

Entrepreneurial model based technology creative industries sector software through the use of free open source software for Universitas Pendidikan Indonesia students

B Hasan*, Hasbullah, W Purnama and A Hery

Department of Electrical Engineering Education, Universitas Pendidikan Indonesia
Jl. Dr. Setiabudhi No. 207 Bandung, Indonesia

*Corresponding author: bachtiarhasan55@yahoo.com

Abstract. Creative industry development areas of software by using Free Open Source Software (FOSS) is expected to be one of the solutions to foster new entrepreneurs of the students who can open job opportunities and contribute to economic development in Indonesia. This study aims to create entrepreneurial coaching model based on the creative industries by utilizing FOSS software field as well as provide understanding and fostering entrepreneurial creative industries based field software for students of Universitas Pendidikan Indonesia. This activity phase begins with identifying entrepreneurs or business software technology that will be developed, training and mentoring, apprenticeship process at industrial partners, creation of business plans and monitoring and evaluation. This activity involves 30 UPI student which has the motivation to self-employment and have competence in the field of information technology. The results and outcomes expected from these activities is the birth of a number of new entrepreneurs from the students engaged in the software industry both software in the world of commerce (e-commerce) and education/learning (e-learning / LMS) and games.

1. Introduction

Business and industrial development have risen with the globalization of the economy. The result range of products required to meet the needs and desires of consumers. Economic globalization and information development encourage the students who just graduate have competent entrepreneurial spirit. However, not all college graduates have an entrepreneurial spirit as desired by the employment opportunities. The fact shows that only a small proportion of college graduates who have an entrepreneurial spirit. On the other hand, the economic crisis caused the number of jobs was not growth, and even reduced due to bankruptcy. Under these conditions, the college graduates are required to not only be able to act as job seekers but also must be able to act as a job creator. Both require an entrepreneurial spirit. Therefore, in order that the college must be able to meet these demands, various innovations needed, include learning innovation to building technopreneurship generation today's information age [1]. On the other hand the technopreneurship are who make money out of existing or new technologies which may or may not have been developed by themselves [2].

Creative economy including the economy of the fourth wave, Alvin Toffler called the first wave of the economy relies on agriculture, economy the second wave in the industrial sector, and the third wave had economics in the information sector. In Indonesia, the creative economy is quite a role in national economic development though has not been touched by government interference. According to data from the Creative Economy Study Team, the creative industry sub-sector of Information



Technology in 2014 [3]. Has a Value Added Subsector (ADHB) IDR 8,610 billion or an average accounted for 0.11% of the total GDP added Subsector (ADHB) during 2010-2013. As for the labor force participation rate of the labor of the creative economy sector by 0.58% during 2010-2013. In addition, this sector has a workforce subsector 67,888 workers with national employment growth rate by an average of 0.06% in 2013 [4]. Relating to the field of software development of creative industries, these spirit of creative industries have drawn researchers' attention to the role of firm-level innovation activities in the creative industries and their economy [5], [6], [7].

Therefore, to foster the innovation it is necessary to create an environment that encourages increased capacity and capability areas create a creative economy. In this case innovation means something new for the recipient that the community concerned. Economic progress related to the level of development of 'technical change' means the stage mastery of technology. "Technical change" most are "tacit" or not codified and is built on experience. Also are cumulative (formed by "incremental" and in a certain time). Time mastery of this technology depends on the industry sector (sector specific) and the process of accumulation follow a certain trajectory typical [8]. The rapid development of information and communication technologies present huge business opportunities mainly for young entrepreneurs or students, Effect of information technology seems to open up business opportunities that could be considered unique, new, innovative, and creative for entrepreneurs. We can see so popular Microsoft Windows operating systems, the rapid sales of the iPhone, iPod, and Apple's iPad, as well as the spread of social networking sites Facebook and Twitter throughout the world. Surely the opportunity to establish a business in the information technology field is very large in the era like today. We can make products that have never been made before and will affect the development of the technology world. However, we must first recognize several key factors before starting a business in the field of information technology, among others: market feasibility, preferences, skills or familiarity, funds, raw materials. Human resources and technology as well as personality [9].

2. Method

This research begins with identifying entrepreneurs or business software technology that will be developed, training and mentoring, apprenticeship process at industrial partners, creation of business plans and monitoring and evaluation. This activity involves 30 students UPI which has the motivation to self-employment and have competence in the field of information technology.

Sustainable development is to create such sustainability (sustainability) into a form of benefits (advantages). In this regard, Barney Clark (2007) suggests VRIO models (Value, Rareness, Imperfect Imitability, and Organization). According to him, the Sustainable Competitive Advantage can be obtained by performing a continuous process of discovery that will continue to innovate. This process will run properly when first establishing the organization's core competencies are resources development capabilities and effort that relies on the potential of nature, culture and daily life of the community is a very closely in developing a sustainable business. UPI as college has organized a variety of entrepreneurial programs in an effort to increase the independence of his students that after graduating from college not be job seekers but can create jobs. Coaching methods compiled here are trying to synergize some coaching methods that already exist in the UPI.

Coaching is done by conducting a needs assessment regarding what training is needed by students to become entrepreneurs in the field of creative industries field of software technology. Then do the race simulation in the form of business ideas. This competition aims to enhance student creativity in exploring creative ideas and innovative giving solutions to the problems that harness the power of information technology. Furthermore conducted training and coaching process. To produce young entrepreneurs, a phased approach that can be mentally stimulating entrepreneurship among students, as defined in Table 1 as follows:

Table 1. Stages of Mentoring in the conduct of entrepreneurial activity in the field of creative industries in software technology-based FOSS

No	Stages of Mentoring	Action
1	First: understanding the entrepreneurial process.	identify and translate business opportunities into value-added superior transform the added value in the form of products or services, and can be consumed by the target customers. Sharpen analytical skills and entrepreneurial creativity.
2	Second: a business plan and a commitment to developing business	the operations begins with the creation of a business plan to convince a third party in order to fund its business. committed to what you want to achieve in the future to always look for ways to achieve that goal; partnership with third parties; or sell some or all of the business ownership.
3	Third: determining and adding up the value-added	Start decisive added value through market research, translates into a value added product concepts and business concepts, maximizing entrepreneurial capital as competence groups, access to funding, and social capital among other immediate family, relatives, friends, and parents so that the risk of failure when launching a business can diminimlisasikan.
4	Fourth: Consolidation of business and business development plan	For long-term goals, sustainability coaching program it is proposed formation of house innovation as a think tank to develop products and services of the creative industry entrepreneurs technology field FOSS-based software.

3. RESULTS AND DISCUSSION

This study on the activities of the steps taken to develop the skills of students in the field of creative industries FOSS-based software field. The activity starts from the preparation stage to the stage of monitoring and evaluation. More details stages are as follows:

3.1. Preparation

Community Service Program (CRP) based entrepreneurial activity started with a review of the needs required by students in developing and improving entrepreneurial competence. It was conducted with focus group discussions (FGD) and direct dialogue with the business of the students on matters concerning the business development needs of the creative industries and their understanding of the business activities and its management. The initial activity or the preparation starts from the first week to the fourth week on June 2015.

In accordance with the objectives of the PKM (Creativity Program of the Student) models Entrepreneurial Development Based Technology Creative Industries Sector Software through the use of Free Open Source Software is then at this stage the team offers a wide audience in the UPI students who already have a business or want to expand their business in order to make it more valuable. The students were mostly those who have a strong commitment to become entrepreneurs and have basic competency in developing creative industries based business based on free open source software (FOSS). At this stage chosen and netted a total of 32 students who have a rear Latra electrical engineering who are interested to participate in the creative industries PKM-based technology software field. All participants will later be given an initial understanding of the target training on how to develop a creative industry business areas of software, either on the software learning (e-learning), commerce (e-commerce), games (games) and others.

3.2. Implementation

At this stage, all participants who are interested and have the potential of entrepreneurial technology-driven creative industries are given training in how to design marketing business by utilizing e-marketing, the website designing business profile (company profile) that can be accessed widely by business partners and market more easy. The training activities conducted and guided by instructors

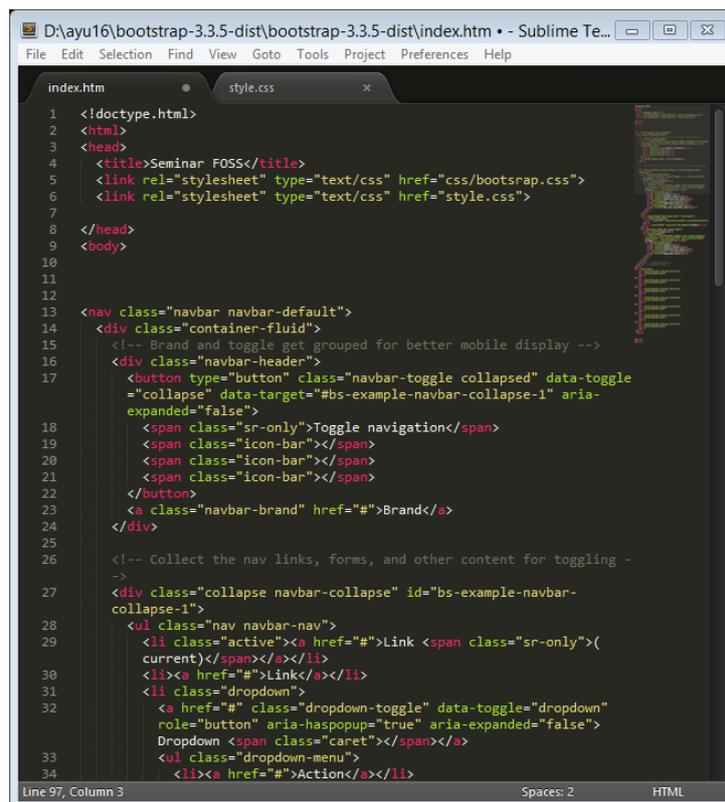
PKMK UPI and assisted by some experts of IT and Web Designers and Developers who have experience in the practical world.

At this stage also Entrepreneurship teams and assisted by instructors to provide guidance to students of entrepreneurship by conducting meetings face-to-face with them for 8 sessions, provide basic training as well as guidance on the business or the business of creative industries field of software based on free open source software (FOSS) Training activities or workshops in the field of software FOSS based industry creative was held on the second Sunday in July to August 2015. As part of the next phase of activities, all participants or groups commissioned to design the website of each business profile creative and innovative in accordance with the business they are going to run the business and profile will be assessed for feasibility by the assessment team.

From the results of the training and mentoring carried out during several meetings, and guided by instructors who are experienced, participants are business enthusiasts from among the students do it seriously and enthusiastically. Enthusiast trainees (workshop) can be seen from the liveliness and seriousness they develop entrepreneurial website as a first step to publish products that want to be marketed via the Internet, social networks and other media.

In this phase of the participants are given training by the instructors how to develop the website FOSS-based entrepreneurship, these materials include:

1. Front end developing (HTML + CSS + javascript).



The image shows a screenshot of a code editor window titled "D:\ayu16\bootstrap-3.3.5-dist\bootstrap-3.3.5-dist\index.htm - Sublime Te...". The editor displays HTML code for a Bootstrap navigation bar. The code includes a doctype declaration, HTML and head tags, a title "Seminar FOSS", and links to "css/bootstrap.css" and "style.css". The main content is a navigation bar with a toggle button, a brand link, and a list of links including "Link", "Dropdown", and "Action". The code is syntax-highlighted and includes comments for better readability.

Figure 1. Front end developing Appearances (HTML + CSS + javascript)

Figure 1 is a display of the programming software for develop the website FOSS-based entrepreneurship.

2. Wordpress + Woocommerce Introductions (XAMPP + Database).

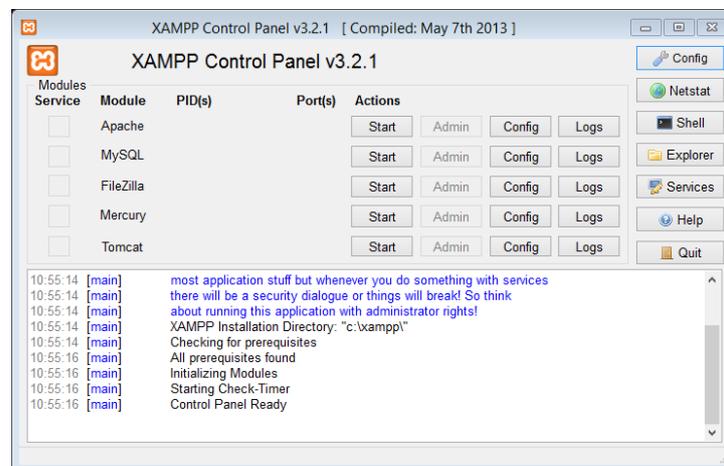


Figure 2. Wordpress + Woocommerce Appearances (XAMPP + Database)

3.3. Development

As a follow up to the stage of training the post-training mentoring process continues until participant has become considered able elaborated independently effort this website. The participants continue to be monitored progress and Entrepreneurship teams and instructors are intensive provide advisory services and technical assistance needed by the participants. In the expansion of the positive because all groups can creatively develop its business profile through the website. The stages of future activities to be implemented as a series of this program is inter connectivity among businesses student website home page into a container UPI student entrepreneur website. This website once the arena of information and communication development work done by the students UPI. The hope is FOSS-based business website can continue to be utilized even if they had graduated from his alma mater, the UPI. Here's the result of the training that has been developed by the students with various types and styles to suit their innovations.

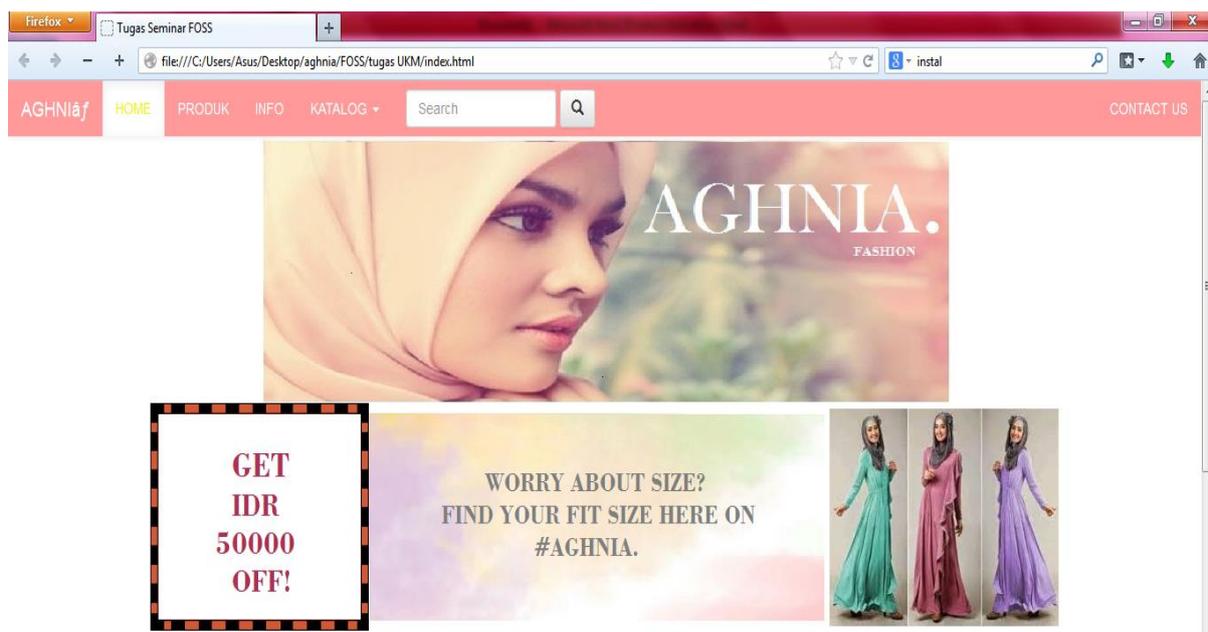


Figure 3. Blog effort students of fashion and FOSS-based Muslim fashion

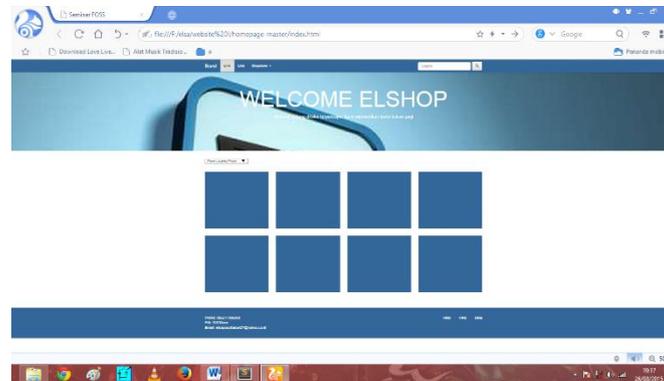


Figure 4. Blog businesses selling goods online student-based field-based FOSS

Figure 3 is the display of the home of the website of online store whereas figure 4 is the display of the home of Blog businesses selling goods online student-based field-based FOSS.

3.4. Phase Monitoring and Evaluation

Evaluation is done in Entrepreneurship PKM activity in the form of direct discussion with students who fostered and also discussions with the faculty team PKM. What are the difficulties in implementing these activities and solutions to overcome them. Students also continues to provide valuable inputs to the faculty team that PKM entrepreneurial activity goes well. Follow-up of the activities carried out are in the form of coaching/ training capacity industry for business students about the creative field of FOSS-based software that will be conducted in October 2015 in the Campus UPI. From the results of the evaluation and monitoring conducted by a team of turns of the 30 students that we provide training and mentoring only about 15 or 50% of the total number of business groups that fostered intensively and seriously develop the profile entrepreneurial venture for later entry into the communities joined in the website entrepreneurs The. Although the team PKMK already providing various facilities and instructors to guide them, but the obstacles are the reason they are not to develop a program that has been initiated, ranging from scheduled lectures are solid, coursework that accumulate and there are participants who are currently undergoing PPL, Industrial Practice, corruption and other academic activities.

4. CONCLUSION

Activity Based Community Service (PKM) entrepreneurship there are several conclusions that can be obtained include:

1. Development of entrepreneurship in the field of creative industries in software can be done in the form of stages structured activities, ranging from the mapping of the students who have asked for entrepreneurship, the selection of students who will be trained, creation of business plan and action plan, the provision of material about the development of software technology business and as well as coaching clinic and business assistance as well as help the promotion of efforts undertaken.
2. Based on the student profile is based on the observation and mentoring activities, approximately 50% UPI entrepreneurial students with various types of businesses, are already using and use the advantages of information and communication technology as a means for the promotion and marketing efforts.
3. Model fostering entrepreneurial creative industries field of software that had been developed based on the needs of entrepreneurship among students, field observations, the results of

comparative studies and internships in the industry partners who have developed and applied various software technologies.

4. Developing entrepreneurial networks between students UPI further strengthen their presence in the territory of other businesses that will awaken interconnectivity and climate entrepreneurship education is more reliable and professional.

References

- [1] Chris Boulton & Patrick Turner, 2011. *Mastering Business in Asia: Entrepreneurship* Wiley MBA Publications Reproduced.
- [2] Dina. P.T, Depositario, Aquino. A.N, Feliciano, 2011. Entrepreneur Skill Development Needs of Potential Agri-Based Technopreneurs. *ISSAAS Journal* Vol. 17, No.1 pp.106-120.
- [3] Tim Studi Ekonomi Kreatif, 2014. *Statistik Ekonomi Kreatif Subsektor Teknologi Informasi*. Kementerian Pariwisata dan Ekonomi Kreatif, Jakarta.
- [4] Iqbal, Ahmad, 2010. "Pengembangan Kewirausahaan Teknologi Untuk Mendorong Tumbuhnya Industri Kreatif Software Melalui Pemanfaatan FOSS". Pusat Pengkajian Kebijakan Peningkatan Daya Saing Badan Pengkajian dan Penerapan Teknologi.
- [5] Green, L., Miles, I., Rutter, J., 2007. *Hidden Innovation in The Creative Industries*. NESTA Working Paper. National Endowment for Science, Technology and the Arts, London.
- [6] Stoneman, P., 2007. *An Introduction to The Definition and Measurement of Soft Innovation*. NESTA Working Paper. National Endowment for Science, Technology and the Arts, London.
- [7] Miles, I., Green, L., 2008. *Hidden innovation in the creative industries*. NESTA Research Report. National Endowment for Science, Technology and the Arts, London.
- [8] Departemen Perdagangan Republik Indonesia, 2008. *Pengembangan Ekonomi Kreatif Indonesia 2025, Studi industri kreatif Indonesia*.
- [9] Rahmawaty, Penny., Suwanto, Dyna Herlina., Enderwati, M. Lies., 2010. "Technopreneurship Course Development Program". Jurusan Manajemen FISE Universitas Negeri Yogyakarta.