entrepreneurship education makes a real difference and has a positive effect on the entrepreneurial mindset of students. Students who went through entrepreneurial programs and activities have more favorable attitudes and intentions or aspirations in becoming entrepreneurs. After graduation, they find a job earlier, demonstrate greater intrapreneurial skills and start more companies. [5]"Alumni who have attended entrepreneurship programs rate themselves to be more creative, have more analytical skills, are more capable of motivating others to gain support and assistance in realizing opportunities, they have better networking skills and, to a lesser extent they have a great ability to adapt to situations and handle different situations with ease".[6]

Additionally, skills development of the individual is perceived as underpinning personal wellbeing and fulfillment. Establishing your own business is seen by young people as an excellent and efficient way for personal development and economic and social autonomy. Given the interest of young people as digital natives for new media and the ample opportunities they offer to make a few (or a lot of) euros, the increased number of students enrolling for an academic course in new media design and production does not come as a surprise.

In a recent report on the 'Modernization of Higher Education Institutes' the authors recommended integrating interdisciplinary thinking together with intellectual entrepreneurship, whereas intellectual entrepreneurship is 'extended beyond the business curriculum to become a way of thinking, as a mode of learning through creating synergistic relationships across academic disciplines and involving universities and the public and private sectors. Intellectual entrepreneurship moves the mission of institutions of higher learning from 'advancing the frontiers of knowledge' and 'preparing tomorrow's leaders' to 'serving as engines of economic and social development'. The mission of intellectual entrepreneurship is then to help students discover their discipline, use their expertise and become successful, highly academically literate professionals'[20].

Open markets demand entrepreneurial students to further economic development. Specifically the creative sector is perceived as holding huge potential to unleash the entrepreneurial and innovative capabilities and aspirations of young people[7]. Indeed, there is a world of opportunities awaiting those who want to take risks, explore new ways of self-employment and enjoy the freedom of idea flow.

At our University College we enjoy a long and strong tradition of entrepreneurship. ACCIO, an organization that stimulates entrepreneurial spirit among our students and coaches student startups, was established specifically to this end in 2013 and provides a structural support for entrepreneurial students. Additionally students with startup plans can apply for special facilities and support-

ing measures to take the first steps towards initiating and running their own business. A special cooperative has been established for that purpose, providing students with the opportunity to commence a business in a (financially, fiscally and legally) regulated context. The student entrepreneur becomes shareholder in the cooperative and receives coaching from experts and peers during the initial stages. An "entrepreneurship" course is in the making that can be lectured across the various departments at our University College in addition to department-specific courses. In this context, the need for a mobile application to galvanize and interconnect the various initiatives arose.

3. Why this application

While students are eager to think about starting up businesses, they often don't succeed to get over the first (administrative) hurdles or seem unable to get through the first three years. A lot of people quit[23]. During the process of starting a business there is also this aspect of loneliness. Starting up a business is chaos. It is a difficult process with lots of potential hurdles. During this process there are highs and lows, stability and routine is not really there, pre-starters and early stage starters often are pushed out of their comfort zone and thrown in the unknown. The envisaged application will connect them to their peers, create new networks, match the available skills with those of other starters in order to co-create certain aspects of their startup or becoming an associate. With this mobile application, which we can categorize under 'Personal Informatics', we will be able to monitor, to anticipate when and where required, and to coach the student individually. Whilst people are using the application, we learn more about their entrepreneurial behavior and we can data mine for further research, with a view to optimize the exiting application.

4. Methodology

We applied a co-creation design method (Cooper, 1990, 2008, 2009) with 'lead users' (Von Hippel, 1986) and mainstream users, in order to come to a detailed analysis of the application, its features and functionalities. Through expert interviews (early stage starters, entrepreneurs and coaches/facilitators), open and structured brainstorms with students and colleague entrepreneurs and an online survey we decided to focus on 3 functionalities, a nearby functionality, mood tracking and goal setting. We then designed the application based on behavior design principles (Fogg, 2008). Finally, the app was tested and re-tested by lead users.

5. Personal Informatics and Mobile Persuasion

Personal informatics envisions the use of tools to help people to gain insight and awareness in their current behavior, habits and thoughts. By using self-reflection they have the possibility to act on it (Li 2012, p1). When introducing this application into the pre-starter and early stage starter community, one still need to learn about entrepreneurship, we offer essential tools and information to stimulate entrepreneurship. Gradually, users learn more about the need of milestones, deadlines, networking, etc. This will generate the necessary commitment to keep going whilst at the same time acquiring the necessary skills and information to set up a business. The more they use the application, the more insight they (and we) will get and the more feedback they get when opted in for that. Creating engagement with the application is part of the persuasion to persevere and to avoid people from quitting in a very early stage (see also further).

Mobile phones are very powerful instruments for persua-sion. The persuasive experience can be personal and can lead to more delicate behavior changes. In addition, the experience is also focused and targeted (Fogg, 2007).

Mobile applications are powerful and influential tools largely due to their real-time data synchronization and real-time information transmission. As such, one can instantly act on the motivation of the user when he or she is in a certain mode. In the words of Fogg: "putting 'Hot Triggers' in motivated people's path" (Fogg, 2010). When the use of the application amplifies and expands, we will learn more about the best 'cues' to send feedback and send triggers to the user in order to help him carry on and persevere.

The more the application synchronizes data of the individual user, the more the system gets to know his or her patterns and will provide feedback accordingly.

In the next section the different, successive steps in the follow-up system are explained. For this, the application makes use of the taxonomy for self-monitoring. The latter is adapted from the taxonomy of wearable technology by Ananthanarayan & Siek, (2012).

6. Taxonomy of Self-monitoring

In this taxonomy, the self-monitoring process is categorized according to three aspects: 1) goal settings by the us-er, 2) data interpretation or reflection on the synchronized data, 3) feedback loop and coaching provided by the software. Goal setting is an important element in the cycle of possible behavior change. Goal setting theory teaches us that *proximal, specific, difficult yet attainable goals result in higher task performance compared to 'no goals' or 'easy goals' (Locke, Latham, 2002, p.705-717).* The more specific the goal, the higher the success rate in achieving the goal. Within the application the user can set goals that are important for him or her to achieve with his or her startup. The dashboard presents the data and will help the user to reflect on the data. As such, it is one of the key motivators of the system. When using the application over a longer period of time, this will be complemented and reinforced with individual feedback and coaching. In order to have more impact on the user, one might consider a fourth element in the taxonomy. This will take the form of personal coaching, adding a human touch (Fogg, 2007, p75) either through chat application or face-to-face encounters on a regular basis.

7. Persuasive Methods

Besides the awareness that comes along with the technology, there are other contextual factors that come into play when changing behavior or having the ability to change a certain behavior.

The behavior model of Fogg states that three elements need to converge simultaneously at the same time. B=MAT, behavior = motivation, trigger and ability, but not necessarily in that order. We mainly work on triggers and ability. The higher the ability, the more likely the application will be used in our case. In previous research on wearable devices we have learned that 'People try to simplify the paths they take. They try to simplify their lives, preferring short routes to longer ones' (Norman, 2010, p 126-127). The affordance between person and object can be complex but not complicated. In combination with Norman's theory on 'Living with complexity' (Norman, 2010), we consider the 6 simplicity components that come with Fogg's behavior model. These components are: (depending on the audience and context there might be trade-offs) money, time, physical effort, cognitive effort, social deviance, out of comfort zone and non routines.

In addition, it is necessary to take into account the complex totality of subdimensions of motivation. Fogg describes three core dimensions of motivation: sensation (Pleasure and Pain), social cohesion (Social acceptance and Social rejection) and anticipation (Hope and Fear). If we look further at motivational factors and personal informatics, we should also pay attention to the difference between intrinsic and extrinsic motivation. In the latter we can distinguish three different aspects: identification, integration and introjection (Ryan & Deci, 2000).

First, identification is related to extrinsic motivation, because the user of wearable devices is identifying with the personal importance of a behavior. The user is accepting regulation in the form of feedback and reporting that is generated by the data dashboard of the wearable device. The user decides whether to change a certain behavior based on one's own goals set in the dashboard.

Second, integrated regulation is also a component of extrinsic motivation. Integrated regulation is close to intrinsic motivation, but differs because integrated regulation is separated from the behavior and its instrumental value, even though the rules and regulations are fully assimilated into the person. '*Integration occurs when identified regulations have been fully assimilated to the self. This occurs through self-examination and bringing new regulations into congruence with one's values and needs' (Ryan & Deci, 2000, p62).*

Finally, a third component of extrinsic motivation is intro-jection. This is occasioned by peer pressure, or social pres-sure, to uphold a certain image, to have higher self-esteem, avoid guilt and anxiousness. In this last component we can notice a dichotomy. The social peer pressure could lead to a 'show off' behavior to impress the peers and trigger dishonest behavior. Therefore, the user might choose to not share all elements within the mobile application.

However, if intrinsic motivation plus these three elements in extrinsic motivation can be triggered by the wearable devices or in our case by the mobile application, one can almost be certain that a change of behavior will occur, because of a self-identification with the application. We will clarify this assumption later on.

If we look at these different motivational triggers within a startup community, we can better understand the reasons for a change in the perception of younger generations towards entrepreneurship.

Sensation, pleasure and pain: having your own startup is very trendy and modish, especially amongst digital natives. National authorities and the EU noticed these new trends and seized the opportunity to promote self-employment and entrepreneurship, especially in the creative industry[8]. At the same time it is not an easy process to start up a business and this might cause some 'mental' pain.

Social cohesion, social acceptance and social rejection: not all countries have the same social acceptance towards entrepreneurship. In some countries, if you fail, you will face shame and people might react in a strange way. If you succeed, people might think you did something improper. There is never a win. (Hwang & Horowitt, 2012, Loc 4016)

Anticipation, hope and fear: the risk that is involved in starting a company (even when it is calculated) and at the same time there is the hope to do something cool or meaningful to make it happen and succeed in something you are passionate about. If we look at the simplicity components, we can argue that money, time, physical effort, cognitive effort, social deviance, out of comfort zone and non routines are all components that influence the decision to create a startup yes or no. These elements should be considered carefully. Especially money, out of comfort zone and non-routine are hard to tackle and are not that easily overcome by everybody. Testing these elements with potential starters is critical in the startup phase. In our search for the 'best' features of this mobile application, we came to the conclusion that the three selected features not only matched the preferences of the starters, but that these were also the ones that we could use to go deeper into the simplicity factors. The three functionalities we are looking at today in the mobile application like to go more into detail of realizing the dream and overcoming its hurdles.

First, goal setting, as written before, is an important element to achieve a goal. We have learned in previous research that the more specific the goal is, the more likely you are to reach it. As the application can be monitored by the researchers, there is the opportunity to give feedback loops to the user. Even though we will automate this process based on the usage, the application can trigger the user to set more specific goals and to share the goals if he or she wants to. In addition, the user could also be triggered by peers to reach a certain goal.

Second, the nearby function will be location-based. It allows users to check whether other users are in the neighborhood. This gives the user the feeling of not being alone and might incline them to have a drink or lunch together. In addition, co-working spaces will be mapped within this feature and other 'nice to know' locations will be available. This will give the user the opportunity to co-exist within his or her tribe.

Third, mood tracking will allow the users to get a view on his or her personal disposition over a period of time. The mood tracking feature is an interesting evaluation tool, to check a person's personality during his or her startup process. We all know that starting up a business is a very lonely process and one always has to be cheery to the outside world even though things are not necessarily that cheery. Thanks to this feature the user learns to anticipate on moods and can find out when lower moods are popping up and in what kind of situation. This person can then start to work on it and look for support from his or her peers and seek comfort to get back on the right mood track. One could also conclude that entrepreneurship causes too much stress and distress and is making him or her less happy. One could also notice that he or she is feeling at ease in his or her tribe with a certain group of people and might seek out those people to get back into a good mood.

Within our application we want to explore and test all these elements. Ideally we come to an evidence-based experiment. Therefore, we opted for the development of an application within a co-creation process (Cooper, 1990, 2008, 2009) to establish the preconditions for a favorable operating environment.

8. Co-creation

The specific features and functionalities of the application did not come overnight. Various actions were taken to gather sufficient information on the usability and relevance. We had, among other things, several in-depth expert interviews with various organizations. These include the Microsoft Innovation Centers in Belgium, Startup.be (an online startup community), iMinds (a knowledge center and starters lab-incubator located in Ghent) etc. Moreover, several brainstorms were organized with early stage starters to get a good grasp of their concerns and sentiments during the startup phase. Additionally, a survey was carried out to check the look and feel and the usability of the application at an international conference in Denmark in 2014.

During the entire development process of the application (still in progress while writing this paper) we work in different phases. During the first phase, we worked with a small group of colleagues employed by the University

College who are also active as private entrepreneurs. In a sec-ond phase we will open it up to lead users (Von Hippel, 1986) and in the third phase we will open it up to the startup community.

9. Open Source

We choose for an open source application (Apache License, v2.0), mainly because we want to give the online community the opportunity to co-create and because we would like to find out what will happen to it in an open learning and creation environment. The code and the design will be available on our website startmeup-buddy.io.

10. Future of StartMeUp

On several occasions we had the opportunity to present the idea of the StartMeUp mobile application to both national and international startup communities. This was always received well. Soon it became very clear that the project idea met the need of our international partners. This will encourage us to create an international community and to engage in monitoring of pre- and early starters on an international level. But also to support pre- and early starters in a wider, transnational context. Innovative ideas and various viewpoints come more readily when you open this up to the international community. Countries might have different needs in innovation, e.g. in the area of mobility and accessibility of information. By adopting this approach, the project gets a good glance at entrepreneurial behavior on an international level, and will be able to anticipate on this in the longer run. In addition, we will learn about innovative hubs, innovative ideas and how they come about both at home and abroad.

11. Conclusion

StartMeUp is clearly a work in progress and might never be finished because of the evolution of the market focus. While doing the first usability test, we noticed that the de-sign aspect (look and feel) of the application will be challenging. The simplicity, the shortest way to do 'things' in the mobile application will guarantee its success in attracting users and create sustainable engagement with the users. The mobile application will fail or succeed based on the amount of users we will be able to recruit and retain for the application.

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