

**THE ROLE OF EDUCATION AND TRAINING IN DEVELOPING THE
UNIVERSITY ECOSYSTEM OF ENTREPRENEURSHIP: THE CASE OF UIN
SJECH M.DJAMIL DJAMBEK BUKITTINGGI**

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Abstract

Preparing college graduates for entrepreneurship has become a key strategic goal in the knowledge-based economy to ensure the sustainable growth of successful Start-Ups and SMEs that can keep pace with the ever-increasing pace and pressure of innovation. Because ideas are the origin of every successful innovation, students must be trained in systematically opening their mindset to generate and structure ideas with high innovation potential. They must also learn to apply it in such a way that the results make it easier for them to enter into entrepreneurial activities. Support from universities through education and training contributes to creating an entrepreneurial university ecosystem. It is based on the idea that a well-established entrepreneurial university ecosystem automatically leads to the emergence of a business ecosystem that benefits its surroundings.

This paper confirms empirically that entrepreneurship education and training is a key factor in the entrepreneurial ecosystem in strengthening knowledge transfer that can relate to other businesses outside the ecosystem as well as expanding the emerging ecosystem approach to the field of entrepreneurship.

Keywords: Education and training, Ecosystem, Entrepreneurship University

1. Introduction

Policymakers around the world continue to seek effective mechanisms to stimulate their economies (Autio, E., Kenney, M., Mustar, P., Siegel, D., Wright, 2014). In this regard, universities have been the focus of several policies (Morgan, 2007); (Nicolaou, N., Birley, 2003) to stimulate the production and dissemination of new knowledge (knowledge transfer) and to act as a catalyst for innovation across the region (Nicolaou, N., Birley, 2003); (Wright, 2014); (Harfandi, Z. E.Sonita. 2022). As a result, universities are increasingly adopting a stronger entrepreneurial and innovative strategic profile to deliver broader social and economic benefits to their region (Siegel, D.S., Wright, 2015), thus giving birth to entrepreneurial universities (Clark, 1998); (Clark, 2003); (Carsrud, A., & Brännback, 2011); (Ilham, Harfandi, 2022); (H Etkowitz, 2016). Some researchers define an entrepreneurial university as a university which, apart from teaching and research activities, also focuses on supporting

entrepreneurial activities by researchers and graduates, with strong links to R&D centers (RDC), companies, science and technology parks, governments, and institutions. Therefore, this entrepreneurial university in general, is community-oriented as a regional actor (Henry Etzkowitz et al., 2019). This new university model provides a supportive ecosystem for the university community and its environment, to generate, absorb, absorb and use new knowledge that can give rise to Spin-off University companies (Carree, M., Della Malva, A., Santarelli, 2014); (Harfandi, E.Sonita, Z. 2020), (Guerrero, M., Cunningham, J., & Urbano, 2015).

At a time when entire economies and industries are reeling from the financial crisis, business leaders are struggling to balance the short-term need for survival with the long-term demand to find new sources of growth. There has never been a more pressing need to innovate and become an entrepreneur. If you want to achieve strategic goals for growth and employment, Islamic Universities need to stimulate the entrepreneurial mindset of young people, encourage innovative business start-ups, and foster a culture that is more friendly to entrepreneurship and for the growth of micro, small and medium enterprises. (SME). The important role of education in promoting entrepreneurial attitudes and behavior is now widely becoming very important (Nambisan, S., Baron, 2013), . However, the benefits of entrepreneurship education are not limited to start-ups, innovative ventures and new jobs. Entrepreneurship refers to the ability of individuals to turn ideas into action and is therefore a key competency for all, helping young people to be more creative and confident in whatever they do. Therefore, the main objective of entrepreneurship education should be to develop the capacity and mindset of entrepreneurship. In this context, entrepreneurship education programs can have different objectives, such as:

- a. To develop entrepreneurial drive among students by increasing awareness and motivation);
- b. To train students in the skills they need to set up a business and manage its growth;
- c. In order to develop entrepreneurial skills to identify and take advantage of existing opportunities to start a business for graduates is one of the various possible outcomes.

The forms of training and education program activities that have existed so far, the majority only focus on targets (Mosey, S., Wright, 2007); (Hesi Eka Puteri, M. Arifinb, and Hidayatul Arief. 2022): (Nambisan, S., Baron, 2013). The high unemployment rate among graduates of Islamic universities is not a new problem, because the facts on the ground remain a problem in many countries in the world (Noorah Yusof, Zakiah Jamaluddin, 2013). One of the steps in overcoming this problem is by introducing the entrepreneurial learning model applied at UIN Sjech M. Djamil Djambek Bukittinggi to equip students with market-relevant entrepreneurial skills so that graduates have independence and create new businesses (Harfandi, 2020); (Sonita's Era, 2020). This entrepreneurship education model was built with the aim of helping entrepreneurial graduates with the aim of producing graduates who have entrepreneurial characteristics.

Entrepreneurship as a career has become an important agenda in many countries (Henderson, R., Robertson, 2000); (Keat, O. Y., Selvarajah, C., Meyer, 2011). This can be realized because entrepreneurship is considered a field that can be learned, but it also depends on the effectiveness of the entrepreneurship education and training provided. The effectiveness of

entrepreneurship education and training is recognized as an important factor in helping graduates/prospective young entrepreneurs improve entrepreneurial attitudes and through this factor will form interest in opening their businesses in the future (Era Sonita, 2020a); (Sonita, 2020); (Wang, C. K., Wong, 2004).

Entrepreneurship education and training carried out by students while in college has an influence on students' interest in running their businesses later after graduation (Sánchez, 2011). These results are supported by studies conducted (Choy, C. S., Kuppusamy, J., Jusoh, 2005); (Era Sonita, 2020a), who found several factors that influence the selection of students to become entrepreneurs, including subjective norms, attitudes and perceived behavioral control. In addition, the government's contribution is also an important factor in developing entrepreneurship, through the creation of more successful entrepreneurs by reducing the level of bureaucracy for business actors, reducing the stigma of failure (Wang, C. K., Wong, 2004)

This paper provides an overview of the entrepreneurship education and training program at UIN Sjech M. Djamil Djambek Bukittinggi, and shows how the ideal aspects of structure and mindset formation have been taken into account. It describes the role that institutions play there, and provides practical examples of how education and training models can help significantly in finding innovative technical solutions that would otherwise be very difficult to obtain.

For this purpose, this paper is structured as follows: Part I summarizes the background of the activities presented. Part II describes UIN Sjech M. Djamil Djambek Bukittinggi as an entrepreneurial ecosystem, part III describes the overall training programs carried out and describes elements that focus on structuring ideas for students to prepare after getting a suitable job to become an entrepreneur and create jobs, have competence and high quality and added value in terms of soft skills. Finally, section IV concludes and provides views.

2. Background

Entrepreneurship refers to an individual's ability to turn ideas into action. It includes creativity, innovation and risk taking, as well as the ability to plan and manage projects to achieve goals. It supports everyone in everyday life at home and in the community, makes employees more aware of the context of their work and better able to seize opportunities, and provides a foundation for entrepreneurs who build social or commercial activities (Gaynor, J., Mackiewicz, A., Ramaswami, 2009); (Liñán, F., Rodríguez-Cohard, J. C., & Rueda-Cantuche, 201 C.E.); (Lüthje, C., & Franke, 2003).

Entrepreneurship is currently recognized as a basic skill that must be imparted through lifelong learning. The European Council of Lisbon and the European Charter for Small Business have emphasized this aspect. All of these activities are part of the European Commission's more general efforts to promote SMEs and entrepreneurship, which included the implementation of the Green Paper on Entrepreneurship in Europe and a set of other related documents in January 2003.

3. UIN Sjech M. Djamil Djambek Bukittinggi as an Entrepreneurial Ecosystem

State Islamic University (UIN) Sjech M. Djamil Djambek Bukittinggi is a state Islamic university which is fully funded by the Government of Indonesia. UIN became an Islamic higher education institution in West Sumatra after UIN Padang. The purpose of establishing this institution is to become the spearhead of knowledge and a reference center for Islamic sciences. This Islamic college was founded in 1997 under the name Islamic High School (STAIN) Sjech M. Djamil Djambek Bukittinggi. Since 2015 it has changed its status to the State Islamic Institute (IAIN) Bukittinggi, and 2022 it has changed its status to the UIN. UIN Sjech M. Djamil Djambek Bukittinggi is located in two areas in West Sumatra, namely Bukittinggi City for campus 1 and Agam Regency for campus 2 as a form of campus development. The campus is located in a strategic area near the trade area and the City of Tourism and is only 69 kilometers from the provincial capital.

The education system at UIN Sjech M. Djamil Djambek Bukittinggi adopts a balanced integration between physical and spiritual aspects, which is carried out as a whole both in the academic field as well as at the administrative and management levels. The integration of naqli sciences with aqli sciences is a specialty for UIN Sjech M. Djamil Djambek Bukittinggi in the development of higher education. Where through the integration of religious and social and physical sciences in all its programs to provide a comprehensive understanding of global problems and offer new alternatives in finding solutions.

The principle of education with an integrated approach to religious and social and physical sciences is expected to provide a more comprehensive understanding in responding to today's global challenges, but also to offer new solutions in solving them. The breadth and universality of Islamic values as well as historical evidence that Islamic values can be applied by all human beings, live in harmony together and mutual respect and tolerance. Through this EOTs, UIN Sjech M. Djamil Djambek Bukittinggi forms its graduates, so that they will not only function as professionals in their respective fields of knowledge, but how can they at the same time contribute and make a difference to society in the Islamic tradition.

Until now, UIN Sjech M. Djamil Djambek Bukittinggi has 12 thousand undergraduate and 500 postgraduate students with 55 academic staff and 175 permanent teaching staff. Until now, UIN Sjech M. Djamil Djambek Bukittinggi already has 4 faculties, namely the Faculty of Tarbiyah and Teacher Training, the Faculty of Sharia, the Faculty of Economics and Islamic Business and the Faculty of Ushuludin Adab and Da'wah, as well as the Postgraduate Program.

3.1 Institutional Environment

Description The concept of entrepreneurship at UIN Sjech M. Djamil Djambek Bukittinggi is defined in the philosophy, vision, mission and goals to encourage Islamic entrepreneurship within the UIN Sjech M. Djamil Djambek Bukittinggi environment. The main thrust of entrepreneurship is clearly shown in the university's mission of "developing networking in the form of institutional cooperation". A clearer description of the institution's objectives "Producing graduates who have faith, have noble character, have social, managerial and entrepreneurial skills and have a sense of social responsibility". In this view, the main motivation of entrepreneurship is for the benefit/welfare of the people. This means that innovations and research results by UIN Sjech M. Djamil Djambek Bukittinggi all refer to the welfare of the community. UIN Sjech M. Djamil Djambek Bukittinggi also provides full

support to student activities in the form of consultations, training, coaching, partnerships, seminars both locally, nationally and internationally.

In addition, UIN Sjech M. Djamil Djambek Bukittinggi has also provided a forum for the development of student entrepreneurship both in the form of facilities in the form of entrepreneurship labor, sharia mini bank labor, integrated labor and in the form of student creativity week activities which are carried out routinely both at the faculty level or at the institutional level. The main purpose of this forum is to instill entrepreneurial attributes among students and also to encourage more entrepreneurial graduates. Thus, these facilities and platforms provide places and facilities for students to run their businesses. Students are also given the facility to hold a business carnival or other outdoor events in addition to the routine events every year. However, there are still weaknesses from the development of student entrepreneurship, namely student cooperatives that have not developed well at UIN Sjech M. Djamil Djambek Bukittinggi. This student cooperative is expected to be a business foundation for students, for example by offering business tenders in providing new student attributes, souvenirs and so on.

To develop a network of cooperation with external campus parties, UIN Sjech M. Djamil Djambek Bukittinggi has entered into a memorandum of understanding (MoU) with institutions - both government, private or businessmen/industry at home and abroad. Through this agreement, it is possible for universities to expand their networks towards entrepreneurial activities. Affiliation with industry and external parties such as associations of young entrepreneurs, Minang entrepreneurs and overseas entrepreneurs, SME companies, the Ministry of Trade and Industry, the Ministry of SMEs, the Ministry of Law and Human Rights, the Ministry of Tourism and others as well as with professional associations related to the existing study program. In addition, international relations are also developed with foreign universities and with regional universities, both public and private.

3.2 Student engagement

The program which is organized and managed under the Student Entrepreneurship Development Center of UIN Sjech M. Djamil Djambek Bukittinggi itself instills and exposes students to instill entrepreneurial values and skills, which include aspects of leadership, innovation, creativity, resilience, competitiveness, independence, calculated risk and the ability to identify and create opportunities (identification and creation opportunities). For example, environmental care projects, research activity projects and community service lecturers by involving students, whose aim is to provide education to students in the form of direct practice to the community.

In addition, UIN Sjech M. Djamil Djambek Bukittinggi also provides students with training activities and workshops on business development for students. Most of the training is conducted by involving industry experts such as Online Business and Agropreneurs (Ministry of Agriculture). Other forms of activity For example, the Islamic entrepreneurship module is specially developed by entrepreneurship lecturers as the basis for developing the concept of entrepreneurship or Basic Training for Muslim entrepreneurs and is held every semester break. In this module, students are exposed to the basics of entrepreneurship such as preparing a business plan using a business model canvas, sharing sessions from entrepreneurs from UIN

Sjech M. Djamil Djambek Bukittinggi graduates, information about business grants and incentives from financial institutions. Also in this module, Islamic entrepreneurship is emphasized where the characteristics of a Muslimpreneur are introduced. The students are encouraged to practice dhuha prayer, recite surah al-waqiah and al-mathurat to strengthen their spiritual emotions.

4. Innovative Entrepreneurship Education and Training Program

Entrepreneurship course is a compulsory subject for all students of UIN Sjech M. Djamil Djambek Bukittinggi with a weight of 2 credits. However, specifically for the Faculty of Islamic Economics and Business in the Sharia Business Management Study Program, almost all of the course content refers to entrepreneurship, both theory and practice. This course is coordinated by the Faculty of Islamic Economics and Business by appointing competent lecturers and practitioners in the field of entrepreneurship as a teaching team. Students must be able to demonstrate how entrepreneurial ventures are developed starting from generating innovative ideas, feasibility studies, preparing business plans, implementing businesses (based on business plans) and evaluating business performance. Both monetary and non-monetary performance measures are discussed. The course evaluation is 80% on the practical aspect, and 20% on the theoretical aspect. For practical elements, a special semester called Student Entrepreneurship (Student Entrepreneurship Week) is held. Around 500 students will be involved during the week from managing events, selling products, and providing services to students and staff of UIN Sjech M. Djamil Djambek Bukittinggi

Another course, Creative Thinking and Problem Solving is the core program of the Sharia Business Management Study Program (MBS) which uses an entrepreneurial approach. This course is coordinated directly by the MBS Study Program. This course covers the theory and practical aspects of creativity used to solve problems. Group-based projects to create innovative products (goods and services) that can solve specific problems are the main outcome of the course which accounts for 70% of the course evaluation. One-day exhibitions and competitions held in the form of Creative Products Exhibitions are held and open to the public to visit. Interested industries who wish to commercialize products can approach UIN Sjech M. Djamil Djambek Bukittinggi for further arrangements.

There are three Study Programs at the Faculty of Islamic Economics and Business and one Study Program at the Teaching faculty namely the Computer Informatics Engineering Study Program which leads the entrepreneurial culture at UIN Sjech M. Djamil Djambek Bukittinggi by having their own annual event for demonstrations of entrepreneurship. The Faculty of Tarbiyah and teacher training held a student creativity week competition (Islamic Innovation Student Competition) and IT-based Product Development.

The Faculty of Islamic Economics and Business is a Faculty that is actively involved in driving companies. Among other important events held by FEBI is the student entrepreneurship week. This program is fully organized by students taking Entrepreneurship courses, a course offered by FEBI for final year students. Regardless of the theoretical input, this course allocates 80% of the evaluation to creating business activities to generate funds. The funds raised are used for their planned activities namely, industrial visits, and charity work. All students of UIN Sjech

M. Djamil Djambek Bukittinggi, external parties, are invited to take part in the event which usually lasts for 1-3 days at the identified venue. Participants are open locally and nationally. In this paper, the author will focus on programs that specifically form student mindsets and the method of organizing ideas. Shaping students' minds means training them in applying systematic techniques to find innovative solutions to concrete problems (Tichkiewitch, 1999); (Brissaud, D., Tichkiewitch, 2000). Although teaching this method is of course beyond the scope of this particular training. This training is based more on technology case studies showing how the following aspects can help generate innovative solutions to specific problems:

- In-depth understanding of the specific problem to be solved;
- Abstraction of specific problems in general problems and sub-problems;
- Think in terms of generic technology solution principles for generic problems and subproblems;
- Systematic investigation of the principles of the technology;
- Systematic selection of relevant principles for specific contexts in relation to the latter constraint in terms of all environmental aspects (ie, economic, ecological, and social);
- Application of selected principles to specific problems to produce specific ones
- Solutions with strong market relevance and potential.

This method-specific approach has special interest and value for entrepreneurship, as it forces students to open their minds to potential solutions that are not “obvious”, i.e. those that cannot yet be found on the market. Inherently, this will lead to greater potential for differentiation from competitors than would be obtained by thinking a straightforward solution.

The method of structuring ideas is basically based on the integration of complementary network skills and in such a way that they address a particular problem, and have a broader long-term vision for development and students in particular will learn to understand and model similar innovation theories in which a mixture of complementary roles (such as chairpersons, company workers, complements, monitors/appraisers, manufacturers, etc.) form the basis for innovative teams and results; service/product components must be adapted to these skills; understand how to map ideas/solutions to specific problems to provide answers for the industry; conduct analysis of common goals to formulate a vision for future services/products and craft ideas to align with that vision.

5. Conclusions and Views

We hope that this paper can contribute to research into the entrepreneurial ecosystem through education and training and the user community in the sense that it shows how the training system and its values can be taught and explained without the need to teach the method in detail. In the trainings that we conducted in several European countries, it was clear that the systematic way of thinking and organizing ideas was not perceived as usual and was proven by most of the participants, even in the field of technology. They found that a systematic way of thinking about problems and solutions opened their way of thinking to create new ideas.

When viewed comparatively, UIN Sjech M. Djamil Djambek Bukittinggi is considered an Islamic university that is still young but already has strong aspirations for a strong and healthy

ecosystem and entrepreneurial environment. All of this will not be realized if there is no support from all universities, starting from the leadership, academic staff, teaching staff and students as well as from external parties, namely the government, business actors and stakeholders and alumni themselves. so that in the future UIN Sjech M. Djamil Djambek Bukittinggi can produce graduates which will eventually lead to the creation of new jobs.

more graduate employers which will eventually lead to graduate employment, especially job creators.

6. Discussion

This study investigates how entrepreneurial intentions can be developed among Islamic college graduates. Empirical evidence supports the view that entrepreneurship education programs have a positive impact on the development of entrepreneurial intentions and entrepreneurial production. This finding is in line with the findings of several other studies (eg, (Douglas, 2013); (Fitzsimmons, J. R., & Douglas, 2011). Theoretically, the use of the theory of planned behavior to frame this research has allowed us to formalize and empirically test the proposition that drawn from previous theories and research on the development of entrepreneurial intentions.

Looking at the results in detail, the authors agree that entrepreneurship education is an important tool in encouraging entrepreneurial activities. Entrepreneurship education positively affects attitudes towards entrepreneurship, subjective norms, perceived behavioral control, and entrepreneurial intentions, these findings contradict the findings (Souitaris, Vangelis, Zerbinati, Stefania, & Al-Laham, 2007), however, in line with the research conducted (Armitage, C. J., & Conner, 2001); (Autio, E., Keeley, R. H., Klofsten, M., GC Parker, G., & Hay, 2001); (Krueger, Jr., Norris, F., Reilly, M. D., & Carsrud, 2000); (Liñán, F., Rodríguez-Cohard, J. C., & Rueda-Cantuche, 201 C.E.).

And interestingly, learning about entrepreneurship not only affects entrepreneurial attitudes, as previous researchers have found, but also develops a realistic perceived control for entrepreneurship and a sense of social pressure that being educated to be an entrepreneur leads to an obligation to be one. This broad effect reflects the broad scope of entrepreneurship education where activities cover the main themes of entrepreneurship, including theoretical knowledge, values, motivation, abilities, social skills, networking, experience, and intuition.

The inspirational benefits of participation in dedicated entrepreneurship education influenced the subjective norms and perceived control for entrepreneurship among the participants in this study. This suggests that entrepreneurship programs can inspire students by increasing their perception that it is possible to become an entrepreneur. In contrast, (Souitaris, Vangelis, Zerbinati, Stefania, & Al-Laham, 2007) in their study found that inspiration was the only predictor variable with significant coefficients in the hierarchical regression model for subjective norms between the antecedents of entrepreneurial intention and behavior. Motivational activities, such as visits and lectures delivered by external speakers, entrepreneurs and expert lecturers, have the potential to develop students' confidence in their abilities to become entrepreneurs; that is, their self-efficacy for entrepreneurship. Therefore, we support the various studies carried out in this area (Bandura, 1997); (Krueger, Jr., Norris, F., Reilly, M.

D., & Carsrud, 2000). In addition, inspirational benefits also affect perceptions of social pressure to become entrepreneurs. However, it did not affect the participants' attitudes towards entrepreneurship.

It seems that entrepreneurial students are more inspired by pedagogical techniques and other inspirational activities to know that it is possible to become an entrepreneur than to imagine how to be an entrepreneur. Utilization of incubator resources as part of education and training only affects subjective norms. This pattern of effects is consistent with previous observations that entrepreneurship education activities in a practical form affect perceptions and beliefs (Chen, C. C., Greene, P. G., & Crick, 1998), with the exception of attitudes. Utilization of incubators involves practice, and usually places entrepreneurial students in groups whose members rely on each other to perform (social pressure) in an environment that offers support for the development of entrepreneurial concepts (increased control). This explanation raises both definitional and methodological problems: although, like previous studies, this study examines the utilization of incubator resources, the inclusion of other activities in which universities provide opportunities for hands-on practice may enhance the observed effects of entrepreneurial education and training resources on entrepreneurial intentions and behavior. . One such activity was field visits, which were not included in the survey questionnaire but were commented on as an important part of education and training in interviews. Field trips, internships, and job placements can all influence the entrepreneurial spirit, but so can the attitude to being an entrepreneur by placing students with practicing entrepreneurs so they can observe, and maybe to some extent even experience what it's like to be an entrepreneur.

The results of this study differ from those of (Souitaris, Vangelis, Zerbinati, Stefania, & Al-Laham, 2007), who studied the effects of the entrepreneurship education and training modules taken by science and engineering students as part of their more general degree. Pedagogical techniques and entrepreneurship education and training activities are designed to provide mastery and experience over a continuous period of study.

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