Lailatussaadah

Ar-Raniry State Islamic University, Banda Aceh, Aceh, Indonesia e-mail: lailatussaadah@ar-raniry.ac.id

> Asyraf Isyraqi Bin Jamil Universiti Malaya, Kuala Lumpur, Malaysia e-mail: isyraqi@um.edu.my

> Fakhrul Adabi Bin Abdul Kadir Universiti Malaya, Kuala Lumpur, Malaysia e-mail: fakhruladabi@um.edu.my

Abstract

The implementation of entrepreneurship course can be carried out by integrating the tridharma of higher education (the threefold missions of higher education) simultaneously in learning, for which a guideline is needed for its implementation. This study aims to design and assess the Islamic Entrepreneurship Education (IEE) model in the tridharma in Islamic Religious Universities (PTKI) in Aceh. This research was conducted through Design-Based Research (DBR) involving 3 experts and 6 lecturers. The research instrument used was a questionnaire which was analyzed statistically descriptively, while the qualitative data used interviews and were analyzed with an interactive model. The results of the design of the IEE model has produced three aspects along with four elements for the dimensions of education and teaching, research, and community service. These three aspects are intercurricular activities, co-curricular activities, and extra-curricular activities, while the four elements are the objectives of implementing entrepreneurship education learning activities, entrepreneurial learning *materials/content*, using entrepreneurship learning methods, and implementing evaluations ofentrepreneurship learning. The design of this model has the description for the implementation procedure. This design of IEE model can be used by lecturers as a model for implementing IEE in Islamic Religious Universities.

Keywords: Designing and Assesing; The Model; Islamic Entrepreneurship Education (IEE)

Abstrak

Pelaksanaan mata kuliah kewirausahaan dapat dilaksanakan dengan mengintegrasikan tridharma perguruan tinggi sekaligus dalam pembelajaran. untuk itu diperlukan sebuat pedoman untuk pelaksnaannya secara utuh. Penelitian ini bertujuan untuk mendesain dan menilai model IEE dalam tridharma di Perguruan Tinggi Keagamaan Islam (PTKI) di Aceh. Design Based Research (DBR) digunakan dalam penelitian ini dengan melibatkan 3 pakar dan 6 dosen pengajar mata kuliah kewirausahaan. Instrumen penelitian yang digunakan adalah questionnare yang dianalisis statistik deskriptif. Sedangkan data kualitatif yang berupa wawancara

* Corresponding author, email: lailatussaadah@ar-raniry.ac.id

Citation: Lailatussaadah, Asyraf Isyraqi Bin Jamil and Fakhrul Adabi Bin Abdul Kadir. "Designing and Assessing an Islamic Entrepreneurship Education Model for Islamic Higher Education (IHE)" *Jurnal Ilmiah Islam Futura* 23, no. 1 (2023): 38-59.

dianalisis dengan interaktif model. Hasil rancangan model IEE telah melahirkan 3 aspek beserta 4 elemen untuk masing-masing dimensi yaitu dimensi pendidikan dan pengajaran, dimensi penelitian dan dimensi pengabdian masyarakat. Ketiga aspek tersebut adalah kegiatan intra-kurikuler, kegiatan ko-kurikuler, dan kegiatan ekstrakurikuler. Selanjutnya keempat unsur adalah tujuan pelaksanaan pembelajaran kewirausahaan, materi/konten pembeljaran kewirausahaan, penggunaan metode pembelajaran kewirausahaaan, dan pelaksanaan evaluasi pembelajaran kewirausahaan. Rancangan model ini memiliki prosedur pelaksanaannya. Hasil penilaian para pakar dan dosen terhadap rancangan model IEE ini dinyataan valid dan dapat digunakan oleh dosen sebagai model pembeljaran dalam melaksanaan mata kuliah kewirausahaan di PTKI.

Kata kunci: Rancangan dan penilaiaan; Model; Pendidikan Kewirausahaan Islami.

مستخلص

يتمكن تنفيذ تعليم مادة رادة الأعمال الإسلامية (IEE) عن طريق دمجها بالمهام الجامعية الثلاثة (Tridharma) في عملية التعليم، وذلك يتطلب دليل تنفيذه بشكل كامل. يهدف هذا البحث إلى تصميم وتقويم نموذج التعليم لهذه المادة المندمجة بالمهام الثلاثة في الجامعات الإسلامية(PTKI) الآتشية. تصميم وتقويم نموذج التعليم لهذه المادة المندمجة بالمهام الثلاثة في الجامعات الإسلامية (PTKI) الآتشية. فاستخدم منهج DBR يمشاركة ثلاثة الخبراء وستة المحاضرين، تم جمع البيانات بتوزيع الاستبيان والمقابلات، وبعد تحليل البيانات الكمية إحصائياً وتحليل البيانات النوعية موضوعيا فظهرت نتائج تصميم والمقابلات، وبعد تحليل البيانات الكمية إحصائياً وتحليل البيانات النوعية موضوعيا فظهرت نتائج تصميم النموذج لتعليم مادة رادة الأعمال الإسلامية (IEE) في ثلاثة جوانب وأربعة عناصر لكل ناحية من المهام الثلاثة؛ التربية والتعليم، والحث العلمي، والخدمة الاجتماعية. وتلك الجوانب الثلاثة تتمثل في الأنشطة النموذج لتعليم مادة رادة الأعمال الإسلامية (IEE) في ثلاثة جوانب وأربعة عناصر لكل ناحية من المهام الثلاثة؛ التربية والتعليم، والحث العلمي، والخدمة الاجتماعية. وتلك الجوانب الثلاثة تتمثل في الأنشطة الميلاثة؛ التربية والتعليم، والمحث العلمي، والخدمة الاجتماعية. وتلك الجوانب الثلاثة تتمثل في الأنشطة الميوذج راحفية، والأنشطة لاصفية، والأنشطة المنهجية اللاصفية وأما العناصر الأربع فهي: أهداف تعليم مادة رادة الأعمال الإسلامية، ومحتواها، وطرق تعليمها، وتقويمها. ويشتمل هذا التصميم على إجراءات مادة رادة رادة الأعمال الإسلامية، ومحتواها، وطرق تعليمها، وتقويمها. ويشتمل هذا التصميم على إجراءات مادة رادة رادة الأعمال الإسلامية، ومحتواها، وطرق تعليمها، وتقويمها. ويشتمل هذا التصميم على إجراءات مادة رادة رادة الأعمال الإسلامية، ومحتواها، وطرق تعليمها، وتقويمها. ويشتمل هذا التصميم على إجراءات مادة رادة رادة رادة الأممان مادة رادة الأعمال الإسلامية، ومنهج؛ الموذج العميم المادة الموذج العامات المامية، ولوني مادة رادة الأممان التربوي الإسلامية، مادة راحمام مادة رادة الأعمال التربوي الإسلامي، مادة بالربيسية؛ المامية الديميم؛ موذج العليم لرادة الأعمان التربويو المامية، مادة راحمام الزمانية الموني مانية مالة مادة مالة ماليمانية، مادة مالي ماليمية، مادة مالمولة المولة ماليمانية، ماميمية، مادة مم

ا**لكلمات الرئيسية**: تصميم؛ نموذج التعليم لرادة الأعمال التربوي الإسلامي؛ منهج؛ الجامعات الدينية الإسلامية.

A. INTRODUCTION

Economic growth is one indicator of the success of development in a country.¹ In essence, entrepreneurship education has an important role in the success and sustainability of economic growth.² Currently, Indonesia needs 4 million new entrepreneurs from the total

¹ Fitri Ana Siregar and Khairil Razali, "UMKM Participation in Halal Industry: The Legal Framwork and Opportunities," *Jurnal Ilmiah Islam Futura* 22, no. 1 (2022): 127–38.

² Nibedita Saha, Tomas Sáha, and Petr Sáha, "Entrepreneurial Universities Perception and Regional Innovation System: Do They Really Create an Environment for Regional Economic Development?," *Journal of Entrepreneurship Education* 23, no. 2 (2020): 1–15; Lisa Nansadiqa, Raja Masbar, and M Shabri, "Does

population.³ In this case, Indonesia only has 3.47% of entrepreneurs which needs more entrepreneurs because Indonesia currently only has 1.5% of the Indonesian population, which is far from other countries in South East Asia.⁴ According to BPS Report, 2021 Indonesia has a large population; as of December 2020, the Indonesian population reached 271,349,889 people. This demographic bonus will be a commercial value for the Indonesian industrial world if it can be managed properly. In addition, if the management and skills development are carried out effectively and efficiently, Indonesian human resources will become powerful in developing this country and affect the bargaining position of the Indonesian country on the world stage.

The results of the business competitiveness report issued by the World Bank show that Indonesia needs young entrepreneurs to overcome the problem of intellectual unemployment.⁵ The increasing number of unemployed was dominated by the educated unemployed from college.⁶ In this case, it is due to the non-absorption of tertiary graduates from tertiary academic institutions and tertiary vocational institutions in business and industries. Therefore, to reduce unemployment, the Ministry of Education and Culture makes policies to foster an entrepreneurial spirit and interest through entrepreneurship programs offered to academic colleges and vocational.⁷ The curriculum implemented in academic universities has yet to answer the unemployment problem, while the widest employment opportunity is to become an entrepreneur. For this reason, universities should have a big role in overcoming the problem of unemployment and poverty by designing a curriculum implemented in the *Tridharma* of Higher Education, especially in PTKI.

Entrepreneurship education is all activities that aim to instill thoughts or mindset about entrepreneurship and foster interest, attitudes, and competence of a person in developing their

Economic Growth Matter for Poverty Reduction in Indonesia?," *East African Scholars Journal of Economics, Business and Management* 2, no. 2 (2019): 46–51, https://doi.org/10.36349/easjebm.2019.v02i0.

Kemenperin, "Indonesia Butuh 4 Juta Wirausaha Baru Untuk Menjadi Negara Maju," 2018.

⁴ Dwi Aditya Putra, "Jumlah Wirausaha Indonesia Jauh Di Bawah Malaysia Dan Thailand," *Harian Merdeka*, April 2021.

⁵ Doing Business, "Doing Business 2018," 2018.

⁶ Angga Martha Mahendra, Ery Tri Djatmika, and Agus Hermawan, "The Effect of Entrepreneurship Education on Entrepreneurial Intention Mediated by Motivation and Attitude among Management Students, State University of Malang, Indonesia," *International Education Studies* 10, no. 9 (2017): 61, https://doi.org/10.5539/ies.v10n9p61.

⁷ Ahmadi Usman, "Analisis Perbandingan Minat Berwirausaha Mahasiswa Dari Perspektif Perbedaan Gender," *Jurnal Pendidikan Dan Kewirausahaan* 11, no. 1 (2023): 36–51; Sanusi Ismail et al., "Religious Radicalism and Islamic Universities in Aceh: Between Campus, Environment and Family," *Samarah* 5, no. 2 (2021): 1044–68, https://doi.org/10.22373/SJHK.V5I2.10958; Bahrun Abubakar et al., "Parenting Education in Islamic Families within the Framework of Family Resilience in Aceh, Indonesia," *Samarah: Jurnal Hukum Keluarga Dan Hukum Islam* 7, no. 2 (June 2023): 1121, https://doi.org/10.22373/SJHK.V7I2.17901..

potential by realizing creative and innovative behavior.⁸ In essence, states that entrepreneurship education is carried out as a discipline with three aspects, first; it provides theoretical teaching of entrepreneurship, second; knowledge and practical skills needed to set up and run a business; and third; ethical system⁹. It is necessary as it can create profits to solve the problems faced. Entrepreneurship education in higher education is implemented in the learning process in various teaching spaces, research, and participation in organizations.¹⁰ Entrepreneurship is someone who is in the process of creating a business that can look for opportunities, take risks, innovate, create, produce, maintain business existence, compete, visualize the future, perform honestly, commit to best services, self-empower, work hard, have good attitudes, have good skills, explore self-potential, and build self-independent.¹¹ At the same time, entrepreneurship education is a process of developing individual potential related to all aspects of entrepreneurship through management, curriculum implementation, pedagogy, and evaluation.¹²

The implementation of entrepreneurship education in higher education is carried out through education and learning, research and community service. In the education aspect, it is conducted by developing curriculum, activities and lecture methods, creative practice, training, coaching, entrepreneurship competitions and business incubation. The content and methods of implementing entrepreneurship education are synergized with non-

⁸ Ratih Indrayani, "Pengaruh Entrepreneurship Terhadap Entrepreneurial Intention Melalui Entrepreneur Motivation Sebagai Mediasi Pada Mahasiswa Tinggi Swasta Di Surabaya," *BISMA (Bisnis Dan Manajemen)* 10, no. 1 (2017): 26–46.

⁹ Dianne H.B Welsh, Willian L. Tullar, and Hamid Nemati, "Entrepreneurship Education: Process, Method, or Both?," *Journal of Innovation & Knowledge & Knowledge* 1, no. 3 (2016): 125–32; Gabriela Boldureanu et al., "Entrepreneurship Education through Successful Entrepreneurial Models in Higher Education Institutions," *Sustainability (Switzerland)* 12, no. 3 (2020): 1–33, https://doi.org/10.3390/su12031267; Mukta Mani, "Entrepreneurship Education: A Students' Perspective," *International Journal of E-Entrepreneurship and Innovation* 5, no. 1 (2015): 1–14, https://doi.org/10.4018/ijeei.2015010101.

¹⁰ Gustavo Hermínio Salati Marcondes de Moraes, Edson Sadao Iizuka, and Matheus Pedro, "Effects of Entrepreneurial Characteristics and University Environment on Entrepreneurial Intention," *Revista de Administração Contemporânea* 22, no. 2 (2018): 226–48, https://doi.org/10.1590/1982-7849rac2018170133.

¹¹ Bahri, Pengantar Kewirausahaan Untuk Mahasiswa, Wirausahaan, Dan Kalangan Umum (Yogyakarta: Pustaka Baru, 2021); Ika Yunia Fauzia, Islamic Entreprenneurship, Kewirausahaan Berbasis Pemberdayaan (Depok: Rajawali pers, 2019); Ratih Indrayani, "Pengaruh Entrepreneurship Education Terhadap Entrepreneurial Intention Melalui Entrepreneurial Motivation Sebagai Media Pada Mahasiswa Perguruan Tinggi Swasta Di Surabaya," Bisnis Dan Manajemen 10, no. 1 (2017); Donald F. Kuratko, "The Emergence of Entrepreneurship Education: Development, Trends, and Challenges," Entrepreneurship: Theory and Practice (Blackwell Publishing Inc., 2005), https://doi.org/10.1111/j.1540-6520.2005.00099.x; Ade Suyitno, "Pendidikan Kewirausahaan: Teori Dan Praktik" (Bandung, 2013).

¹² Nor Aishah Buang, *Pendidikan Keusahawanan* (Bangi, Selangor Darul Ehsan: Universiti Kebangsaan Malaysia, 2013).

entrepreneurship courses, student organizations, study programs, faculties, universities and other units. ¹³

The results of the needs analysis that have been carried out in implementing entrepreneurship education at UIN Ar-Raniry Banda Aceh show that, in practice, it has yet to implement entrepreneurship education in 3 aspects of the *tridharma* of higher education. In addition, the learning process still needs to integrate curricular aspects in learning Islamic entrepreneurship education at PTKI need to be integrated into its vision and mission in the learning process.

Several previous studies related to Islamic entrepreneurship have been conducted by several researchers from several countries, namely Turkey, Oman, Bangladesh, Malaysia and Indonesia. Previous studies has been done by Gümüsay who discusses entrepreneurship from an Islamic perspective.¹⁴ Then, Al-Omari examines the influence of Islamic entrepreneurship mindset programming towards entrepreneurial performance,¹⁵ Ashraf examines the theory of Islamic entrepreneurship conceptual, and Ramadani examines the context of Islamic entrepreneurship and business, consisting of concepts, principles and perspectives¹⁶. Research on design in the field of entrepreneurship education has been carried out by Wahl & Münch.¹⁷

¹³ Renny Dwijayanti, "Pengaruh Pendidikan Kewirausahaan, Locus of Control, Dan Kebutuhan Berprestasi Terhadap Pembentukan Sikap Kewirausahaan Mahasiswa," Ekonomi Pendidikan Dan Kewirausahaan 2, no. 2 (2014): 129, https://doi.org/10.1017/CBO9781107415324.004; Rifa'atul Maftuhah and Bambang Suratman, "Pengaruh Efikasi Diri, Lingkungan Keluarga, Dan Pengetahuan Kewirausahaan Terhadap Minat Berwirausaha Siswa Smk Di Sidoarjo," Jurnal Ekonomi Pendidikan Dan Kewirausahaan 3, no. 2 (2017): 121-31, https://doi.org/10.26740/jepk.v3n2.p121-131; Islami Nurul Novita, "Pengaruh Sikap Kewirausahaan, Norma Subyektif, Dan Efikasi Diri Terhadap Perilaku Berwirausaha Melalui Intensi Berwirausaha Mahasiswa," Jurnal Ekonomi Pendidikan Dan Kewirausahaan 3, no. 1 (2015): 5-21; Fantika Febry Puspitasari and Sigit Priatmoko, "Development of Integrated Entrepreneurship Education Based on Local Wisdom Through Jagong Maton," Nidhomul Haq: Jurnal Manajemen Pendidikan Islam 6, no. 3 (2021): 690-703; Raya Sulistyowati, "Pengaruh Pembelajaran Kewirausahaan Dan Praktik Kerja Industri (Prakerin) Terhadap Sikap Kewirausahaan Siswa Smk Negeri Di Surabaya," Jurnal Ekonomi Pendidikan Dan Kewirausahaan 2, no. 1 (2017): 85, https://doi.org/10.26740/jepk.v2n1.p85-102; Sumarno Sumarno et al., "Desain Pendidikan Kewirausahaan Mahasiswa Berbasis Technopreneurship," Jurnal Ekonomi Pendidikan Dan Kewirausahaan 6, no. 2 (2018): 171, https://doi.org/10.26740/jepk.v6n2.p171-186; Anim Fattah, Muhamad Imam Syairozi, and Lailatur Rohimah, "Youth Creative Entrepreneur Empowerment (YOUTIVEE) Solutions for Youth to Contribute to the Economiy and Reduce Unemployment," International Journal of Economics, Business and Accounting Research (IJEBAR) 5, no. 3 (2021): 29–37.

¹⁴ "Entrepreneurship from an Islamic Perspective," *Journal of Business Ethics* 130, no. 1 (2015): 199–208, https://doi.org/10.1007/s10551-014-2223-7.

¹⁵ "Effects of Islamic Entrepreneurship Mind Programming on Entrepreneurial Performance in Jordania," *International Journal of Business and Globalisation* (2015), https://doi.org/10.1504/IJBG.2015.071909.

¹⁶ "Theory of Islamic Entrepreneurship: A Conceptual Paper," *International Journal of Entrepreneurship* 23, no. 3 (2019).

¹⁷ Turning Students into Industry 4.0 Entrepreneurs: Design and Evaluation of a Tailored Study Program, Entrepreneurship Education (Springer Nature Singapore, 2022), https://doi.org/10.1007/s41959-022-00077-9.

The design implemented is designed for the needs of study programs at universities with industrial 4.0 entrepreneurial characteristics. The research focuses on aspects of Islamic entrepreneurship and the design of university study programs in accordance with entrepreneurial characteristics. In contrast, this study focuses on the form of Islamic entrepreneurship education at PTKI.

Based on these problems, an Islamic entrepreneurship course is very important to be carried out at PTKI. It is hoped that entrepreneurship course is not only oriented to the educational aspect or only used for general concepts but also must integrate Islamic concepts as a whole, referred to *tridharma* concept of higher education. So, the noble goal of the entrepreneurship course can create Islamic entrepreneurs who always follow Allah's guidance and can perform good deeds. In referring to the importance of Islamic entrepreneurship education is needed by lecturers teaching at PTKI. This study aims to design and assess the implementation model of Islamic entrepreneurship education at PTKI.

Based on this need, this research was conducted with a spectrum of educational design and development research phases: analysis, design, formative evaluation, summative evaluation and context expansion.¹⁸ The research subject for a need analysis consisted of 3 head of department, 6 lecturers and 3 student of entrepreneurship who attended entrepreneurship lectures. Meanwhile, for evaluating the IEE implementation model, the selected research subject consisted of 3 experts and 6 lecturers. The research instrument used observation sheets, interviews and questionnaires. while questionnaires were used to assess the quality of the model by experts. Data were analyzed qualitatively and quantitatively. Qualitative data was used for requirements analysis, design and development of the IEE model. Furthermore, quantitative data were analyzed to get responses from experts, lecturers and students.

¹⁸ Rusdi, *Penelitian Perlakuan Kependidikan* (Depok: RajaGrafindo Persada, 2020).

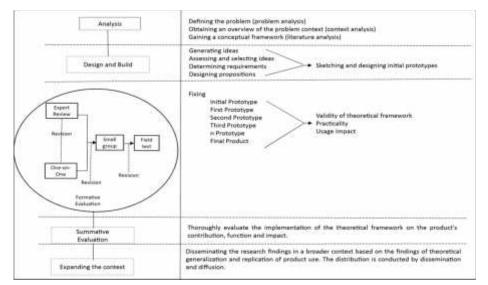


Figure 1. Model of educational design-based research procedures by Rusydi

The phases in this study were carried out in two ways: the design phase and the model assessment phase. The first phase is to design the IEE implementation model. At this phase, a need analysis is carried out by examining the PTKI curriculum, studying lecturers' lesson plans, material and theory analysis, and learning implementation analysis. The next phase is the design of the IEE model. At this stage, the product to be designed and developed is in the form of a design description so that it can form an initial prototype of the IEE model. The prototype is then evaluated by experts and lecturers, and this stage aims to get ideas and opinions from experts. The evaluation results by experts and lecturers are then revised to form prototype N.

B. DISCUSSION

Designing IEE Implementation Model in PTKI Aceh

The Model Design of Islamic Entrepreneurship Education at PTKI is carried out in four stages. The initial stages include needs analysis, model design, evaluation, and context expansion.

Domain 1: Problem Analysis

The problem that arises is the non-achievement of the *tridharma* of higher education in entrepreneurship courses. Entrepreneurship education is only taught in teaching and has yet to be integrated into research and community service. In entrepreneurship courses, research is needed for product development and marketing. In contrast, community service is required to

practice and provide benefits to students and the community from the knowledge that has been developed.

Furthermore, researchers conducted a documentation study. This phase is a review of the curriculum. The PTKI curriculum is already included an Entrepreneurial course. Moreover, the study in the lesson plan of lecturers still needs to link entrepreneurship material with Islamic material. It has yet to integrate entrepreneurship-based research and community service into a teaching entrepreneurship course.

In addition, the researchers conducted a context problem. Context analysis is carried out on the peculiarities of the issues that arise and formulate the objectives of problem-solving so that new knowledge emerges in innovative learning ecologies.¹⁹ This context has two objectives: design research and social context objectives. This research aims to design a model for implementing Islamic entrepreneurship education in *Tridhama* Islamic Religious Universities. The goal of knowledge is to provide new insights into the implementation of Islamic entrepreneurship education in implementing procedure steps and the goal of predicting future events. Thus, lecturers' and students' needs for implementing entrepreneurship education are fully integrated into *Tridhama* Higher Education. In comparison, the purpose of the social context is to benefit external and internal stakeholders both directly and indirectly involved, namely the birth of Muslim entrepreneurs who have Islamic entrepreneurial competencies.

The following are excerpts of interviews with Head of Department, lecturers and students:

Excerpt 1... After this discussion, I became more open-minded about the ease and usefulness of integrating entrepreneurship education into the course ... (DH1, HD2, HD3).

Excerpt 2. ... students are very enthusiastic about the entrepreneurship course. However, so far, they have already learnt without following-up research and have not applied the learning outcomes that are very useful to the community... (L1, L3)

Excerpt 3. ...This course is beneficial for students because they can think about what they will do in the future so that they can participate in community life and state development (L2, L6)

Excerpt 4. ... It requires a complete form of implementing the Entrepreneurial course so that students can learn, develop and improve their results and the products that they have produced in learning (L3, L5).

Excerpt 5. ... I feel that this entrepreneurship course has made me able to create something. In my opinion, this course can make students more creative and ready to face the future... (L2, L4)

¹⁹ Roel J. Wieringa, *Design Science Methodology for Information Systems and Software Engineering* (London: Springer, 2014).

Excerpt 6. ...is what I need most in the course it performs the experiment products and marketing, so we can use the experiment results when we open a real business later...(S1)

Excerpt 7. ... in this course, the lecturer only mentions a few Islamic concepts. Meanwhile, we also have not done serious research yet in the entrepreneurship course, even though entrepreneurship research can develop products and marketing, and we can use it when Community Services Program (KPM)... (S2, S3)

The results of interviews with lecturers found that learning had not integrated all components of the *tridharma* of higher education. What lecturers learned in teaching was not followed up in research and scientific development and was not applied in community service. The findings of the subsequent needs analysis are that lecturers need a guide or model in implementing Islamic-based entrepreneurship education.

Literature analysis, in this case, is carried out as a scientific foundation so that this design research has a clear conceptual framework for determining the necessary design principles. Two major themes of the theoretical basis used in this study are the theory of implementing education in higher education and the theory of Islamic entrepreneurship. The theory of the implementation of entrepreneurship education is based on the Regulation of the Minister of Education and Culture of the Republic of Indonesia on the implementation of the Indonesian National Qualifications Framework²⁰, SISDIKNAS Law Number 20 of 2003, SISDIKNAS Law Number 12 of 2012, PP Number 57 of 2001, PP Number 4 of 2002, PERMENDIKBUD Number 73 of 2012, PERMENDIKBUD Number 3 of 2020, Directorate General of Higher Education 2020, Decree of the Director General of Islamic Education Number 1591 of 2022. Furthermore, Islamic entrepreneurship theory uses theories inseparable from Tawheed's science, worship, sharia, and morals.²¹

The results of interviews, observations, documentation review and literature analysis show that lecturers need a model of implementing Islamic-based entrepreneurship learning integrated into the *tridharma* of higher education. This model is considered convenient for lecturers in carrying out entrepreneurial learning because there are work guidelines. Therefore, the researchers made a prototype model design that can be used by lecturers.

²⁰ Compiler, Panduan Pengembangan Kurikulum PTKI Mengacu Pada KKNI Dan SN-Dikti Kementerian Agama Republik Indonesia (Jakarta: Direktorat Pendidikan Tinggi Keagamaan Islam Direktorat Jenderal Pendidikan Islam Kementrian Agama Republik Indonesia, 2018).

²¹ Siti Aishah Chu Abdullah and Mohd Nizam Sahad, "Integrated Marketing Communication: A Spiritual and an Ethical Islamic Perspective," *International Journal of Islamic Marketing and Branding* 1, no. 4 (2016): 305, https://doi.org/10.1504/ijimb.2016.10002295; Sarimah Che Hassan, Norlizah Che Hassan, and Nor Aisyah Buang, "Penguasaan Kemahiran Insaniah (Kemahiran Keusahawanan) Dalam Kalangan Guru Sekolah Di Malaysia," *Proceedings of The 4th International Conference on Teacher Education; Join Conference UPI & UPSI Bandung, Indonesia, 8-10 November 2010*, no. November (2010): 8–10; Fauzia, *Islamic Entreprenneurship, Kewirausahaan Berbasis Pemberdayaan*; Ashraf, "Theory of Islamic Entrepreneurship: A Conceptual Paper."

Based on the results of interviews, observations, documentation review, and literature analysis, it shows that lecturers need a model of implementing Islamic-based entrepreneurship learning integrated in the *tridharma* of higher education. This model is considered to be able to provide convenience for lecturers in carrying out entrepreneurial learning, because there are work guidelines. Therefore, the researchers made a prototype model design that can be used by lecturers.

Domain 2: Design-Construction: IEE Implementation Model Design in PTKI Aceh

In this phase, activities are carried out to design and build a model along with the procedure for implementing the IEE model in PTKI Aceh in accordance with the objectives and benefits to be achieved from the IEE model design are determined. Furthermore, a discussion with model experts to design a form of learning can be carried out by lecturers so that it affects the entrepreneurial competence of students. The result of this phase has already created a new prototype for the implementation of entrepreneurship education at PTKI. This prototype is based on the results of a needs analysis following the results of discussions with experts and a literature review. The ideas outlined in the initial prototype were then selected, assessed, considered and rechecked. Then, the researcher designed and decided to make a design proposal as prototype 1. Prototype 1 of the implementation of higher education includes the *tridharma* of higher education, namely education, research and community service. Here are the results of prototype 1 The Model of Islamic Entrepreneurship Education In Islamic Higher Education (IHE) Instituition (PTKI) in Aceh.



Figure 2. Prototype 1 The Model of Islamic Entrepreneurship Education In Islamic Higher Education (IHE) Instituition (PTKI) in Aceh

The design of the IEE model at PTKI aims to serve as a guide for lecturers in implementing Islamic entrepreneurship education. With this model, it is hoped that it can provide convenience and direction to lecturers so that the goals of learning outcome can be achieved and can be useful for students and the community.

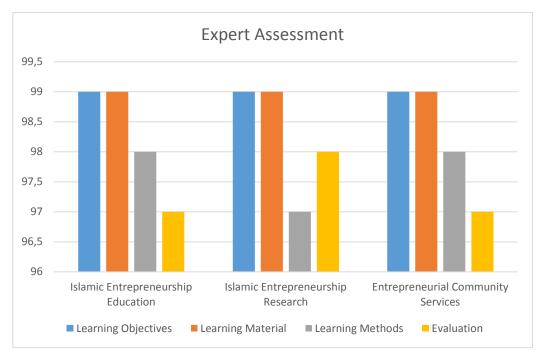
Domain 3: Evaluation of the IEE PTKI Model

The assessment of the IEE PTKI implementation model involved experts review, oneon-one review, small group, and field test. Four experts assessed the designed model, and 6 lecturers at UIN Ar-Raniry Banda Aceh, IAIN Lhokseumawe, STAIN Meulaboh, and PTI Al-Hilal Sigli. This assessment contributes ideas, assistance and follow-up to the IEE PTKI model. This assessment is carried out to ensure that the designed model has good validity and reliability. The assessment was conducted in a formative and summative manner.

The Assesment of Expert

The assessment of formative expert involved four experts in assessing the IEE PTKI model design. This assessment was analyzed descriptively on the aspects and indicators of dimensions built in the IEE model. The dimensions design include entrepreneurship education or teaching, research, and community service based on entrepreneurship. Each dimension consists of inter-curricular, co-curricular, and extracurricular elements. The indicators in each element are objectives, content or materials, methods, and evaluations.

According to the findings of the expert assessment, every dimension and element's learning objectives and learning material indicators were 99% or more highly appropriate. As for the results of learning methods and evaluation indicators, they varied. The learning methods indicator received a high score of 98% on the dimensions the Islamic entrepreneurship education and entrepreneurial community services, while the evaluation indicator received a high score of 98% on Islamic entrepreneurship research. Both the score for the learning methods indicator in Islamic entrepreneurship research and the score for the evaluation indicator in Islamic entrepreneurship education and entrepreneurship education and entrepreneurship education and entrepreneurship education and entrepreneurship research and the score for the evaluation indicator in Islamic entrepreneurship education and entrepreneurial community services slightly declined (97%). Overall, the result of the experts' assessment was in the "very appropriate" category.



In prototype 1, the experts gave the following suggestions:

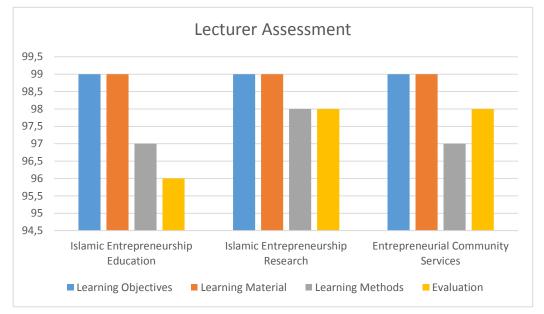
Excerpt ... The IEE model design should have to provide some explanation in the description column to let lecturers and other users get a detailed explanation of implementing entrepreneurship education... (experts 1, 2, & 3).

In accordance with the advice of experts, prototype 1, the results of the revised design of prototype 1, then formed the next prototype, which was again assessed by experts in the next round. The results of prototype N also formed a descriptor of the IEE PTKI implementation model. Meanwhile, the results of prototype 1 are still getting suggestions and improvements from experts and lecturers in terms of content, language and several description items that must be combined because they are similar.

Assessment of Lecturers

The formative assessment of entrepreneurship teaching lecturers involving six lecturers had been assessed and analyzed descriptively. The results of the lecturers' assessment show that the learning objectives and learning materials indicators got the highest score (99%) for the three dimensions (Islamic entrepreneurship education, Islamic entrepreneurship research, and entrepreneurial community services). The learning methods indicator in Islamic entrepreneurship research and entrepreneurial community services got the second-highest score, 98%. Although the learning methods indicator in Islamic entrepreneurial community services got the second-highest score, 98%. Although the learning methods indicator in Islamic entrepreneurial community services scored 97%, slightly lower than in Islamic

entrepreneurship research (98%), the evaluation indicator in Islamic entrepreneurship education had the lowest score (96%). The findings of the lecturers' assessment of the IEE model show that they were in the category "very appropriate." The results of the analysis can be seen in the following graph.



In prototype 1, the lecturer gave the following suggestions:

Excerpt ... as whole the IEE model meets or appropriate and can be used, but need some point can be explained in more detail, so that they are clearly illustrated in the IEE ... (lecturer 1, 2, 6).

The results of the expert assessment were then revised into prototype N. The results of prototype N have received a quantitative assessment, concluding that it is feasible. The following are the results of the final prototype in three aspects. First, the education and learning aspects; second, Islamic entrepreneurship research aspects; and last, the entrepreneurship community aspects. In simple words, the results of the design that have gone through the validation and reliability process of the IEE implementation model in Islamic religious universities can be seen in the following figure:



Figure 3. The IEE Model

From this model, steps or procedures for implementing entrepreneurship education in learning, research, and community service have been established. These steps or procedures will make it easier for teachers to integrate entrepreneurship education into the *tridharma* of higher education.

The IEE implementation model in education and learning is designed with several steps or procedures for implementation in learning entrepreneurship courses. The following describes the steps or procedures for implementing the IEE model in education and teaching entrepreneurship courses.

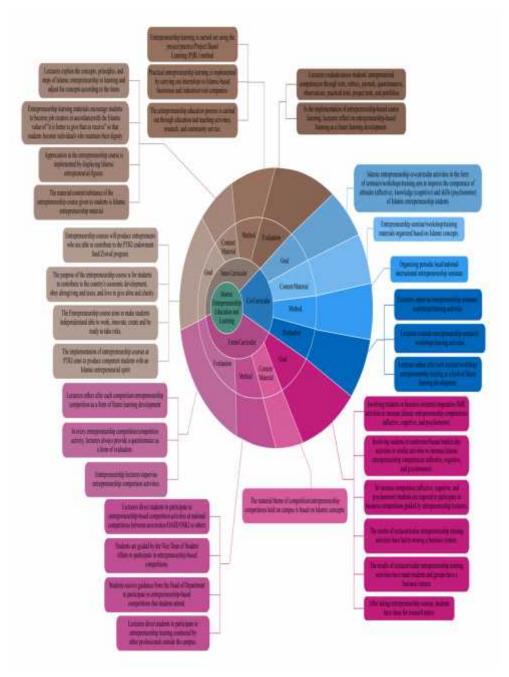


Figure 4. The IEE Implementation Model in the Education and Learning

Furthermore, the IEE model design results that experts and lecturers have validated have resulted in the steps or procedures for implementing IEE in the implementation of entrepreneurship research integrated with entrepreneurship courses. The followings are the steps or procedures for implementing the IEE model in Entrepreneurship Research.

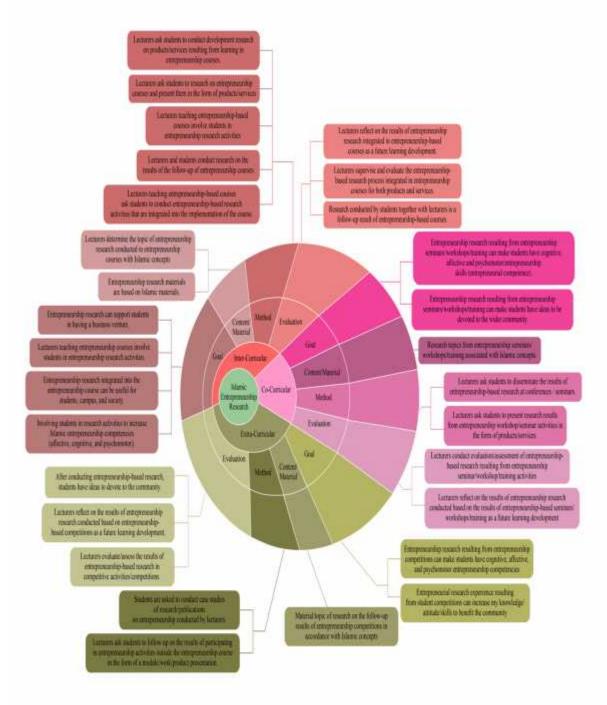


Figure 5. The IEE model in Entrepreneurship Research.

The last is the result of the design of steps or procedures for implementing IEE in entrepreneurship-based community service integrated into entrepreneurship courses. The followings are the steps or procedures for implementing the IEE model in Community Services Based on Islamic Entrepreneurship.

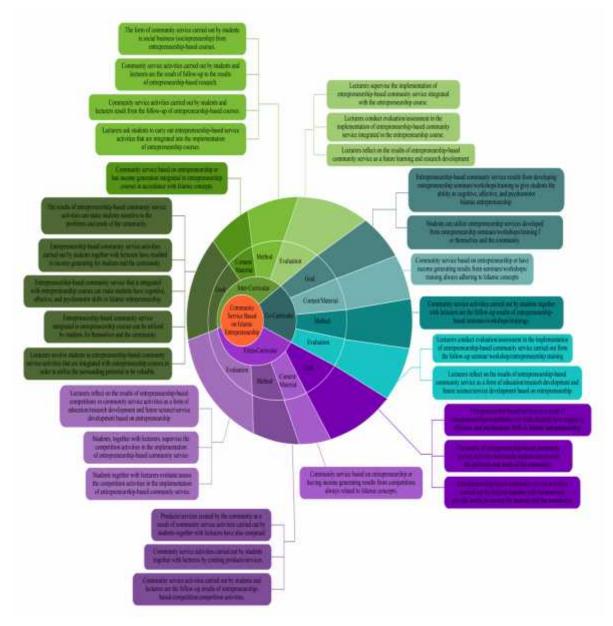


Figure 6. The IEE model of Community Services Based on Islamic Entrepreneurship

Domain 4: Expansion of the Context of Using the Model The IEE model in

This phase is the last part of research based on educational design. The results of this IEE model design have been carried out to expand the context to an international conference as an effort to convey information to other parties.²² Furthermore, this IEE model has been given to lecturers and applied to entrepreneurship learning students. The response of lecturers and students to the IEE model is positive and can be implemented well in learning. The presence of this IEE model can solve problems in entrepreneurship learning. In this regard,

²² Rusdi, Penelitian Perlakuan Kependidikan.

Rusydi (2020) stated that educational design research was carried out to solve existing problems.

In the context of the expansion stage, lecturers and students revealed the impacts and constraints experienced from implementing the IEE model at UIN Ar-Raniry Banda Aceh. The lecturers who have implemented this model argue that:

Excerp 1. "... After implementing this IEE model by lecturers to students, lecturers suggested that entrepreneurship courses be carried out sustainably in 2 semesters to impact the sustainability of products and management of business units built in this course because this management is under the entrepreneurship division in the structure of the Department Student Association. In addition, this can improve entrepreneurial competence through learning and habituation ..." (L-1,2,3,4,5,6).

Furthermore, students as learning subjects have given their opinions on applying this IEE model. The results of student opinions have been summarized in the following sentence:

Excerp 2. "...this model is very good for students' Islamic entrepreneurship competencies, but there are obstacles for us in the sustainability of our products in the intention of realizing the endowment fund program. Because it is only in one semester, we hope it will be in the next semester again. In addition, we feel that we have not perfectly completed research and community service, even though the concept is taught that good products are the result of the development of research from the potential in the environment and the results of community service that has been or can be done... " (S-1,2,3).

This IEE implementation model can be used in entrepreneurship learning as a solution that still stands alone without research and community service. The integration of the *tridharma* of higher education in entrepreneurship learning has been assessed as achieving the objectives of IEE learning on student entrepreneurial competencies. Entrepreneurship education is believed to be able to overcome social problems.²³ Although there are many obstacles in the implementation of entrepreneurship education,²⁴ entrepreneurship education is carried out in universities in order to create new job creators (Directorate General of Higher Education KEMENDIKBUD, 2020). Even, entrepreneurship education has been carried out in

²³ Lailatussaadah, Asyraf Isyraqi Bin Jamil, and Fakhrul Adabi Bin Abdul Kadir, "The Implementation Formula of Entrepreneurship Education at Higher Education as a Solution for the Social Problem," *International Journal of Higher Education*, 2020, https://doi.org/10.5430/ijhe.v9n6p10; Siswo Wiratno, "The Implementation of Enterpreneurship Education in the Higher Education," *Jurnal Pendidikan Dan Kebudayaan* 18, no. 4 (2012): 453–66.

²⁴ Gunawan Adnan et al., "The Problems and Alternative Solutions for the Implementation of Entrepreneurship Education in the Higher Education : A Literature Review," *Tadris: Jurnal Keguruan Dan Ilmu Tarbiyah* 5, no. 2 (2020): 349–61, https://doi.org/10.24042/tadris.v5i2.7264.

Islamic boarding schools for a long time, it has influenced students' character.²⁵ In the implementation model, IEE offers several learning methods in accordance with entrepreneurial characteristics, such as apprenticeship methods. The apprenticeship method can be used in learning to positively impact students' entrepreneurial abilities.²⁶

C. CONCLUSION

This research has produced a model for the implementation of IEE in PTKI. The resulting model design has gone through the appropriate phases. The first phase are needs analysis, model design, evaluation and context expansion. The results of the IEE model assessment from experts and lecturers showed a positive response with the conclusion that this model was suitable for implementing entrepreneurship education at PTKI. This IEE model is assessed according to the characteristics of entrepreneurship education with noble goals. However, this research is still being implemented at UIN Ar-Raniry and has not assessed the effect on student entrepreneurial competency achievement. Therefore, further research can examine the effectiveness of using the IEE model on student entrepreneurial competencies and the broader context.

BIBLIOGRAPHY

- Abdullah, Siti Aishah Chu, and Mohd Nizam Sahad. "Integrated Marketing Communication: A Spiritual and an Ethical Islamic Perspective." *International Journal of Islamic Marketing and Branding* 1, no. 4 (2016): 305. https://doi.org/10.1504/ijimb.2016.10002295.
- Abubakar, Bahrun, Sanusi Sanusi, Razali Razali, Taat Kurnita Yeniningsih, and Mujiburrahman Mujiburrahman. "Parenting Education in Islamic Families within the Framework of Family Resilience in Aceh, Indonesia." Samarah: Jurnal Hukum Keluarga Dan Hukum Islam 7, no. 2 (June 2023): 1121. https://doi.org/10.22373/SJHK.V7I2.17901.
- Adnan, Gunawan, Lailatussaadah Lailatussaadah, Asyraf Isyraqi, Bin Jamil, Misbahul Jannah, Buhori Muslim, and Erfiati. "The Problems and Alternative Solutions for the Implementation of Entrepreneurship Education in the Higher Education : A Literature Review." *Tadris: Jurnal Keguruan Dan Ilmu Tarbiyah* 5, no. 2 (2020): 349–61. https://doi.org/10.24042/tadris.v5i2.7264.

Al-Omari, Hadeel Marwan Tawfiq. "Effects of Islamic Entrepreneurship Mind Programming

²⁵ Lukman, M Nazaruddin, and Saifuddin Yunus, "Kewirausahaan Berbasis Pendidikan Karakter Di Dayah Ummul Ayman, Samalanga," *Jurnal Sosiologi Agama Indonesia (JSAI)* 2, no. 2 (2021): 75–85, https://doi.org/10.22373/jsai.v2i2.1310.

²⁶ Maddalena Volpe et al., "Exploring Curricular Internships in Italy: Towards Entrepreneurial Universities," *International Business Research* 9, no. 9 (2016): 150–67, https://doi.org/10.5539/ibr.v9n9p150; Zubaedi, "Urgensi Pendidikan Kewirausahaan Di Kalangan Mahasiswa PTKI," *Madina* 19, no. 2 (2015): 147–58; Cut Nelvi Ariska and Sheerad Sahid, "The Social Entrepreneurship Readiness Among University Students," *Ceudah Journal: Education and Social Science* 1, no. 2 (2022): 48–61.

on Entrepreneurial Performance in Jordania." International Journal of Business and Globalisation, 2015. https://doi.org/10.1504/IJBG.2015.071909.

- Ariska, Cut Nelvi, and Sheerad Sahid. "The Social Entrepreneurship Readiness Among University Students." *Ceudah Journal: Education and Social Science* 1, no. 2 (2022): 48–61.
- Ashraf, Mohammad Ali. "Theory of Islamic Entrepreneurship: A Conceptual Paper." International Journal of Entrepreneurship 23, no. 3 (2019).
- Bahri. Pengantar Kewirausahaan Untuk Mahasiswa, Wirausahaan, Dan Kalangan Umum. Yogyakarta: Pustaka Baru, 2021.
- Boldureanu, Gabriela, Alina M riuca Ionescu, Ana Maria Bercu, Maria Viorica Bedrule-Grigoru, and Daniel Boldureanu. "Entrepreneurship Education through Successful Entrepreneurial Models in Higher Education Institutions." *Sustainability (Switzerland)* 12, no. 3 (2020): 1–33. https://doi.org/10.3390/su12031267.
- Buang, Nor Aishah. *Pendidikan Keusahawanan*. Bangi, Selangor Darul Ehsan: Universiti Kebangsaan Malaysia, 2013.
- Business, Doing. "Doing Business 2018," 2018.
- Compiler. Panduan Pengembangan Kurikulum PTKI Mengacu Pada KKNI Dan SN-Dikti Kementerian Agama Republik Indonesia. Jakarta: Direktorat Pendidikan Tinggi Keagamaan Islam Direktorat Jenderal Pendidikan Islam Kementrian Agama Republik Indonesia, 2018.
- Dwijayanti, Renny. "Pengaruh Pendidikan Kewirausahaan, Locus of Control, Dan Kebutuhan Berprestasi Terhadap Pembentukan Sikap Kewirausahaan Mahasiswa." *Ekonomi Pendidikan Dan Kewirausahaan* 2, no. 2 (2014): 129. https://doi.org/10.1017/CBO9781107415324.004.
- Fattah, Anim, Muhamad Imam Syairozi, and Lailatur Rohimah. "Youth Creative Entrepreneur Empowerment (YOUTIVEE) Solutions for Youth to Contribute to the Economiy and Reduce Unemployment." *International Journal of Economics, Business and Accounting Research (IJEBAR)* 5, no. 3 (2021): 29–37.
- Fauzia, Ika Yunia. Islamic Entreprenneurship, Kewirausahaan Berbasis Pemberdayaan. Depok: Rajawali pers, 2019.
- Gümüsay, Ali Aslan. "Entrepreneurship from an Islamic Perspective." Journal of Business Ethics 130, no. 1 (2015): 199–208. https://doi.org/10.1007/s10551-014-2223-7.
- Hassan, Sarimah Che, Norlizah Che Hassan, and Nor Aisyah Buang. "Penguasaan Kemahiran Insaniah (Kemahiran Keusahawanan) Dalam Kalangan Guru Sekolah Di Malaysia." Proceedings of The 4th International Conference on Teacher Education; Join Conference UPI & UPSI Bandung, Indonesia, 8-10 November 2010, no. November (2010): 8–10.
- Indrayani, Ratih. "Pengaruh Entrepreneurship Education Terhadap Entrepreneurial Intention Melalui Entrepreneurial Motivation Sebagai Media Pada Mahasiswa Perguruan Tinggi Swasta Di Surabaya." *Bisnis Dan Manajemen* 10, no. 1 (2017).

——. "Pengaruh Entrepreneurship Terhadap Entrepreneurial Intention Melalui Entrepreneur Motivation Sebagai Mediasi Pada Mahasiswa Tinggi Swasta Di Surabaya." *BISMA (Bisnis Dan Manajemen)* 10, no. 1 (2017): 26–46.

Ismail, Sanusi, Bustami Abubakar, Ajidar Matsyah, Muhammad Thalal, and Hermansyah. "Religious Radicalism and Islamic Universities in Aceh: Between Campus, Environment and Family." *Samarah* 5, no. 2 (2021): 1044–68. https://doi.org/10.22373/SJHK.V5I2.10958.

Kemenperin. "Indonesia Butuh 4 Juta Wirausaha Baru Untuk Menjadi Negara Maju," 2018.

Kuratko, Donald F. "The Emergence of Entrepreneurship Education: Development, Trends, and Challenges." *Entrepreneurship: Theory and Practice*. Blackwell Publishing Inc.,

2005. https://doi.org/10.1111/j.1540-6520.2005.00099.x.

- Lailatussaadah, Asyraf Isyraqi Bin Jamil, and Fakhrul Adabi Bin Abdul Kadir. "The Implementation Formula of Entrepreneurship Education at Higher Education as a Solution for the Social Problem." *International Journal of Higher Education*, 2020. https://doi.org/10.5430/ijhe.v9n6p10.
- Lukman, M Nazaruddin, and Saifuddin Yunus. "Kewirausahaan Berbasis Pendidikan Karakter Di Dayah Ummul Ayman, Samalanga." *Jurnal Sosiologi Agama Indonesia* (*JSAI*) 2, no. 2 (2021): 75–85. https://doi.org/10.22373/jsai.v2i2.1310.
- Maftuhah, Rifa'atul, and Bambang Suratman. "Pengaruh Efikasi Diri, Lingkungan Keluarga, Dan Pengetahuan Kewirausahaan Terhadap Minat Berwirausaha Siswa Smk Di Sidoarjo." *Jurnal Ekonomi Pendidikan Dan Kewirausahaan* 3, no. 2 (2017): 121–31. https://doi.org/10.26740/jepk.v3n2.p121-131.
- Mahendra, Angga Martha, Ery Tri Djatmika, and Agus Hermawan. "The Effect of Entrepreneurship Education on Entrepreneurial Intention Mediated by Motivation and Attitude among Management Students, State University of Malang, Indonesia." *International Education Studies* 10, no. 9 (2017): 61. https://doi.org/10.5539/ies.v10n9p61.
- Mani, Mukta. "Entrepreneurship Education: A Students' Perspective." *International Journal* of *E-Entrepreneurship* and *Innovation* 5, no. 1 (2015): 1–14. https://doi.org/10.4018/ijeei.2015010101.
- Moraes, Gustavo Hermínio Salati Marcondes de, Edson Sadao Iizuka, and Matheus Pedro. "Effects of Entrepreneurial Characteristics and University Environment on Entrepreneurial Intention." *Revista de Administração Contemporânea* 22, no. 2 (2018): 226–48. https://doi.org/10.1590/1982-7849rac2018170133.
- Nansadiqa, Lisa, Raja Masbar, and M Shabri. "Does Economic Growth Matter for Poverty Reduction in Indonesia?" *East African Scholars Journal of Economics, Business and Management* 2, no. 2 (2019): 46–51. https://doi.org/10.36349/easjebm.2019.v02i0.
- Novita, Islami Nurul. "Pengaruh Sikap Kewirausahaan, Norma Subyektif, Dan Efikasi Diri Terhadap Perilaku Berwirausaha Melalui Intensi Berwirausaha Mahasiswa." *Jurnal Ekonomi Pendidikan Dan Kewirausahaan* 3, no. 1 (2015): 5–21.
- Puspitasari, Fantika Febry, and Sigit Priatmoko. "Development of Integrated Entrepreneurship Education Based on Local Wisdom Through Jagong Maton." *Nidhomul Haq: Jurnal Manajemen Pendidikan Islam* 6, no. 3 (2021): 690–703.
- Putra, Dwi Aditya. "Jumlah Wirausaha Indonesia Jauh Di Bawah Malaysia Dan Thailand." *Harian Merdeka*, April 2021.
- Rusdi. Penelitian Perlakuan Kependidikan. Depok: RajaGrafindo Persada, 2020.
- Saha, Nibedita, Tomas Sáha, and Petr Sáha. "Entrepreneurial Universities Perception and Regional Innovation System: Do They Really Create an Environment for Regional Economic Development?" *Journal of Entrepreneurship Education* 23, no. 2 (2020): 1– 15.
- Siregar, Fitri Ana, and Khairil Razali. "UMKM Participation in Halal Industry: The Legal Framwork and Opportunities." *Jurnal Ilmiah Islam Futura* 22, no. 1 (2022): 127–38.
- Sulistyowati, Raya. "Pengaruh Pembelajaran Kewirausahaan Dan Praktik Kerja Industri (Prakerin) Terhadap Sikap Kewirausahaan Siswa Smk Negeri Di Surabaya." *Jurnal Ekonomi Pendidikan Dan Kewirausahaan* 2, no. 1 (2017): 85. https://doi.org/10.26740/jepk.v2n1.p85-102.
- Sumarno, Sumarno, Gimin Gimin, Gani Haryana, and Saryono Saryono. "Desain Pendidikan Kewirausahaan Mahasiswa Berbasis Technopreneurship." Jurnal Ekonomi Pendidikan Dan Kewirausahaan 6, no. 2 (2018): 171. https://doi.org/10.26740/jepk.v6n2.p171-186.
- Suyitno, Ade. "Pendidikan Kewirausahaan: Teori Dan Praktik." Bandung, 2013.

- Usman, Ahmadi. "Analisis Perbandingan Minat Berwirausaha Mahasiswa Dari Perspektif Perbedaan Gender." *Jurnal Pendidikan Dan Kewirausahaan* 11, no. 1 (2023): 36–51.
- Volpe, Maddalena, Alfonso Siano, Agostino Vollero, and Francesca Esposito. "Exploring Curricular Internships in Italy: Towards Entrepreneurial Universities." *International Business Research* 9, no. 9 (2016): 150–67. https://doi.org/10.5539/ibr.v9n9p150.
- Wahl, Dario, and Jürgen Münch. Turning Students into Industry 4.0 Entrepreneurs: Design and Evaluation of a Tailored Study Program. Entrepreneurship Education. Springer Nature Singapore, 2022. https://doi.org/10.1007/s41959-022-00077-9.
- Welsh, Dianne H.B, Willian L. Tullar, and Hamid Nemati. "Entrepreneurship Education: Process, Method, or Both?" *Journal of Innovation & Knowledge & Knowledge* 1, no. 3 (2016): 125–32.
- Wieringa, Roel J. Design Science Methodology for Information Systems and Software Engineering. London: Springer, 2014.
- Wiratno, Siswo. "The Implementation of Enterpreneurship Education in the Higher Education." *Jurnal Pendidikan Dan Kebudayaan* 18, no. 4 (2012): 453–66.
- Zubaedi. "Urgensi Pendidikan Kewirausahaan Di Kalangan Mahasiswa PTKI." *Madina* 19, no. 2 (2015): 147–58.