Transformation of entrepreneur education programs (EEPS) of Indonesia’s higher education

Erna Handayani(a)*, Siswoyo Haryono(b), Akhmad Darmawan(c)

Abstract

The Entrepreneurship Education Program (EEPs) of Indonesia's higher education has not been effective. The study aims to identify the extent to which EEPs in Indonesia was developed and propose several alternative schemes. The research uses the methodology of traditional narrative literature review and interviews with young entrepreneurs as the output of the EEPs higher education program in Indonesia. The analysis technique is done with an interactive model with steps of data collection, data reduction, data presentation, verification, and conclusions. The literature study is intended for the latest research information that evaluates the effect of EEPs on the formation of EM and the formation of new entrepreneurs. Furthermore, the information is verified by the results of the interview data processing. Entrepreneurship education for multidisciplinary students, business incubators, funding provision, and program sustainability studies is the result of research as a proposal for the development of higher education EEPs. This program is part of a long-term solution to addressing labor problems in Indonesia.

Keywords:
Entrepreneurship, Entrepreneur Education, Entrepreneur Mindset, Business Incubator, higher education.

Introduction

Indonesia unemployed people shot up to 7.0.5 million in August 2019 (BPS-Statistics, 2020) and continued to grow around 2.9 million to the heaviest prediction of 5.2 million people due to the impact of the covid pandemic. (Kompas, 2020b). The Central Bureau of Statistics (BPS) publishes data on the number of labour force participation, which continues to increase. In August 2019, labour force participation in Indonesia was 67.49%. It will continue to increase as the rate of population demographics. Unemployment is indeed a problem for all countries. However, even more concerning unemployment is now developing into educated unemployment: undergraduate and even graduate level. In general, people taking tertiary education are looking for working companies/institutions after they graduate. The limitations of the government providing land for work cannot meet these needs. It is difficult to resolve because of the development of economic sectors have not been able to keep pace with demographic. The average economic growth before the pandemic was 5%, while the predicted growth in the addition of the productive age workforce continued to increase. BPS prediction until 2035, run to the productive labour force age is 67.9% from the population (BPS-Statistics, 2020). The percentage of Indonesian entrepreneurs compared to the population is still 3.1%. This figure requires an acceleration because of the number of entrepreneurs in developed countries averages above 14%. Even some neighbouring countries like Malaysia, Singapore, and Thailand have reached rates above 4% (Tempo, 2019).

Back to the increase in unemployment as of the covid pandemic impacted, the government has programs with a pre-unemployed card, one of which is the victim educational program termination through a pre-employment card. With the card's pre workers, unemployed due to termination of the employment impact of a covid pandemic will obtain skills training for using the needs of industry and entrepreneurship. Some training alternatives provided include how to sell online, become a photographer, master computer applications, language courses, beauty care skills, become a fitness trainer, how to earn income from social media, and others. (Kompas, 2020a). The card's pre worker is a short-medium term solution. In the long term, its a need transformation of the system that allows solving the problem of unemployment. Some example programs are EEPs and vocational education programs. As one of the employment solutions, the implementation of EEPs in Indonesia has not been optimal, as stated in the study (Aswan and...
Usman, 2020); (Fahmi, 2018). This study aims to trace the development of the last years of EEPs in Indonesia and the proposed scheme for further development of EEPs.

The problems of EEPs in Indonesia’s higher education include a limited number of hours of learning, learning methods, lecturer limitations, university support, external collaboration (Santosa, 2014). Students are still as objects when learning in class and have not fully explored the potential, innovation, and entrepreneurship motivation. There are still many studies on the effectiveness of EEPs in changing mindsets and whether students have real ideas on entrepreneurship. Further reality research after students graduate and got EEPs in Indonesia’s higher education is still very little. Graduate tracking is still limited to graduates working where after graduation, what is their waiting period to get a job. In line with the aim of EEPs (Rasmussen et al., 2015), the problems in this research are: first, searching for information on the extent to which higher education EEPs in Indonesia play a role in the formation of entrepreneurs? The second question is, what are the alternative suggestions for the transformation of EEPs in Indonesia’s higher education?

Literature Review

“Entrepreneur mindset is essential for entrepreneurial success (Rozan & Zibarzani, 2018). EM has the understanding "the ability to feel, act, and mobilize quickly, even under uncertain conditions (Tammy Schakett et al., 2015) citing (Ireland et al., 2003). (Davis et al., 2015) defines it as motives, skills, and thought processes that distinguish entrepreneurs from non-entrepreneurs. EEPs aim at creating an EM that generates a chance of success (Chu & Ang, 2017). Why does EM need to be formed? EM can be obtained from the education process because EEPs build an entrepreneur mindset (Tammy Schakett et al., 2015). EEPs are starting from the built of EM to business practices to get a business idea and start a new business. (Rasmussen et al., 2015). The researchers who prove that EEPs success in supporting EM, including (Chu and Ang, 2017), (Suprapto and Herta, 2018), (Solesvik et al., 2013), (Wongpreedee et al., 2015), (Wheadon and Duval-Couetil, 2005), (Tammy Schakett et al., 2015), and many other researchers. Although some studies claim EEPs are not yet fully effective form EM, which is still a lot of graduate education high thinking as a job seeker, or already have an idea but do not know how to realize them (Rozan and Zibarzani, 2018), (Mitchell et al., 2007).

Higher education can develop EM with a lifetime learning arrangement and vocational Training (Kakouris, 2015). Refer to (Kottler, 2012) in (Konovolenko Slettli, 2019), the transformation of mindset and behaviour patterns is the first step in implementing major transformation at the organizational/business level. EEPs are the only policy initiative that can contribute to resolving unemployment (Strachan, 2018). The transformation of entrepreneurship education adopted at Sofia University "St. Kliment Ohridski" and ISCTE-IUL in Bulgaria and France towards entrepreneurial universities. (Yordanova and Filipe, 2019)

Answering the problem of unemployment in Indonesia, EEPs needs to be managed more seriously and transformed not just to change the mindset of society into a more concrete program as term solution. Research has proven the success of EEPs in changing EM in Indonesia, among others, have been carried out by (Arifin and Prasetyaningtyas, 2018), (Alfiyan et al., 2019), (Dijayanti, 2017), (Rusmana, 2020), (Indriyani, 2018), (Wijayanto and Prasetyo, 2018), (Santy et al., 2017), (Rimadani and Murniawaty, 2019), (Purussottama and Trilaksono, 2019). The answer is, do EEPs in Indonesia’s higher education only stop at the formation of EM?

The curriculum of higher education in Indonesia according to the Indonesian National Qualification Framework (KKNI), which is a framework for qualifying the gap of Indonesian human resources that match, equalizes, and integrates the education sector with the training sector and work experience in a work skills recognition scheme adapted to structures in various employment sector (Menristek Indonesia, 2015). At present, the majority of tertiary education has included EEPs as part of their curriculum, both as compulsory and elective courses with a magnitude of varying hours of learning and learning outcomes.

Methodological Procedures

The review of scientific literature contributes to the renewal and critique of available knowledge to formulate new research based on the synthesis and interpretation of the results of non-systematic selection from published studies. (Saracci et al., 2019). The purpose of the narrative literature review is to reshape information that previously existed in a way that contributes to new perspectives. Unlike the systematic literature review, the narrative literature review approach does not have a predetermined method, it can use with various styles, and no specific methods are determined. (Brutte and Fitzig, 1993).

The research methodology used narrative literature and interviews with entrepreneurs who graduate from Muhammadiyah University of Purwokerto, Indonesia. The number of interview respondents is twenty young entrepreneurs who graduated from various major EEPs. There are two categories of respondents. The first category of graduates of the faculty of economics with exposure to the EEPs with twelve credits. The second category of non-economics faculty graduates with exposure to EEPs between 1-3 credits. Other categories of respondents have graduated more than 2 (two) years and already have their own business. Interviews were carried out in person or through the zoom online communication media, WhatsApp. The analysis of the results of the interviews is a directed content analysis approach. The directed approach to content analysis aims to validate or conceptually broaden the theoretical framework or theory. (Hsieh and Shannon, 2005).

The interview list present to 12 (twelve) questions to verify and complete information from a literature study on EEPs in Indonesia’s higher education. The questionnaire contains questions, among others:
i. How do the students get EEPs when studied at university?
ii. How does their entrepreneur's mindset grow up after getting EEPs?
iii. Does EEPs help the students find business opportunities?
iv. Is entrepreneurship the first choice after the students graduate from university?
v. What are their thoughts about EEPs in Indonesia’s higher education should be?
vi. What are the facilities of EEPs university that can support new entrepreneur as a student and as a graduate of EEPs?

The discussion of this paper contains a two-part structure. First, the paper describes the literature review information and verification of literature interview with the interview data results. Second, the paper discusses the proposed scheme for the transformation of EEPs in Indonesia’s higher education.

Results

The Indonesian National Library's scientific article search engine (perpusnas.go.id) with the tagline “Higher Education Entrepreneurship in Indonesia” produced 11,966 articles published from 1949-2020. The search for the article limited the publication time of the last 3 (three) years, and the results found 3,100 articles related to these 5 (five) keywords. (perpusnas.go.id) accessed on 6 May 2020. The scientific article focuses on the evaluation of EEPs in Indonesia’s higher education. Furthermore, there are 27 articles published in the last 3 (three) years with discussions relevant to the purpose of this study. Additional information is that there is much research on evaluating EEPs at the high school, vocational, or informal education programs. As is the case in China, mostly EEPs in Indonesia was going implementation in secondary schools and vocational schools. (Min-Chun et al., 2017); (Ni and Ye, 2018).

Most of the latest scientific articles on EEPs in Indonesia’s higher education contain about the evaluation of EEPs that affect EM, discussion of the EEPs curriculum and EEPs learning methods, including:

i. Consistency of Prasetya Mulya Jakarta University students in participating EEPs (Purussottama et al., 2019),
ii. Evaluation of the effect of students’ intentions on entrepreneurship after obtaining an EEPs at Malang State University with the results of entrepreneurship education affecting student interest in entrepreneurship (Mahendra et al., 2017),
iii. Evaluation of EEPs learning at the Faculty of Engineering, Padang State University (Yulastri et al., 2017),
iv. Research on students’ thinking skills through inquiry module with chemo-entrepreneurship orientation for students of IKIP Mataram (Dewi and Mashami, 2019).

The preparation of learning modules covers the scope of entrepreneurship, the determination of ideas and entrepreneurial opportunities, business plans, innovation and creativity in entrepreneurship, management concepts in entrepreneurship, marketing strategies and the concept of Break-Even Point (BEP), subjects of entrepreneurial ethics, entrepreneurial mindset, competitive strategy, motivational theory in entrepreneurship, risk management of customer behaviour and the path to successful entrepreneurship at Sriwijaya University (Firmansyah and Rusmin, 2018). Evaluation of the apprenticeship learning model in increasing student entrepreneurial interest in Universitas Pendidikan Indonesia (Mulyadi et al., 2018), Evaluation of leadership entrepreneurship education at Telkom University Indonesia (Yosephine and Astri, 2017), Effect of EEPs and Academic Support on Student Entrepreneurship Intention at ASMI Multimedia Business Institute (Alfiyan et al., 2019), EEPs in several higher education in Semarang City still focuses on cognitive aspects (Martien Herna Susanti, 2013), Evaluation EEPs with additional variables attitudes and self-efficacy affect student entrepreneurship intentions Kuningan University (Sumarno et al., 2018), Evaluation of EEPs at Surabaya State University has a significant effect on student entrepreneurial attitudes (Dijayanti, 2017), Evaluation of EEPs based on technopreneurship with integration between entrepreneurship study programs that build entrepreneurial competencies at Riau University (Sumarno et al., 2018), EEPs at PGRI Kediri University can improve student character (Arifin and Prasetyaningtyas, 2018), Evaluation of entrepreneurship-based curriculum has a significant impact on non-interest student entrepreneurship economics faculty at the University Computer Indonesia (Mbetwa, 2017), Evaluate the development of training models that effectively build graduates’ competencies in entrepreneurship at Semarang State University (Sudana et al., 2019).

From the results of the literature, searching was still sparse research with respondents who graduated from EEPs in higher education. Recent research can evaluate EEPs graduates of higher education in Indonesia after several years of EEPs graduation. It can evaluate whether EM that has been grown in higher education is useful in forming young entrepreneurs. A series of EEPs higher education is expected to contribute significantly to the problem of unemployment and employment in Indonesia. EEPs Indonesia’s higher education has not been adequate to create supports of entrepreneurs in Indonesia is according to another research (Aswan and Usman, 2020); (Fahmi, 2018). Most EEPs higher education in Indonesia is still at the level of theory, knowledge, or the formation of EM. Table 1 verifies the results of a literature review, this is following results of interviewing EEPs graduated from Muhammadiyah University in Purwokerto.
After graduation, six people have managed to change the mindset of an entrepreneur. Ten people answered EM increased; six people answered varied. Ten people answered varied, from 10 respondents none answered in the early years or on average after they worked. Ten people answered varied, three people answered agreed. Ten people answered varied, from 10 respondents none answered in the early years or on average after they worked. Ten people answered varied, from 10 respondents none answered in the early years or on average after they worked. Ten people answered varied, from 10 respondents none answered in the early years or on average after they worked.

<table>
<thead>
<tr>
<th>Respondent Information</th>
<th>EEPs semester credit unit: 12</th>
<th>EEPs semester credit unit: 1-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year of graduation: between 2014-2016</td>
<td>Number of respondents = 10 people</td>
<td>Year of graduation: between 2012-2016</td>
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<td>Number of respondents = 10 people</td>
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**Table 1: Summary of interview results**

<table>
<thead>
<tr>
<th>Respondent Information</th>
<th>EEPs managed to change the mindset of an entrepreneur</th>
<th>EEPs help find business opportunities</th>
<th>Entrepreneurs are the first choice after graduating from college</th>
</tr>
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<tbody>
<tr>
<td>Ten people answered EM increased</td>
<td>Seven people answered disagree, three people answered agree</td>
<td>Four people answered that an entrepreneur is not the first choice after graduating from college</td>
<td></td>
</tr>
<tr>
<td>Ten people answered varied</td>
<td>Ten people answered agreed, and nine people answered disagree</td>
<td>Ten people answered that an entrepreneur is not the first choice after graduating from college</td>
<td></td>
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</tbody>
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<thead>
<tr>
<th>The business fields at the study program in college</th>
<th>Become an entrepreneur after how many years working</th>
<th>Difficulties obtained when starting a business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seven people answered the business sector is not the same as the study programs, three people answered the study program in the same direction as the business sector</td>
<td>Three people answered immediately after graduation; seven people answered varied</td>
<td>Find suitable business opportunities, get capital, expand</td>
</tr>
<tr>
<td>Six people answered that their business in line with their study program four people answered no</td>
<td>Ten people answered varied, from 10 respondents none answered in the early years or on average after they worked</td>
<td>They were finding a suitable opportunity, 4 of the respondents completed by stating that they had changed their previous business fields. Capital and marketing problems.</td>
</tr>
</tbody>
</table>

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<tr>
<th>Respondents obtained opinions about EEPs higher education</th>
<th>Expected facilities provided by the university for students who are interested in entrepreneurship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nine people conveyed the EEPs with 12 credits was good with practice, direct guidance from lecturers, KWU, and others.</td>
<td>Assistance, good relations with alumni</td>
</tr>
<tr>
<td>Most respondents claim they have not got experiences from EEPs.</td>
<td>Assistance with alumni who are entrepreneurs, or in collaboration with alumni</td>
</tr>
</tbody>
</table>

From the interview results, EEPs with more hours of learning, containing direct field practice, contributed to shaping EM entrepreneurship and helping young entrepreneurs of Muhammadiah University in Purwokerto to find opportunities to the limited amount of learning. The results of this interview support the research (Yuliana, 2017), that EEPs will get good results with practice and direct experience and research (Ghina et al., 2014), (Hermann and Bossle, 2020) that good entrepreneurship education involves the collaboration of universities, external parties of the university as supporters of entrepreneur formation.

EEPs are a study that continues to grow. There are so many proposed methods to make effective EM changes. The coaching method involves mentors providing students' business experience (Widyanto et al., 2017), Brainwash, Product-Based Learning Approach (Yulastri et al., 2017).

Furthermore, in this paper, several proposals related to the transformation of EEPs in Indonesia’s higher education are presented, as follows:

EEPs propose to include a multidisciplinary program of higher education in Indonesia with curriculum adjustments and additional hours of learning.

EM is beneficial for students of all majors: literature, psychology, engineering, education, pharmacy, or business and regardless of intention or interest in forming a business. EEPs is one of the ways to install the mindset of “how to start a business” in students across disciplines and higher education (Binks et al., 2006); (Wheadon and Duval-Couetil, 2005); (Susilaningsih, 2015). Some higher education has applied it in Indonesia. Public universities such as Sebelas Maret University, Jenderal Soedirman University, Halu Oleo University (UHO) Kendari. So it is with some private higher education. DIKTI has facilitated EEPs in higher education since 1997 with offers of activities, namely Entrepreneurship Lectures (KWU), Entrepreneurship Internships (MKU), Business Work Lectures (KKU), Business Consultation and Job Placement (KBPK), and New Entrepreneurial Incubator (INWUB)). Besides, there is an entrepreneurial student creativity program (PKM) that specifically accommodates student creativity from various fields of science for entrepreneurship. In 2009, DIKTI provided an entrepreneurial student program (PMW) scheme. Interest above programs is the implementation capability, responsibility attitude, students’ ability, collaboration teams, independence, and enterprise development through students' creative activities according to their respective fields. This program follows Government Regulation
No. 17 of 2010, which states that higher education aims to form critical, creative, innovative, independent, self-confident, and entrepreneurial people. Research (Chu and Ang, 2017) on EEPs given to multidisciplinary students produces unique insights about mindset, motivation, and needs (Business, Information Technology, Engineering, Applied Sciences, Design, Humanities, and Social Sciences). As a result, they understand the challenges they face in starting a business. Every multidisciplinary graduate of higher education has a creative direction towards developing his knowledge to open ground for disbursement in their respective expertise.

For the realization of togetherness in creating graduates who have entrepreneurial insights and knowledge, there needs to be a government policy regarding the obligations of higher education institutions implementing EEPs. This program following one of the functions of higher education, namely, developing an innovative, responsive, creative, skilled, competitive, and cooperative academic community (Law of the Republic of Indonesia Number 12 of 2012 concerning Higher Education, 2012). The status of entrepreneurship courses as elective courses also has implications for differences in course content. Some only focus on or focus on providing entrepreneurial insights, the formation of EMs, limited entrepreneurial practice, but some have already provided services to establish student businesses. There is research that proposes EEPs as compulsory subjects before. (Sumarno et al., 2018) (Susilaningish, 2015).

The entrepreneurship learning process is integrated with changing the mindset of students, exploring creative business ideas, and marketing insights to practice and mentor. One of the difficulties of students is marketing their creative products/services. The research that proposes integrating EEPs. (Amjad et al. 2020). Curriculum integration direct to global entrepreneurship. It is about seeing what Indonesia will face. Competition and global trade make the curriculum adjust a broader definition of what it means to be entrepreneurial. (De Carolis and Lizky, 2019) ; (Poole, 2012).

A business incubator is one of a facility for higher education EEPs.

Students who already have the desire to start their business still have difficulties in several matters, such as environmental support and funding. EEPs support includes business incubation, retail space, business assistance, and funding (Chu and Ang, 2017). Something is interesting that is the result of a collaboration between Thailand's Srinakhrinwirot University with the jewellery industry and the local trade ministry—described by (Wongpreedee et al., 2015) that since 1992 the university has been working with large-scale jewellery producers and the ministry of trade. EEPs were participating students to make innovative jewellery materials. The innovation process is introduced and taught in separate subjects from Material Art and Technology, developing in a combination of marketing and technology, and producing innovative products accessories and jewellery. When there is a trade show, the products of student innovation was sold out. This program is an example of teaching techniques that require students to have “direct” experience in business and practice experience to improve student EM. (Pihie and Sani, 2009); (Lyken-Segosebe et al., 2020).

In addition to learning to make product innovations, this activity is also a material for students’ final assignments. Srinakhrinwirot University developed a business incubator with the university's research centre. Business incubators help students set up companies as they complete their final projects. In addition to corporations and governments, collaboration can be established across tertiary education to maximize EEPs (Pihie and Sani, 2009). EM acculturation collaboration methods across higher education and multi-channel initiative approaches have been implemented and evaluated at Ohio North University [8];

Dennis Ridley, in the proceedings presented by the USASBE Conference, explained the Interdisciplinary Center for Creativity and Innovation (ICCI). The ICCI framework implements specific methods in learning entrepreneurship and utilizes institutional and community support (Ridley et al., 2017). Entrepreneurship education in tertiary education is limited in time, the process alternates with participants, but the widespread involvement of students and alumni is the only way to build traditions and respond to ICCIs sustainability solutions. The purpose of the business incubator is to provide a home where the company is just starting—a place where EEPs graduates practice their knowledge and receive funding and assistance. First, fundamental theories and concepts are introduced. Next, students learn, practice, and reflect on the skills needed for entrepreneurship. EM students are further developed through business plans and competitions. Finally, students apply concepts and theories through student-managed companies in business, science, engineering, and technology incubators. (Ridley, 2009); (Ridley et al., 2017).

Funding is one part of business incubator work usually constrained by collateral by government collaboration with higher education. The higher education business incubator can bridge schemes with a low and easy loan. Loans are given to teams of students who have obtained full EEPs with a business feasibility assessment from tertiary education and national banking. Assistance and funding sources are given for EEPs graduates students who have feasibility business. The Business Incubator Institute makes a business feasibility analysis in providing stimulant funds. Business feasibility analysis can involve experienced practitioners. This program is only going to work for a team that has a high probability of success. (Laptev and Shaytan, 2017). The university collaborates with companies or experienced practitioners in mentoring, monitoring, and reporting activities to the government.

**Sustainability of EEPs in Indonesia’s Higher Education**

Many successful businesses were born from higher education. Monitoring should be carried out guided by the government to ensure the new start-up results from the higher education business incubator continue to thrive. Assistance and monitoring were carried out until the start-up develops and is independent. Furthermore, they will be joining as part of the continuation of the higher education EEPs program. Successful new entrepreneurs become mentors to their juniors in their own higher education.
In general, the scheme of the EE transformation proposed by this paper can be described as follows:

**Figure 1:** Cooperation scheme between the Government, Universities, external parties, and business incubator facilities in developing EEPs for the formation of EM and subsequently creating young Indonesian entrepreneurs.

**Conclusion**

Higher education can help overcome the problem of job shortages in Indonesia and transform higher education EEPs from a theoretical level of knowledge to form EM into a container for the formation of new entrepreneurs. The transformation includes the development of EEPs material. Second, the provision of an entrepreneurial business incubator centre for higher education that provides facilitation, financing, and external support facilities. The third is mentoring for start-up graduates of higher education EEPs to continue developing and continuing to collaborate to develop higher education EEPs.

Research is still limited to students who decide to become entrepreneurs after graduation. The amount cannot represent the population of entrepreneurs who graduate from higher education. Future studies can examine the population of students exposed to higher education EEPs with sufficient learning hours, loaded with real practice with university support that has been carried out for a specified period. Information from all of the EEPs participants on what percentage has succeeded in developing entrepreneurship. Other advanced research can deal with comparative studies of several tertiary institutions in Indonesia.

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**References**


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