Jurnal Minds: Manajemen Ide dan Inspirasi
Vol. 10, No. 1 (June) 2023: 41-72

LET'S START TALKING: UNIVERSITY ACCELERATORS AND THEIR STRATEGIC INTENT ALIGNMENT WITH ENTREPRENEURSHIP EDUCATION IN INDONESIA

Alex Maritz[1*], Sobhan Arisian[1], Elia Ardyan[2], Gracia Ongkowijoyo[2]
[1]La Trobe University Melbourne, Australia
[2]Universitas Ciputra Surabaya, Indonesia

Citation (APA 7th): Maritz, A., Arisian, S., Ardyan, E., & Ongkowijoyo, G. (2023). Let's Start Talking: University Accelerators and Their Strategic Intent Alignment with Entrepreneurship Education in Indonesia. *Jurnal Minds: Manajemen Ide Dan Inspirasi*, *10*(1), 41-72. https://doi.org/10.24252/minds.v10i1.32949

Submitted: 05 November 2022
Revised: 14 January 2023
Accepted: 25 January 2023
Published: 17 February 2023

ABSTRACT: This paper aims to explore the significance of university accelerators (UAs) in Indonesia by examining neoteric global best practices for aligning university entrepreneurship strategic intent. We introduce an iterative aspect and emerging investigation into multi-method research, which includes a quantitative examination of Indonesian UAs and analyses of entrepreneurial strategic objectives and narratives based on best practice accelerator applications. Our findings demonstrate the scarce allocation of UAs in Indonesia and the lack of alignment with the strategic intent of universities. Additionally, we found no evidence of entrepreneurship education (EE) integration in Indonesia, indicating the successful outcomes mostly present from the self-effort of students' nascent startups rather than educational impacts. Collaborative and engagement aspects of UAs in broader entrepreneurial ecosystems may deliver a better platform for societal upliftment within an Indonesian context.

Keywords: University Accelerators; Entrepreneurship Education; Entrepreneurial Ecosystems; Entrepreneurial University; Indonesia

*Corresponding Author : a.maritz@latrobe.edu.au
DOI: 10.24252/minds.v10i1.32949
ISSN-E: 2597-6990
ISSN-P: 2442-4951
http://journal.uin-alauddin.ac.id/index.php/minds
Publisher: Program Studi Manajemen, Universitas Islam Negeri Alauddin Makassar

INTRODUCTION

Over the past decade, the number of university startup accelerator programmes has exponentially risen, though it is uncertain what their specific role is in the university entrepreneurial ecosystem (Maritz et al., 2022; Metcalf et al., 2020; Bliemel et al., 2018). They also operate on a different model from private accelerators, primarily investment vehicles (York et al., 2016). When considering entrepreneurship education (EE) integration, there is ambiguity around the measurement and outcomes associated with such startup enablers (Maritz et al., 2019; Davidsson et al., 2021; Miles et al., 2017). University accelerators (UAs) make up a crucial part of entrepreneurial ecosystems, and this organizational form is still emergent despite their rapid growth (Breznitz and Zhang, 2019; Cohen et al., 2019).

As previously mentioned, UAs are an essential part of entrepreneurial ecosystems (Wurth et al., 2021; Audretsch and Belitski, 2021a), including the entrepreneurial university (Klofsten et al., 2018; Mascarenhas et al., 2017), and notably EE (Belitski and Heron, 2017). UAs are essential components of university spaces for entrepreneurship and the support of EE (Pittaway et al., 2019). The impact of UAs is not just considered on startups but also for the development of a broader ecosystem and EE providers (Metcalf et al., 2020; Breznitz and Zhang, 2019). This study defines entrepreneurial ecosystems as independent factors that enable productive entrepreneurship within a specific region (Spigel, 2017; Mason and Brown, 2014). Furthermore, we define UAs as short-term programmes which assist and guide startups to create and launch their ventures. These services may include working space, capital, networking opportunities, training/seminars, and mentorship (Kennett et al., 2020; Cohen et al., 2019). The aim of UAs is significantly different to EE, as it focuses on knowledge transfer opportunities for creating goods, services, and values and how these are discovered, evaluated and exploited (Maritz and Brown, 2013). There is a clear distinction between accelerators and other programmes facilitating startups. Some examples include EE programs, pitch nights, startup workshops, and networking events organized by various communities and organizations. EE is considered an educational programme which aims to develop and improve individuals' entrepreneurial attitudes, skills, and personal attributes, created to encourage and provide the tools to assist with the process of startups (Maritz, 2017). Academic scholars have contributed significantly to our understanding of emerging entrepreneurial support organizations (ESOs), specifically the rapidly advancing and growing technologies of such ESOs (Bergman and McMullen, 2021). However, our study focuses on UAs forming part of ESOs.

The integration of UAs and EE in Indonesia indicates three main tendencies. The first is that our analysis suggests inconsistent participation of UAs within Indonesian higher education institutions (HEIs), which is not in line with the entrepreneurial university benchmarking report of BEEHIVE (Beehive, 2017), which implies similar involvement of entrepreneurial initiatives within most HEIs. This similar finding was discussed in the research conducted by Maritz et al. (2022), highlighting the implications of the uneven distribution of EE programmes across all the HEIs in Australia. Second, the literature and practice do not currently provide a clear link between outcomes and the impact of UAs, nor on how EE is integrated into

these programmes. Previous studies discuss the uncertain role of UAs within entrepreneurial ecosystems, along with substantial differences in the form and outcomes these accelerators provide (Metcalf et al., 2020; Bliemel et al., 2019; Cohen et al., 2019; Miles et al., 2017). Third, limited studies focus on the relationship between UAs and university strategic intent and aligning institutions with the entrepreneurial university (Klofsten et al., 2018; Nguyen and Maritz, 2019). This highlights the significance of UAs in Indonesian universities (Maritz et al., 2022a; Hambrick and Lovelace, 2018; Zott and Huy, 2007).

The points mentioned earlier provide insight into current research gaps, thus, highlight the importance of our study. To address the insufficient research, our paper aims to review best practices in UAs on a global scale to provide insight into the positive outcomes of Indonesian UAs. Furthermore, we aim to investigate the integration of UAs and EE within Indonesian universities whilst identifying the strategic intent of HEIs and their recent rise in the creation of UAs. Our research will further contribute to identifying fundamental motives associated with UAs at Indonesian HEIs. Our primary contribution to the body of knowledge on UAs is providing the first multi-method study on such programmes offered globally and incorporating an innovative algorithmic method to analyze the relationship between university entrepreneurship strategic intent and UA offerings. These ground-breaking insights provide the initial path in embedding UA and EE in improving the entrepreneurial university and entrepreneurial ecosystems.

Based on the above discussions, we investigated the following research questions:

Question 1 – Are UAs in Indonesia consistently represented across all the universities?
Question 2 – Do UAs appropriately link EE into their established programmes?
Question 3 – Is EE incorporated into UAs' strategic intent?

Our paper begins with a thorough review of current and leading literature, focusing on integrating entrepreneurial ecosystems, entrepreneurial universities, EE, and UAs. We then give a comparison and extension on the study conducted by Maritz et al. (2022), which highlights the status of EE in Australia and then a related EE study within Indonesia (Maritz et al., 2022a). Our study provides a quantitative approach to view the distribution of UAs, followed by qualitative narratives from accelerators with best practices. With our discussion, we perform an emergent inquiry approach to investigate the three tendencies mentioned previously and explain the advantages and disadvantages of UAs. Furthermore, we discuss the results of our findings in the discussion and conclusion section. Lastly, we discuss implications for achieving successful UAs, suggestions to improve entrepreneurial ecosystems, and further research on this crucial yet limited body of knowledge.

THEORETICAL REVIEW

This study contributes to the existing stream of research on university accelerators and provides a new perspective by focusing on the Indonesian university accelerator context. In this section, we first review the emerging research on entrepreneurial ecosystems. We next discuss the previous research on the

entrepreneurial university. We finally examine the body of literature on entrepreneurship education and university accelerators.

Entrepreneurial Ecosystems and the Entrepreneurial University

Research on entrepreneurial ecosystems has shifted from an entrepreneur-centric perspective to a multiple-stakeholder ecosystem. This transformation has created (and extended) substantial value for a more diverse community and environment willing to play a role in various entrepreneurship processes (Stam and van de Ven, 2019). Through integrating different disciplines of research and theoretical lenses, scholars have conducted a wide range of interdisciplinary research focused on entrepreneurial management, sustainable development (Corazza and Saluto, 2020; Kang et al., 2021), innovation and economic development (Hevner and Gregor, 2020; Wurth et al., 2021). Resulted of the shift in entrepreneurship research over the past decades, there has been an increasing interest among scholars, entrepreneurs, innovation managers, and even policymakers to unpack the complexity and business value of entrepreneurial ecosystems (Maroufkhani et al., 2018; Wurth et al., 2021). The emerging concept of entrepreneurial ecosystems is described as "a set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship within a particular territory" (Stam, 2015, p. 1765). Our in-depth literature survey revealed that a majority of prior studies on entrepreneurial ecosystems are focused on conventional topics and standard entrepreneurial components, such as relational organizations (Spigel, 2017), economic policy (Isenberg, 2011), systems perspective (Stam and van de Ven, 2019), functional characteristics (Kang et al., 2021), contextualization (Acs et al., 2017; Cao and Shi, 2021; Wurth et al., 2021), and dynamic capabilities (Shwetzer et al., 2019; Mack and Mayer, 2016; Tabas et al., 2022).

As mentioned earlier, their critical reviews of studies provided a deep understanding of the entrepreneurial ecosystems' critical components and contextual elements. They also identify and describe the social entrepreneurial actors and their roles within the respective entrepreneurial ecosystems. These ecosystems consist of several binding domains, such as markets, policy, human capital (Isenberg, 2011), social, cultural, and material attributes (Spigel, 2017), and institutional procedures designed for resource arrangement (Stam and van de Ven, 2019). In line with prior studies, research by Stam (2018) revealed that in addition to the typical actors and the organizational structures, there exist some other factors (e.g., institutions, physical infrastructure, entrepreneurship culture, social networks, supply and demand, leadership, finance, knowledge sharing, and intermediate services) that influence the establishment and performance of the entrepreneurial ecosystems. Besides creating substantial synergy, integrating different elements of the entrepreneurial ecosystems is complicated and requires some unique trajectories (Isenberg, 2011). In particular, sustainable ecosystems are expected to connect and integrate actors and systems and create value. However, those actors and systems cannot entirely replace each other and may even have conflicting objectives (Spigel, 2017; Acs et al., 2014).

Universities have been recognized as crucial strategic actors in entrepreneurial ecosystems. They are widely accepted as an essential resource for entrepreneurial

talents and knowledge creation (Clark et al., 2020; Mazzarol, 2014). Universities contribute to the development of communities and economic development via accelerators and incubators, as well as offering entrepreneurship courses, and bridge the gaps between other actors of entrepreneurial ecosystems (Lahikainen et al., 2019). As facilitators for developing entrepreneurial ecosystems, universities also play a role in socioeconomic development (Wadee and Padayachee, 2017). Their functions and scope of work have been expanded from teaching and researching to enhancing entrepreneurship orientation in the broader community (Smith et al., 2020; Audretsch and Belitski, 2021b). Entrepreneurship education at the university level advocates a healthy, sustainable entrepreneurial ecosystem by focusing on innovative initiatives, such as structured schemes for student startups, knowledge-sharing platforms, development of entrepreneurship programmes, and enhancement of students' entrepreneurial competency (BEEHIVE, 2017).

The concept of entrepreneurial university lacks an accepted universal definition. In this paper, we refer entrepreneurial university as an institution that "consists of direct and indirect mechanisms to link academia to business", which is achieved mainly through entrepreneurship education and technology transfer (Guenther and Wagner, 2008, p. 403). Entrepreneurship education seeks to sharpen students' knowledge and skills to promote future entrepreneurial practices (Maritz and Brown, 2013; Maritz, 2017). They also transfer technologies, commonly facilitated via university science parks, incubators, and accelerators (Guenther and Wagner, 2008). Accelerators can occur within a specific organizational context or in different industries. It makes narrow or extended sets of interventions that leverage mechanisms for enhanced learning, innovation, and growth to achieve organizational goals (Crişan et al., 2021). In the following subsection, we discuss the recent trends and developments in entrepreneurship education integration within broader entrepreneurial ecosystems.

Entrepreneurship Education

Given the rapid changes in the entrepreneurship landscape, transformation and disruption of EE to promote entrepreneurship ecosystems are inevitable. Traditional EE delivery methods need transformation and alignment with future trends. The changes are expected to transform different areas of EE delivery, ranging from pedagogy and andragogy to measurement and evaluation, leading to the development of enhanced research and educational programmes that can cultivate entrepreneurial mindsets in future generations and innovative market leaders (Bodolica and Spraggon, 2021; Loi and Fayolle, 2021). There is consensus on the idea that EE should be delivered differently to various populations. An EE must adopt a contextualization approach to enhance knowledge dissemination and training for specialized groups (e.g., the disadvantaged, indigenous, and age-specific cohorts) (Maritz and Foley, 2018). In this section, we briefly reflect on the latest EE trends and focus on contextualization within the boundary of the present study.

Various definitions of EE are cantered on concepts such as entrepreneurial mindset, value co-creation, experiential pedagogy, engagement, and mechanisms of

entrepreneurship education programmes (Looi and Maritz, 2021; Nicotra et al., 2021; Maritz, 2017; Fayolle and Gailly, 2008). There is a limited understanding of EE contextualization, education spaces, delivery models, transformation, and dynamic initiatives. For this study, we use the following definition of EE:

> "Contextualized content, experiential methods and initiatives supporting the creation of knowledge, competencies and experiences within entrepreneurial spaces that enable diverse participants to initiate and participate in entrepreneurial value creating processes such as transformation, disruption and startups" (Maritz et al., 2022).

Innovative EE spaces in the university context refer to dedicated physical spaces for entrepreneurship. Some examples of such spaces are student pre-incubators, incubators, accelerators, prototyping labs, and design thinking facilities (Pittaway, 2021). We expand the notion of EE spaces by including physical and remote spaces. It incorporates modes of delivery and dynamic digital platforms that enhance EE (Bodolica and Spraggon, 2021). The EE spaces also embrace market transformation, startups, and EE initiatives in times of uncertainty, such as COVID-19 (Matthews et al., 2021; Maritz et al., 2020). Contextualization of EE spaces includes entrepreneurship engagement and initiatives, such as hackathons, thinktanks, and startup knowledge-sharing events (where entrepreneurs share stories on their successes and failures) (Maritz et al., 2019; OECD/EU, 2018; Morris et al., 2013). Value creation is indeed the core element of the above-provided EE definition. It goes beyond value creation in products and services by focusing on a unified value creation that benefits all entrepreneurship stakeholders (Loi and Fayolle, 2021; Jones et al., 2020). This further embraces pedagogical enhancements moving from the method and practice of teaching toward self-negotiated practices and self-directed learning (Maritz et al., 2021b; Neck and Corbett, 2018). The collective actions between EE, university spaces, and university accelerators provide value to EE stakeholders, enhance desirable outcomes, and facilitate efficient resource allocation (Maritz et al., 2022; York et al., 2016; Pittaway et al., 2019). A recent study on EE prevalence within Indonesia provides a further inference, providing context and applicable neoteric updates within entrepreneurial ecosystems (Maritz et al., 2022a). In the following subsection, we discuss the integration of university accelerators within broader entrepreneurial ecosystems, emphasizing the interface between university accelerators and university EE programmes.

University Accelerators

Accelerators facilitate, expedite, and catalyze innovation and entrepreneurship (Maritz et al., 2022; Cohen et al., 2019; Kennett et al., 2020). University-based accelerators (hereafter university accelerators) enable increased connectivity with the industry and provide resource support for various entrepreneurial practices (Goswami et al., 2018; Wurth et al., 2021). Accelerators were initially established to facilitate transferring lab-based ideas into minimum viable products and promoting commercialization (Cohen et al., 2019). Recently, university accelerators have shifted their focus to structured EE programmes, aiming to enhance the overall entrepreneurial ecosystem (Crişan et al., 2021). In a relevant study, Maritz et al. (2019)

found that growth in the higher education industry is closely associated with the increase in university accelerators. In other words, university accelerators can integrate with and contribute to the entrepreneurial ecosystems through structured EE pathways. Furthermore, investing in university accelerators can produce positive outcomes for student entrepreneurship (Metcalf et al., 2020) and contribute substantial value to the entrepreneurial ecosystem. University accelerators often involve multiple stakeholders, each with unique individual and institutional goals (York et al., 2016). Understanding university accelerators, the stakeholders' views, and the functionality of associated value creation networks help education institutions to better contribute to the entrepreneurial ecosystems.

Despite the rapid growth of university accelerators, there is a lack of consensus on how they should be operationalized. Understanding organizational goals may help identify the best practices for university accelerators. For instance, university accelerators may consider two common objectives, namely 1) diffusing new ideas into the market; and 2) developing students' entrepreneurship skills (Cohen et al., 2019). These goals are aligned with corporate accelerators and the skill development of students. Adopting and pursuing such goals motivates and enables the university accelerators to address entrepreneurial challenges that future enterprises may face, e.g., opportunities exploration, business trends analysis, and market information processing. While these practices enrich our understanding of what goals university accelerators should strive for, there remains a certain degree of scepticism and uncertainty about how university accelerators impact the entrepreneurial ecosystem. In other words, the educational support that university accelerators should provide remains unclear. This ambiguity is also accompanied by various EE outcomes associated with university accelerators (Maritz et al., 2022).

Accelerator systems are contextual, and institutions may focus on exclusive entrepreneurial education, programmes, or specific structures. For instance, in the Australian context, some university accelerators are mainly rooted in structured education programmes like other standard academic courses (Maritz et al., 2022). In other words, such programmes' educational aspects are still considered the key features of university accelerators (Cohen et al., 2019; Metcalf et al., 2020). Like the academic environment, this includes training programmes, workshops, and mentorship (Belitski and Heron, 2017). Educational programmes and accelerators may have different priorities; however, some programmes may focus more on pre-accelerators and incubators. Such programmes may include activities, such as engaging with entrepreneurs at an initial stage, business ideas assessing and testing, prototyping, and providing education or mentoring programmes to reach a minimum viable product. At the same time, other accelerators may pursue other priorities, such as offering resource support to mid-level startups with an essential viable product or service. This kind of support offered by an accelerator programme can be extended to providing shared facilities and specialist advice. Hence, depending on the context, accelerator programmes with different priorities may take different approaches to foster entrepreneurial ecosystems.

Being recognized as a critical component of entrepreneurial ecosystems (Cohen et al., 2019; Metcalf et al., 2020; Breznitz and Zhang, 2019), university accelerators play

a crucial role in EE. Although this relationship has been reported in some prior studies (Bliemel et al., 2019; Maritz et al., 2019; Miles et al., 2017), the EE literature overlooked the importance of such a phenomenon in developing countries, such as Indonesia. Our survey revealed that only a few scholars had provided insights on business accelerators and incubators within this context. For instance, Luik et al. (2021) investigated a startup accelerator in Jakarta. They illustrated snapshots of 'seed accelerator', 'seed funding', and the underlying mechanism of organizational principles for the startup accelerator.

Similarly, conducting multiple case studies, Brillyanes and Samira (2019) identified design elements of different Indonesian startup accelerators and practices. They found that the studied startup accelerators are similar in programmes, lean startup, product development, marketing, and finance. However, it has been shown that only two accelerators provide startups with shared offices or spaces for co-working. Taking a different approach, Gozali et al. (2018) adopted a pilot mixed-method study and attempted to construct a framework for a successful business incubator in Indonesian public universities. Their initial model considered several factors, such as entry criteria (e.g., ability to create jobs, firm age), incubators governance, funding, and support. After examination of business incubators in Indonesian public universities, Gozali et al. (2020) concluded that factors such as 'entry criteria' and 'funding and support' are associated with incubator performance. In a more recent study, Wahyuni and Noviaristanti (2022) performed a pilot study in the context of Indonesian business incubators. They found that most incubators were located on Java Island. This little geographical concentration has led to a situation where entrepreneurs outside this location feel excluded and has become hesitant to join those incubation programmes. It is also shown that Indonesian entrepreneurs prefer private ownership to public-private collaborations.

METHODOLOGY

Our research adopts an entrepreneurial ecosystem approach, examining the interactions and interdependencies between UAs, EE, and entrepreneurial universities (Stam, 2018; Spigel, 2017). We supplement our neoteric literature review with an iterative definition of EE to provide an evolving enquiry perspective in nascent research on UAs, entrepreneurial ecosystems, and entrepreneurial universities. Previous research has identified various accelerators outside the traditional scopes, aiming to develop regional and university-based entrepreneurial ecosystems. Aside from the resource-based view, we found that open innovation and social capital theory are increasingly complementary frameworks (Hausberg and Korreck, 2021). Thus, we apply these premises to guide the current study.

To our knowledge, this is the first multi-method investigation of UAs' status in Indonesia. It offers a preliminary literature review, quantitative analysis of the UAs, and traditional inferences on their identified best practices. Furthermore, assessing the integration of university strategic intents on entrepreneurship, startups, EE and UAs using emergent enquiry is a first-of-its-kind study within the Indonesian context. Our design is a four-stage approach to address the three research gaps identified in this

study while extending the previous research on the Australian EE status by Maritz et al. (2022). Figure 1 summarises our research design.

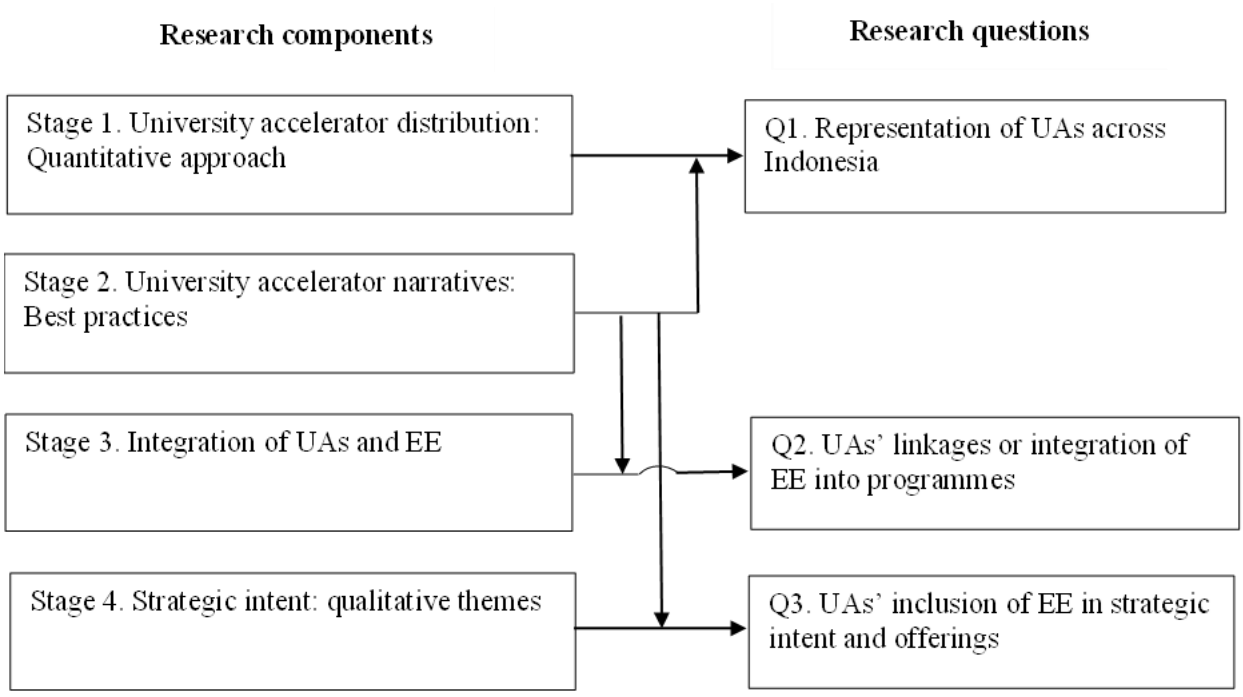

Figure 1. Research design

Our study's quantitative section includes the collection of publicly accessible data on Indonesian university websites for the period between 10th May 2022 to 15th August 2022. Additionally, we provided discussions and obtained clarifications and inferences from 55 university accelerator personnel, including desk research, informal discussions at industry meetings, collaborative events, and live and virtual academic events. It should be noted that no specific consent was confirmed from the respondents. Therefore, they have remained anonymous. Nonetheless, the data provided information for symbolic and substantive management actions (Hambrick and Lovelace, 2018; Zott and Huy, 2007). In addition to the data collection, we created a compound ranking of the UA distribution, as shown in Appendix 1. Indonesian *University Accelerator Distribution*. We then provide a summary of the Indonesian HEIs in Table 1. Summary of universities in Indonesia. Lastly, 71 Indonesian universities provided public information on their websites' strategic intents (Table 4), objectives, offerings, and significant activities. The overview of the results from our research design is as follows.

RESULT AND DISCUSSION

Using the four-stage approach, we make inferences about the interactions and interdependencies between UAs, EE, and entrepreneurial universities. This provides insights into the status of UAs in Indonesia and helps us contribute to the relevant body of knowledge.

Stage 1: University Accelerator Distribution: A Quantitative Approach

In this stage, we identified the initial coded distribution of UAs in Indonesia using content analysis from our research design, as shown in Appendix 1. *Indonesian University Accelerator Distribution*. In descending order, Appendix 1. Indonesian *University Accelerator Distribution* displays the distribution of UAs for each university whilst providing the HEI's name and the UA programme implemented.

Appendix 1. Indonesian *University Accelerator Distribution* shows a slight increase in Indonesian UAs, particularly over the past five years. This is in line with the number of Indonesian entrepreneurs, which only account for 3.4 per cent of the total population. This UA data is obtained by shortlisting 3115 universities in Indonesia to 831 nationally accredited universities. Of the shortlisted universities, only 111 provide EE programmes. Of these 111 universities, only 55 have UAs in place, Table 1 shows the distribution of Indonesian Higher Education Institutions, which addressing the first research question. Our findings in this section suggest that UAs are not consistently represented across universities in Indonesia.

Table 1. Summary of universities in Indonesia

The total number of universities	3115
Top-ranked universities	392
Universities with EE programmes	111
Universities with UAs	55

Stage 2: University Accelerator Narratives: Best Practices

This perspective on emergent inquiry included narratives from a few of the leading UA programmes, as in Appendix 1. Indonesian *University Accelerator Distribution*. These UAs are not necessarily the best or most prolific at Indonesian universities, but they provide significant evidence of best-practice engagement in entrepreneurship.

The first narrative is from Institut Teknologi Bandung, with its three established UAs. The first is the Institute for Innovation and Entrepreneurship Development (LPIK) ITB, founded in 2010, which aims to encourage venture creation and accelerate new businesses by leveraging product innovation. The establishment of ITB's UAs was a response to the need to commercialize research results by faculty members and students to impact society directly. The second UA is the Greater Hub of SBM-ITB, founded in 2016. It carries out various incubation programmes for ITB students during their business field trips, including validations for their customers, product, business model, and market ideas and proposals. The UA often holds seminars and knowledge-sharing gatherings with business experts. The third UA is Koperasi Kesejahteraan Mahasisa (Kokesma) ITB. Founded in 1984, Kokesma is a forum that helps to realize aspirations, creativity, and idealism in economics and organizations and fosters a collaborative culture among students. This UA provides

education focusing on managerial work and business unit control, providing an opportunity for its members to interact with corporations directly, as well as seminars and workshops. Active members of Kokesma ITB are divided into six groups: management, business, human resource organizational development (PMSDA), secretariat, finance, and external relations, such as intermediaries connecting Kokesma ITB with other institutions.

The university that is ranked second based on UAs is Universitas Prasetya Mulya. The two established UAs are Business Incubator STEM Prasmul and Business Venture SBE Prasmul. The primary purpose of the former is to develop businesses through six stages: 1) business experience, checklist, and screening; 2) revenue stream analysis, pipeline, and expenses; 3) re-engineering and optimization of business model and process; 4) proof of concept, training, and socialization, 5) implementation and duplication, and 6) graduation, launching, and media/press release. Meanwhile, the latter supports the students' and alumni's entrepreneurial journeys and activities through a business incubation platform that accelerates startups, showcases, and promotes the potential of investors and partners, and encourages business creation. The faculty members oversee the programmes in both UAs by facilitating the design, development, sustainability maintenance, and expansion to the local and global markets. After the students graduate, they can continue to learn and build their knowledge on the relevant subjects through discussion forums, get-togethers, and entrepreneurial retreat programmes.

The subsequent university with rigorous UA activities is Universitas Brawijaya, Malang. The UA is named Badan Inovasi dan Inkubator Wirausaha Universitas Brawijaya (BIIW-UB) and was established in 2007. It aims to assist businesses by providing consultation, advice on business plans or feasibility studies, assistance in establishing business legality (i.e., licensing), product standardization and certification, intellectual property rights registration, mentoring, product testing, product and business promotion, training, and market research. The UA helps provide additional access to capital from financial, non-financial, and government institutions. Moreover, the UA delivers adequate business infrastructure and networking facilities and access to potential collaborating partners and investors.

An additional university in Malang with a UA is Malang Islamic University. The Centre for Entrepreneurship Development and Business Incubator, Malang Islamic University (P2KIB UNISMA), was established in 2010. It has a group called TARGETS INBIS, consisting of potential new businesses, currently developing businesses, a microfinance institution, and a manager overseeing the facilities, i.e., laboratories, study centres, studios, and workshops. It also consists of its academic community, employees and alumni, and non-academic UA managers. The services provided include business feasibility studies, preparation of business plans, investment facilitation, training and coaching on independent business development, improving business networks, monitoring and evaluation, and supporting facilities and infrastructure. The main goal is to develop an entrepreneurial culture for students, alumni, lecturers, and university employees.

The Universitas Muhammadiyah Jakarta (UMJ) has established a UA called the Centre for Entrepreneurship and UKM Studies (PS. KUMK), founded in 2017. This

UA aims to develop students' entrepreneurial spirit, nurture and develop skills, and monitor and evaluate their progress. Programmes that have been carried out include student business competitions, BNSP Entrepreneurship Companion Certification, entrepreneurship development programmes for students, seminars, and curation of UMJ student business products.

Multimedia Nusantara University's UA is Skystar Ventures, established in 2013. This UA holds a six-month entrepreneurship programme targeting early-stage startups in various sectors. Its goal is to support entrepreneurs, giving them practical education and guidance from the idea validation stage and MVP development to the business validation stage. Skystar Ventures helps businesses leverage KGG's diverse network of distribution channels to strategically market their products and services and quickly build a customer base. Additionally, Skystar Ventures helps startups develop by providing a supportive work environment, giving them access to industry professionals and experts that conduct regular knowledge-sharing sessions in this UA—furthermore, Skystar Ventures partners with long-term strategic investors to help businesses meet their capital needs.

The UA of Universitas Pembangunan Nasional (UPN) Veteran, East Java, is named Technopark Business Incubator, established in 2014. This UA offers pre-start-up and startup programmes to Technology-Based Startup Companies (PPBT) tenants. Also, it helps prepare its tenants to become profitable and sustainable companies. Startups that have passed the selection process in the pre-start-up programme will be awarded funding ranging from 15-20 million Rupiah and 25-30 million Rupiah in the startup programme.

Universitas Stikubank, Semarang, Central Java, also has a UA known as Semai Bisnis Sukses (SBS) Incubator, established in 2014. It provides various programmes for students' businesses, including mentoring, training, monitoring and evaluation, funding, and socialization. SBS Incubator assists students with training, technology, capital, legality, and market access.

In North Sumatra, Universitas Sumatera Utara established its UA in 1997. The activities include mapping out potential businesses opportunities, an incubation programme based on the Incubation Activity Implementation Model from the CIKAL Business and Technology Incubator Centre, carrying out Pre-Incubation aimed to attract prospective tenants that will later be potential participants of the Technology-Based Startup Company (PPBT) programme. It also monitors tenants or startups in the PPBT Programme. This initiative is part of the university's rectorate contract with the Ministry of Research, Technology, and Higher Education.

Finally, Universitas Ciputra, Surabaya, East Java, established UC Ventures in 2018. This UA is equipped with a temporary launching pad for new digital businesses in the hope that the participants will expand their network of accelerators and investors upon graduation. UC Ventures has three main pillars: (1) the UC Ventures Community, (2) the UC Ventures Training and Incubation Programme, and (3) the UC Ventures Facility Centre. As of 11th November 2021, one part of the existing facility centres, Ventures Lab, started to combine the benefits of virtual office and co-working space, empowering the collaboration of ideas between students and alumni to produce innovations in a conducive environment. Selected students and alumni from the pitching stage will be entitled to this facility for free, and the performance-based

contract will be re-evaluated every six months. Selected startups can use the Ventures Lab as their working office to send and receive correspondences from potential investors and invite partners and teammates to conduct meetings.

Stage 3: Integration of UAs And EE.

This stage of the study is a replication and extension of the research by Maritz et al. (2022 and 2022a), seeking to integrate EE and UAs. Past research has shown that the primary function of UAs is to provide EE and entrepreneurial learning and develop student entrepreneurs (Metcalf et al., 2020; Kennett et al., 2020). This is different from the primary goal of private accelerators, which primarily aims to achieve successful business launches and return on investment (Cohen et al., 2019). The novelty of this research lies in examining the Indonesian context, which has not been conducted in past studies as they focused on viewing UA on a global scale.

Integrating stages one and two of this research, along with Maritz et al. (2022), revealed incongruence between EE outcomes within Indonesian UAs, as shown in Indonesian university structures. Since most UAs are embedded in departments distinct from EE, UAs are often perceived as engagement programmes rather than achieving academic alignment. Moreover, UA leadership rarely aligns with educational outcomes in university faculties, schools, and departments.

Table shows the correlation between UAs and EE at the top ten universities in Indonesia, listed according to the number of established UAs. The UA column displays the number of UAs for each university (see Appendix 1), while the EE column displays their raw scores from the study by Maritz et al. (2022a). Figures in brackets represent the order ranking from the 2022a EE study; for instance, the (1) ranking attributed to Institute Teknologi Bandung indicates number one in EE, whereas the (2) ranking attributed to Universitas Prasetya Mulya University indicates number two in EE out of 55 universities.

In 2013, the Indonesian government issued Presidential Regulation No. 27 of 2013 (*Peraturan Presiden Nomor 27 Tahun 2013*) to provide a regulatory base for entrepreneurial/business activities at UAs. The business UA programmes include coaching, mentoring, and business development activities, adjusted according to the needs of the participants, i.e., tenants. The Third Bill of 2014 (*Undang-Undang No. 3 tahun 2014*) categorized the entrepreneurial sector as part of the human resources industry. The Presidential Regulation No. 27 of 2013 was followed by the establishment of the Industrial Training Centre (*Balai Diklat Industri*). With the Regulation of the Ministry of Industry of the Republic of Indonesia (*Peraturan Menteri Perindustrian RI*) number 40/M-IND/PER/5/2014, entrepreneurship is intended to create and develop new businesses with highly competitive advantages and economic values and competent specialists in their respective fields. In addition, several universities in Indonesia established their own business UAs in response to the presidential regulations.

Business incubation in Indonesia is carried out in three phases. The first phase is the Pre-Incubation Phase, which is the selection process for prospective tenants through the business model canvas and administrative selection, as well as

presentations of the business plan and business roadmap by each prospective tenant. The second phase is the Incubation Phase, which assists tenants through technical and management training, business legality, market expansion, and other business development activities. They also support product validation, market testing, and product launching. The final phase is the Post-Incubation Phase, which is the process of releasing tenants considered to be at the independent and developing stage. This stage also aims to monitor and evaluate the tenants' success during incubation. In summary, the role of UAs in the development of entrepreneurs include (1) access and capital assistance, (2) gateway to networks that can assist with business development, (3) development of marketing strategy, (4) accounting or financial management assistance, (5) mentoring and business training, (6) corporate management and culture, (7) introduction and enforcement of business ethics, (8) provision of general information about the relevant business industry, and (9) assistance with regulatory matters.

A business incubation aims to identify and explore opportunities for success in creating new businesses (Al-Mubaraki and Busler, 2011). Al-Mubaraki and Busler (2011) explain that a UA is an environment where new business ideas can be developed along with sufficient support and resources. UAs are crucial in supporting the new generation of competitive businesses and training future entrepreneurs. Abduh, D'Souza, and Burley (2007) define UA as a pool of strengths collected and adjusted to facilitate the creation of new firms. UAs also add value to firms and entrepreneurs by conducting a comprehensive and detailed evaluation of their incubation programme.

Entrepreneurial activities differ across countries, regions, and cities. Various factors include behaviour, motivation, and knowledge of the individual entrepreneurship condition. Moreover, it also depends on opportunities and resources available in the surrounding environment (Stathopoloulous et al., 2004). Universities, independent private sectors, and even governments have developed various business incubation models to provide an ideal environment for entrepreneurs to train and develop, making entrepreneurship more sustainable.

Some degrees of alignment between UAs and EE exist in Indonesian universities. However, the inquiry approach in this study highlights inconsistency in the top ten universities with established UA (s). Our findings show that the notion of UA in Indonesia is not predominantly education-focused (Metcalf et al., 2020). It aligns more closely with private accelerators, focusing mainly on startup value creation (Cohen et al., 2019). We argue that the Indonesian entrepreneurial ecosystem varies from those of Australia, the US, and the OECD countries, where most UA research has thus far been based (see, for example, Breznitz and Zhang, 2019; Cohen et al., 2019; Spigel, 2017; Wurth et al., 2021). Hence, we conclude that there is a need for specific EE integration, funding, government intervention, and a general EE ecosystem (Belitski and Heron, 2017; Maritz and Foley, 2018).

Similar patterns are revealed when looking into the remainder of Indonesian universities. The integration of UA and EE is limited and inconsistent, with some prominent universities implying alignment to entrepreneurship. However, there is a lack of evidence in what is offered through UAs and EE. Although the top six universities (Table) portray substantive management action towards UA and EE, this

proportion is insignificant. The bottom 72 per cent of universities (Appendix 1) may be deemed to represent symbolic management actions toward UA and EE integration, which are not aligned with global best practices of EE delivery (Breznitz and Zhang, 2019; Hambrick and Lovelace, 2018; Zott and Huy, 2007).

In addressing our study's second research question, based on the inconsistent alignment of EE and UAs (except for a few accelerators), our findings demonstrate that the integration of EE into UA programmes has not been implemented effectively.

Table 2. Correlation between UAs and EE at the top ten universities in Indonesia

HEI Name	No. of UA	EE Score	University Ranking	Comment
Institut Teknologi Bandung	3	40	(14)	However, the leader in UAs, not EE, has the highest ranking among HEIs with UAs in Indonesia.
Universitas Prasetiya Mulya	2	11	(29)	Not significant among UAs and EE.
Universitas Bina Nusantara	1	123	(1)	Significant UA and EE.
Universitas Tidar Magelang	1	97	(2)	Significant UA and EE.
Universitas Amikom Yogyakarta	1	95	(3)	Significant UA and EE.
Universitas Ciputra	1	85	(4)	Significant UA and EE.
Universitas Mercu Buana	1	63	(5)	Significant UA and EE.
Universitas Negeri Makassar	1	60	(6)	Significant UA and EE.
Universitas Mercu Buana Yogyakarta	1	55	(7)	Good UA and good EE.
Universitas Muria Kudus	1	51	(8)	Good UA and good EE.

Stage 4: Strategic Intent

The data in Appendix 2 demonstrates the research gap, in which we found that not all universities with entrepreneurial spirit have an established UA, and vice versa. This indicates that universities may claim to have a business UA but with no entrepreneurial spirit-based visions or missions. There are 33 universities in Indonesia with spirit-based entrepreneurship. However, eight of these universities do not have an established UA. Appendix 4 also shows that there are 30 universities without entrepreneurial spirit-based visions and missions. However, they have found their own UA (s). The strategic intent of Indonesian Higher Education Institutions is further highlighted in Maritz et al. (2022a).

Recent studies have provided additional inference regarding the alignment of UAs with universities' strategic intent (Maritz et al., 202a; Maritz et al., 2021a), supporting the contrasting interplay between substantive and symbolic management practices. In response to the third research question, our findings in this section suggest that EE has not been communicated clearly in the strategic intents and activities of UAs due to the overall symbolic management actions.

Our initial study and results have provided fundamental insights into the integration (lack of) between UAs, EE, and the strategic intent of universities. They give foundational guidelines and preliminary understanding for educators, researchers, practitioners, and policymakers who pursue further exploration and improvement of the impact of UAs in Indonesia. We have explored the three identified research gaps to provide the context necessary for further research. These include identifying best practices within UAs which positively impact and align with entrepreneurial ecosystems, the entrepreneurial university, and EE.

Within the Indonesian context, we observed a significant increase in the number of established UAs over the past few years, although with a scattered distribution. The top 10 universities account for 59% of all UAs. The presence of UAs was dominant in Institut Tehnologi Bandung and Prasetya Mulya, as there was skewed distribution present on the Institut Tehnologi Bandung and Prasetya Mulya. Narratives collected from the leading UAs presented examples and insight into best-entrepreneurship engagement, whilst most Indonesian UAs demonstrated inconsistent integration between outcomes and EE. Our findings contradict global research, which suggests that UAs are mainly education-focused, thus, emphasizing symbolic management action about the UAs in Indonesian universities. We provide further evidence through the investigation of the strategic intents of these universities, identifying a lack of integration between UA programmes and their mission.

FURTHER STUDY

We acknowledge this methodology's quantitative nature and suggest incorporating a more substantial qualitative insight in future research. Our analyses also exclude international collaborations, boot camps, and resident entrepreneurs due to being outside the UA scope. Additionally, we conclude that research on university startup education is limited, demonstrating a need to understand UAs' impact further. There is a need for a measurable approach to achieve this. This can be achieved through a scale to measure success and identify which practices provide the best outcomes and how they can be implemented across all UAs in Indonesia. Therefore, there is a need for further empirical and thematic research to identify the current practices of these accelerators and their level of impact. Since UAs are an integral part of an entrepreneurial ecosystem, further analysis can assist in developing standardized UA programmes in Indonesia to improve the impact and reduce the variance gap in participants in such programmes.

Despite our study's findings and limitations, we realize that our results demonstrate insights into the status of UAs in Indonesia only at a point in time through available online resources such as university websites and documents. We

suggest further research to examine and measure the continuing impact and integration of UAs, EE, entrepreneurial ecosystems, and related university strategic intent activities. Further insight should also focus more closely on student entrepreneurship and not just on startups.

References

Abduh, M., C. D'Souza, A. Quazi, and H.T. Burley. (2007). Building Futures or Stealing Secrets?: Entrepreneurial Cooperation and Conflict within Business Incubators. Managing Service Quality, 17 (1), pp. 74 – 91.

Acs, Z.J., Autio, E. and Szerb, L. (2014), "National systems of entrepreneurship: Measurement issues and policy implications", *Research Policy,* Vol. 43 No. 3, pp. 476-494.

Acs, Z.J., Stam, E., Audretsch, DB and O'Connor, A. (2017), "The lineages of the entrepreneurial ecosystem approach", *Small Business Economics,* Vol. 49 No. 1, pp. 1-10.

Al-Mubaraki, Hanadi Mubarak and Busler, Michael. (2011). Entrepreneurship Spirit of Asia Business Incubator.

Audretsch, DB and Belitski, M. (2021a), "A strategic alignment framework for the entrepreneurial university", *Industry and Innovation*, pp. 1-25.

Audretsch, DB and Belitski, M. (2021b), "Three-ring entrepreneurial university: in search of a new business model", *Studies in Higher Education,* Vol. 46 No. 5, pp. 977-987.

BEEHIVE (2017), "Towards the Entrepreneurial University: National Benchmarking Report for Indonesia, Erasmus + Programme of the European Union and BEEHIVE, In (pp. 1-16). *Project 573936-EPP-1-2016.*

Belitski, M. and Heron, K. (2017), "Expanding entrepreneurship education ecosystems", *Journal of Management Development,* Vol. 36 No. 2, pp. 163-177.

Bergman,k B. and McMullen, J. (2021). "Helping entrepreneurs help themselves: A review and relational research agenda on entrepreneurial support organizations", *Entrepreneurship Theory and Practice,* 00(0), pp. 1-41.

Bliemel, M., de Klerk, S., Flores, R. and Miles, M.P. (2018), "Emergence of Accelerators and Accelerator Policy: The Case of Australia", in Wright, M. and Drori, I. (Eds.), *Accelerators: Successful Venture Creation and Growth*, Edward Elgar, Cheltenham, UK, pp. 162-187.

Bliemel, M., Flores, R., De Klerk, S. and Miles, M.P. (2019), "Accelerators as start-up infrastructure for entrepreneurial clusters", *Entrepreneurship & Regional Development,* Vol. 31 No. 1-2, pp. 133-149.

Bodolica, V. and Spraggon, M. (2021), "Incubating innovation in university settings: Building entrepreneurial mindsets in the future generation of innovative emerging market leaders", *Education+ Training,* Vol. 63 No. 4, pp. 613-631.

Breznitz, S.M. and Zhang, Q. (2019), "Fostering the growth of student startups from university accelerators: An entrepreneurial ecosystem perspective", *Industrial and Corporate Change,* Vol. 28 No. 4, pp. 855-873.

Brillyanes, S. and Samira, B.A. (2019) "Building Startups: The Design Elements of Startup Accelerators in Indonesia". *Eurasia: Economics & Business*, Vol. 8 No. 26, pp.2019-08.

Corazza, L., and Saluto, P. (2020), "Universities and multistakeholder engagement for sustainable development: A research and technology perspective", IEEE Transactions on Engineering Management, Vol. 68, No. 4, pp. 1173-1178.

Cao, Z. and Shi, X. (2021), "A systematic literature review of entrepreneurial ecosystems in advanced and emerging economies", *Small Business Economics,* Vol. 57 No. 1, pp. 75-110.

Clark, D.N., Reboud, S., Toutain, O., Ballereau, V. and Mazzarol, T. (2020), "Entrepreneurial education: An entrepreneurial ecosystem approach", *Journal of Management & Organization*, pp. 1-21.

Cohen, S., Fehder, D.C., Hochberg, Y.V. and Murray, F. (2019), "The design of startup accelerators", *Research Policy,* Vol. 48 No. 7, pp. 1781-1797.

Crişan, E.L., Salanţă, I.I., Beleiu, I.N., Bordean, O.N. and Bunduchi, R. (2021), "A systematic literature review on accelerators", *The Journal of Technology Transfer,* Vol. 46 No. 1, pp. 62-89.

Davidsson, P., Grégoire, D.A. and Lex, M. (2021), "Venture Idea Assessment (VIA): Development of a needed concept, measure, and research agenda", *Journal of Business Venturing,* Vol. 36 No. 5, pp. 106130.

De Waal, GA and Knott, P. (2013), "Innovation tool adoption and adaptation in small technology-based firms", *International Journal of Innovation Management,* Vol. 17 No. 03, pp. 1340012.

Eager, B. and Cook, E. (2020), "Micro-credentialing of entrepreneurship education in a practice-based undergraduate engineering context", *Entrepreneurship Education and Pedagogy,* Vol. 3 No. 4, pp. 352-63.

Fayolle, A. and Gailly, B. (2008), "From craft to science: Teaching models and learning processes in entrepreneurship education", *Journal of European Industrial Training,* Vol. 32 No. 7, pp. 569-593.

Fisher, R., Maritz, A. and Lobo, A. (2014), "Evaluating entrepreneurs' perception of success: Development of a measurement scale", *International Journal of Entrepreneurial Behavior & Research,* Vol. 20 No. 5, pp. 478-92.

Fisher, R., Ross, B., LaFerriere, R. and Maritz, A. (2017), "Flipped learning, flipped satisfaction, getting the balance right", *Teaching & Learning Inquiry,* Vol. 5 No. 2, pp. 114-27.

Goswami, K., Mitchell, J.R. and Bhagavatula, S. (2018), "Accelerator expertise: Understanding the intermediary role of accelerators in the development of the B Bangalore entrepreneurial ecosystem", *Strategic Entrepreneurship Journal,* Vol. 12 No. 1, pp. 117-150.

Guenther, J. and Wagner, K. (2008), "Getting out of the Ivory Tower – New perspectives on the entrepreneurial university", *European Journal of International Management,* Vol. 2 No. 4, pp. 400-417.

Gozali, L., Masrom, M., Zagloel, T. Y., Haron, H. N., Garza-Reyes, J. A., Tjahjono, B., ... & Marie, I. A. (2020), "Performance factors for successful business incubators in Indonesian public universities", *International Journal of Technology*, Vol. 11 No. 1, pp. 155-166.

Gozali, L., Masrom, M., Zagloel, T. Y. M., Haron, H. N., and Tjahjadi, E. (2018). "A Framework Toward Successful Business Incubator for Indonesian Public Universities: A Pilot Review", In *Proceedings of the International Conference on Industrial Engineering and Operations Management* (pp. 869-883).

Hambrick, D.C. and Lovelace, J.B. (2018), "The role of executive symbolism in advancing new strategic themes in organizations: A social influence perspective", *Academy of Management Review,* Vol. 43 No. 1, pp. 110-131.

Hausberg, J.P. and Korreck, S. (2021), "Business incubators and accelerators: A co-citation analysis-based, systematic literature review", in Mian, S.A., Klofsten, M. and Lamine, W. (Eds.), *Handbook of Research on Business and Technology Incubation and Acceleration*, Edward Elgar Publishing, Cheltenham, UK.

Hevner, A., & Gregor, S. (2020). Envisioning entrepreneurship and digital innovation through a design science research lens: A matrix approach. Information & Management, 59(3), 1-13.

Isenberg, D. (2011), "The entrepreneurship ecosystem strategy as a new paradigm for economic policy: Principles for cultivating entrepreneurship", in *The Babson entrepreneurship ecosystem project*, Babson College, Babson Park, MA.

Jones, C., Penaluna, K. and Penaluna, A. (2020), "Value creation in entrepreneurial education: Towards a unified approach", *Education+ Training,* Vol. 63 No. 1, pp. 101-113.

Jones, C. (2019a), *How to teach Entrepreneurship,* Edward Elgar Publishing, Cheltenham, UK.

Jones, C. (2019b), "A signature pedagogy for entrepreneurship education", *Journal of Small Business and Enterprise Development,* Vol. 26 No. 2, pp. 243-54.

Kang, Q., Li, H., Cheng, Y. and Kraus, S. (2021), "Entrepreneurial ecosystems: analyzing the status quo", *Knowledge Management Research & Practice,* Vol. 19 No. 1, pp. 8-20.

Kennett, G., Hu, L., Maritz, A. and Sun, H. (2020), "Learning huddles: absorptive capacity and sustainable growth of Chinese incubates", *Journal of Industry-University Collaboration,* Vol. 2 No. 3, pp. 141-159.

Klofsten, M., Fayolle, A., Guerrero, M., Mian, S., Urbano, D. and Wright, M. (2018), "The entrepreneurial university as driver for economic growth and social change - Key strategic challenges", *Technological Forecasting and Social Change*, Vol. 141, pp. 149-158.

Lahikainen, K., Kolhinen, J., Ruskovaara, E. and Pihkala, T. (2019), "Challenges to the development of an entrepreneurial university ecosystem: The case of a Finnish university campus", *Industry and Higher Education,* Vol. 33 No. 2, pp. 96-107.

Loi, M. and Fayolle, A. (2021), "Impact of entrepreneurship education: A review of the past, an overview of the present, and a glimpse of future trends", in Matthews, C.H. and Liguori, E.W. (Eds.), *Annals of Entrepreneurship Education and Pedagogy*, 4 ed., pp. 170-193.

Looi, KH and Maritz, A. (2021), "Government institutions, entrepreneurship education and entrepreneurship education programmes in Malaysia", *Education+ Training,* Vol. 63 No. 2, pp. 271-291.

Luik, J., Hook, J. and Ng, J. (2021), "Framing the startup accelerator through assemblage theory: A case study of an intensive hub in Indonesia", *Convergence*. DOI: 10.1177/13548565211054905.

Mack, E. and Mayer, H. (2016), "The Evolutionary Dynamics of Entrepreneurial Ecosystems", *Urban Studies,* Vol. 53 No. 10, pp. 2118-2133.

Maritz, P.A., Li, A., Utamani, W. and Sumani, Y. (2022a). "The emergence of entrepreneurship education programs in Indonesian Higher Education Institutions. *Entrepreneurship Education*, Springer, DOI: 10.1007/s41959-022-00080-0.

Maritz, P.A., Nguyen, Q., Shrivastava, A. and Ivanov, S. (2022). "University Accelerators and entrepreneurship education in Australia. *Education + Training,* DOI: 10.1108/ET-08-2021-0325.

Maritz, P.A., Nguyen, Q. and Hsieh, H. (2021a). "Exploring the strategic intent and practices of university accelerators: A case of Australia", *Sustainability,* Vol. 13 No. 19, pp. 10769.

Maritz, A. (2017), "Illuminating the black box of entrepreneurship education programmes: Part 2", *Education+ Training,* Vol. 59 No. 5, pp. 471-482.

Maritz, A. and Brown, C.R. (2013), "Illuminating the Black Box of Entrepreneurship Education Programmes", *Education+ Training,* Vol. 55 No. 3, pp. 234-252.

Maritz, A., De Waal, A., Buse, S., Herstatt, C., Lassen, A. and Maclachlan, R. (2014), "Innovation education programmes: toward a conceptual framework", *European Journal of Innovation Management,* Vol. 17 No. 2, pp. 166-82.

Maritz, A. and Foley, D. (2018), "Expanding Australian Indigenous entrepreneurship education ecosystems", *Administrative Sciences,* Vol. 8 No. 2, pp. 20.

Maritz, A., Jones, C., Foley, D., De Klerk, S., Eager, B. and Nguyen, Q.A. (2021b), "Entrepreneurship education in Australia", in Matthews, C.H. and Liguori, E.W. (Eds.), *Annals of Entrepreneurship Education and Pedagogy–2021*, 4 ed., Edward Elgar Publishing, pp. 208-226.

Maritz, A., Nguyen, Q.A. and Bliemel, M. (2019), "Boom or bust? Embedding entrepreneurship in education in Australia", *Education + Training,* Vol. 61 No. 6, pp. 737-55.

Maritz, A., Nguyen, Q.A., Shrivastava, A. and Ivanov, S. (2022), "University accelerators and entrepreneurship education in Australia: substantive and symbolic motives", Education + Training, Vol. ahead-of-print No. ahead-of-print.

Maritz, A., Perenyi, A., de Waal, G. and Buck, C. (2020), "Entrepreneurship as the Unsung Hero during the Current COVID-19 Economic Crisis: Australian Perspectives", *Sustainability,* Vol. 12 No. 11, pp. 4612.

Maroufkhani, P., Wagner, R. and Wan Ismail, K.W. (2018), "Entrepreneurial ecosystems: A systematic review", *Journal of Enterprising Communities: People and Places in the Global Economy,* Vol. 12 No. 4, pp. 545-64.

Mascarenhas, C., Marques, C.S., Galvão, A.R. and Santos, G. (2017), "Entrepreneurial University: Towards a better understanding of past trends and future directions", *Journal of Enterprising Communities: People and Places in the Global Economy,* Vol. 11 No. 03, pp. 316-338.

Mason, C. and Brown, R. (2014), "Entrepreneurial Ecosystems and Growth Oriented Entrepreneurship", *Final Report to OECD, Paris,* Vol. 30 No. 1, pp. 77-102.

Matthews, C.H., Liguori, E.W. and Santos, S.C. (2021), "Preface: entrepreneurship education–what is it we need to know?", in Matthews, C.H. and Liguori, E.W. (Eds.), *Annals of Entrepreneurship Education and Pedagogy*, 4 ed., Edward Elgar Publishing, pp. 208-226.

Mazzarol, T. (2014), "Growing and sustaining entrepreneurial ecosystems: What are they and the role of government policy?" in *SEAANZ White Paper WP01-2014*, Small Enterprise Association of Australia and New Zealand (SEAANZ), pp. 1–17.

Metcalf, L.E., Katona, T.M. and York, J.L. (2020), "University Startup Accelerators: Startup Launchpads or Vehicles for Entrepreneurial Learning?", *Entrepreneurship Education and Pedagogy*, Vol. 0 No. 0, pp. 1-36.

Miles, M.P., de Vries, H., Harrison, G., Bliemel, M., de Klerk, S. and Kasouf, C.J. (2017), "Accelerators as authentic training experiences for nascent entrepreneurs", *Education+ Training,* Vol. 59 No. 7/8, pp. 811-824.

Morris, M.H., Kuratko, D.F. and Cornwall, J.R. (2013), *Entrepreneurship programmes and the modern university,* Edward Elgar Publishing, Cheltenham, UK.

Neck, HM and Corbett, A.C. (2018), "The scholarship of teaching and learning entrepreneurship", *Entrepreneurship Education and Pedagogy,* Vol. 1 No. 1, pp. 8-41.

Nguyen, Q.A. and Maritz, A. (2019), "Entrepreneurship as a strategic imperative in Australian Universities", in *Australian Centre for Entrepreneurship (ACE) Research Exchange Conference 2019*, Brisbane, QUT Business School, pp. 36-37.

Nguyen, Q.A., Maritz, A. and Millemann, J.A. (2021), "Entrepreneurship imperatives in higher education institutions: The case of Australian universities", *Industry and Higher Education,* Vol. ahead-of-print.

Nicotra, M., Del Giudice, M. and Romano, M. (2021), "Fulfilling University third mission: towards an ecosystemic strategy of entrepreneurship education", *Studies in Higher Education,* Vol. 46 No. 5, pp. 1000-1010.

O'Connor, A. (2013), "A conceptual framework for entrepreneurship education policy: Meeting government and economic purposes", *Journal of Business Venturing,* Vol. 28 No. 4, pp. 546-63.

OECD/EU. (2018), "Supporting Entrepreneurship and Innovation in Higher Education in The Netherlands", in *OECD Skills Studies*, OECD Publishing, Paris/EU, Brussels.

Pittaway, L. (2021), "Spaces for entrepreneurship education: A new campus arms race?" in Matthews, C.H. and Liguori, E.W. (Eds.), *Annals of Entrepreneurship Education and Pedagogy*, 4 ed., Edward Elgar Publishing, pp. 44-62.

Pittaway, L., Aissaoui, R., Ferrier, M. and Mass, P. (2019). "University spaces for entrepreneurship: a process model", *International Journal of Entrepreneurial Behaviour & Research,* Vol. 25, No. 5, pp. 91-1021.

Shwetzer, C., Maritz, A. and Nguyen, Q.A. (2019), "Entrepreneurial ecosystems: A holistic and dynamic approach", *Journal of Industry-University Collaboration,* Vol. 1 No. 2, pp. 79-95.

Smith, S., Hamilton, M. and Fabian, K. (2020), "Entrepreneurial drivers, barriers and enablers of computing students: gendered perspectives from an Australian and UK university", *Studies in Higher Education,* Vol. 45 No. 9, pp. 1-14.

Spigel, B. (2017), "The Relational Organization of Entrepreneurial Ecosystems", *Entrepreneurship Theory and Practice,* Vol. 41 No. 1, pp. 49-72.

Spigel, B. and Harrison, R. (2018), "Toward a process theory of entrepreneurial ecosystems", *Strategic Entrepreneurship Journal,* Vol. 12 No. 1, pp. 151-168.

Stam, E. (2015), "Entrepreneurial Ecosystems and Regional Policy: A Sympathetic Critique", *European Planning Studies,* Vol. 23 No. 9, pp. 1759-1769.

Stam, E. (2018), "Measuring entrepreneurial ecosystems", in *Entrepreneurial ecosystems*, Springer, pp. 173-197.

Stam, E. and van de Ven, A. (2019), "Entrepreneurial ecosystem elements", *Small Business Economics*, pp. 1-24.

Stathopoulou, S., Psaltopoulos, D., and Skuras, D. (2004). Rural Entrepreneurship in Europe, a Research Framework and Agenda. International Journal of Entrepreneurial Behavior and Research, Vol. 10, No. 6, pp. 404 – 425.

Tabas, A.M., Nätti, S. and Komulainen, H. (2022), "Orchestrating in the entrepreneurial ecosystem – orchestrator roles and role-specific capabilities in the regional health technology ecosystem", Journal of Business & Industrial Marketing, Vol. ahead-of-print No. ahead-of-print.

Universities Australia. (2021), "University profiles 2021", in *Universities Australia*, Canberra ACT.

Wadee, A.A. and Padayachee, A. (2017), "Higher Education: catalysts for the development of an entrepreneurial ecosystem, or… are we the weakest link?", *Science, Technology and Society,* Vol. 22 No. 2, pp. 284-309.

Wahyuni, A. I., and Noviaristanti, S. (2022), "Startup Characteristics and The Role of Business Incubators in Indonesia", *Indonesian Journal of Business and Entrepreneurship (IJBE)*, Vol. *8 No.* 2, pp. 251-251.

Wurth, B., Stam, E. and Spigel, B. (2021), "Toward an entrepreneurial ecosystem research programme", *Entrepreneurship Theory and Practice*, Vol. 00 No. 0, pp. 1-50.

York, J., Metcalf, L. and Katona, T. (2016). "University Accelerators: Entrepreneurial Launchpads or Unsustainable Fads", *United States Association for Small Business and Entrepreneurship CConference Proceedings*: Boca Raton, DG1-DG8.

Zott, C. and Huy, Q.N. (2007), "How entrepreneurs use symbolic management to acquire resources", *Administrative Science Quarterly,* Vol. 52 No. 1, pp. 70-105.

Appendix 1. Indonesian University Accelerator Distribution

UA Counts	Higher Education Institutions	University Accelerator Units
3	Institut Teknologi Bandung	Lembaga Pengembangan Inovasi dan Kewirausahaan (LPIK) ITB, The greater hub SBM ITB, Kokesma ITB
2	Universitas Prasetiya Mulya	Business Incubator STEM Prasmul, Business Venture SBE Prasmul
	Institut Bisnis Dan Informatika Kesatuan	Inkubator Bisnis
	Institut Bisnis dan Keuangan Nitro	Inkubator Bisnis Nitro
	Institut Pariwisata dan Bisnis Internasional	Inkubator Bisnis IPB Internasional
	Institut Teknologi dan Bisnis Jakarta	Pusat Kewirausahaan Ahmad Dahlan (PKAD ITB - AD)
	Institut Teknologi Kreatif Bina Nusantara Malang	Incubator Laboratory
	Institut Teknologi Nasional	Science Techno Park Itenas
	Sekolah Tinggi Bio Sains Swadiri	STBSS inkubator bisnis
	Sekolah Tinggi Ilmu Ekonomi Amkop Makassar	Inkubator Wirausaha dan BumDes
	Sekolah Tinggi Teknologi Kreatif Bina Nusantara Bandung	BINUS Incubator
	Universitas Agung Podomoro	Pusat Inkubator Bisnis Podomoro University Center of Entrepreneurial Leaders (PUCEL)
1	Universitas 'Aisyiyah Surakarta	MCEBI Muhammadiyah Center for Entrepreneurship and Business Incubator
	Universitas Al-Irsyad Cilacap	Inkubator Bisnis
	Universitas Amikom Yogyakarta	Informatics Industry Incubator Center atau Amikom Business Park (ABP)
	Universitas Banten Jaya	Pusat Inkubator Bisnis dan Teknologi (PiBIT) Unbaja
	Universitas Bina Nusantara	BINUS Incubator
	Universitas Brawijaya	Badan Inovasi & Inkubator Wirausaha Universitas Brawijaya (BIIW-UB)

UA Counts	Higher Education Institutions	University Accelerator Units
	Universitas Ciputra	U.C. Ventures or Business Incubator U.C.
	Universitas Esa Unggul	Inkubator Bisnis
	Universitas Fort De Kock	Inkubator Bisnis
	Universitas Garut	Inkubator Bisnis Dan Startup
	Universitas Indraprasta PGRI	Pusat Studi dan Inkubator Kewirausahaan (PUSTIKARA)
	Universitas Islam Kalimantan Muhammad Arsyad Al Banjari	UPT Kewirausahaan & Inkubator Bisnis (UKIB) UNISKA MAB
	Universitas Islam Malang	P2KIB UNISMA (Pusat Pengembangan Kewirausahaan dan Inkubator Bisnis Universitas Islam Malang)
	Universitas Islam Riau	Inkubator Agribisnis
	Universitas Islam Sumatera Utara	Inkubator Bisnis dan Kewirausahaan
	Universitas Katolik Widya Mandala Surabaya	Inkubator Bisnis dan Teknologi (IBT) UKWMS
	Universitas Kuningan	IBK UNIKU (Inkubator Bisnis & Kewirausahaan Universitas Kuningan)
	Universitas Mahendradatta	Inkubator Bisnis
	Universitas Malikussaleh	Lembaga Inovasi dan Inkubator Bisnis Universitas Malikussaleh (Unimal)
	Universitas Mega Buana Palopo	Inkubator Bisnis UMB Palopo
	Universitas Mercu Buana	Inkubis Mercubuana
	Universitas Mercu Buana Yogyakarta	Inkubator Bisnis Universitas Mercubuana Yogyakarta
	Universitas Muhammadiyah Gresik	Pusat Inkubasi Bisnis Usaha Kecil (PINBUK)
	Universitas Muhammadiyah Jakarta	Pusat Inkubator Bisnis dan Kewirausahaan UMJ
	Universitas Muhammadiyah Metro	Inkubator Bisnis UM Metro
	Universitas Muhammadiyah Purworejo	Unit Inkubator Bisnis (UIB) UMPurworejo
	Universitas Multimedia Nusantara	Skystar Venture
	Universitas Muria Kudus	Inkubator Bisnis UMK/Lab Kewirausahaan
	Universitas Negeri Makassar	Inkubator Kewirausahaan UNM
	Universitas Negeri Makassar	Inkubator Kewirausahaan UNM
	Universitas Negeri Medan	Bisnis dan Kewirausahaan Incubator Universitas Negeri Medan (BK INC UNIMED)

UA Counts	Higher Education Institutions	University Accelerator Units
	Universitas Pahlawan Tuanku Tambusai	Pusat Inkubasi Kewirausahaan Mahasiswa
	Universitas Pembangunan Nasional Veteran Jawa Timur	Inkubator Bisnis Technopark UPN Jawa Timur
	Universitas Pendidikan Indonesia	Inkubator Bisnis Kewirausahaan (INBIK)
	Universitas Potensi Utama	Butterfly Incubator UPU
	Universitas Sains dan Teknologi Komputer	Inkubator Bisnis
	Universitas Slamet Riyadi	Sentra Bisnis dan Kewirausahaan Mahasiswa
	Universitas Stikubank	Semai Bisnis Sukses (SBS) Inkubator Universitas Stikubank
	Universitas Sumatera Utara	Pusat Inkubator Binis dan Teknologi CIKAL USU
	Universitas Swadaya Gunung Jati	Inkubator Bisnis LIP UGJ
	Universitas Teknologi Sumbawa	UTS Launchpad
	Universitas Tidar Magelang	Inkubator Bisnis Universitas Tidar

UA Count	HEI Name		
0 (non-existing)	Akademi Enterpreneurship Terang Bangsa	Sekolah Tinggi Ilmu Manajemen Shanti Bhuana	Universitas Mitra Indonesia
	Institut Bio Scientia Internasional Indonesia	Sekolah Tinggi Kewirausahaan Selamat Pagi Indonesia	Universitas Muhammadiyah Aceh
	Institut Bisnis Informasi Teknologi dan Bisnis	Universitas Baiturrahmah	Universitas Muhammadiyah Cirebon
	Institut Seni Indonesia Surakarta	Universitas Battuta	Universitas Muhammadiyah Enrekang
	Institut Shanti Bhuana	Universitas Bhamada Slawi	Universitas Muhammadiyah Madiun
	Institut Teknologi dan Bisnis Bank Rakyat Indonesia	Universitas Budi Luhur	Universitas Muhammadiyah Papua

UA Counts	Higher Education Institutions	University Accelerator Units	
	Institut Teknologi dan Bisnis Diniyyah Lampung	Universitas Cipasung Tasikmalaya	Universitas Muhammadiyah Sidenreng Rappang
	Institut Teknologi dan Bisnis Kalla	Universitas Darma Persada	Universitas Muslim Buton
	Institut Teknologi dan Bisnis Kristen Bukit Pengharapan	Universitas Dehasen Bengkulu	Universitas Nahdlatul Ulama Lampung
	Institut Teknologi dan Bisnis MUhammadiyah Polewali Mandar	Universitas Dinamika Bangsa	Universitas Pandanaran
	Institut Teknologi dan Bisnis Muhammadiyah Wakatobi	Universitas Dipa Makassar	Universitas Papua
	Institut Teknologi dan Bisnis Nasional	Universitas dr. Soebandi	Universitas Parna Raya
	Institut Teknologi dan Bisnis Nazhatut Thullab Al-Muafa Sampang	Universitas Dr. Soetomo	Universitas Pasir Pengaraian
	Institut Teknologi dan Bisnis Sumatera Utara	Universitas Islam Negeri Raden Fatah	Universitas Pelita Bangsa
	Institut Teknologi dan Bisnis Visi Nusantara Bogor	Universitas Jenderal Achmad Yani Yogyakarta	Universitas PGRI Yogyakarta
	Institut Teknologi Keling Kumang	Universitas Kristen Indonesia	Universitas Tabanan
	Institut Teknologi Perusahaan Listrik Negara	Universitas Maarif Hasyim Latif	Universitas Tamansiswa
	Sekolah Tinggi Ilmu Ekonomi Al-Washliyah	Universitas Mahakarya Asia	Universitas Widya Husada Semarang
	Sekolah Tinggi Ilmu Ekonomi Sampit	Universitas Mandala Waluya	Universitas Widya Mataram

Appendix 2. Strategic intent and UAs in Indonesia

HEI Name	Vision / Mission Statement Related to Entrepreneurship	UA Count	HEI Name	Vision / Mission Statement Related to Entrepreneurship	UA Count
Institut Teknologi Bandung	N/A	3	Universitas Mercu Buana Yogyakarta	Develop entrepreneurial spirit and professional ethics among students and staff who contribute positively to improving quality of life.	1
Universitas Prasetiya Mulya	N/A	2	Universitas Tidar Magelang	Become a university that is superior in the field of Resource-Based Entrepreneurship and Local Wisdom.	1
Universitas Bina Nusantara	Educate BINUSIAN to be leaders with considerable skills by providing a holistic approach using global standards and hands-on entrepreneurial learning experiences.	1	Universitas Negeri Makassar	Centre for development of education in science, technology, and arts through an educational and entrepreneurial perspective.	1
Universitas Negeri Medan	Develop scientific, ethnic, and entrepreneurship culture.	1	Universitas Mercu Buana	Develop competence and cultivate an entrepreneurial spirit and professional ethics for students and staff who contribute positively to improving the quality of life.	1
Universitas Potensi Utama	Conduct coaching and development of scientific culture, soft skills, and entrepreneurship.	1	Universitas Islam Malang	Become competitive in management, accounting, finance, Islamic banking, and entrepreneurship using science,	1

HEI Name	Vision / Mission Statement Related to Entrepreneurship	UA Count	HEI Name	Vision / Mission Statement Related to Entrepreneurship	UA Count
				technology, and culture to achieve mutual benefit.	
Universitas Kuningan	Create a student entrepreneurial culture to develop new entrepreneurs from the young, educated generation.	1	Universitas Muhammadiyah Gresik	Optimal implementation of the IQF curriculum in all study programmes by internalizing Islamic values, entrepreneurship, and strengthening soft skills.	1
Universitas Amikom Yogyakarta	Become the world's leading university in the entrepreneurship-based creative economy that spreads virtue.	1	Universitas Muhammadiyah Jakarta	Develop a superior and innovative Faculty of Economics and Business to create individuals with Islamic, emotional, and spiritual Intellect.	1
Universitas Esa Unggul	Become a world-class university based on intellectual, creative, and entrepreneurship.	1	Universitas Indraprasta PGRI	Develop civilized human resources and have an entrepreneurial spirit.	1
Universitas Islam Sumatera Utara	Develop entrepreneurship study programmes that create entrepreneurs who are independent, creative, Islamic, and with integrity.	1	Institut Teknologi Nasional	Become a leading university in technology, science, and art, which play an active role in sustainable development at the national and global scale, based on the values of integrity, quality, and innovation.	1
Universitas Swadaya Gunung Jati	Develop students' potential, both in mastering hard and soft skills through intra and extracurricular activities, and	1	Universitas Stikubank	Become a university with an international reputation based on technology and with an entrepreneurial spirit.	1

HEI Name	Vision / Mission Statement Related to Entrepreneurship	UA Count	HEI Name	Vision / Mission Statement Related to Entrepreneurship	UA Count
	have an entrepreneurial spirit and reliable leadership.				
Universitas Pembangunan Nasional Veteran Jawa Timur	Develop superior human resources in attitudes and values, performance, knowledge mastery, and managerial skills.	1	Universitas Slamet Riyadi	Achieve community welfare by disseminating research results, community service, and entrepreneurship development.	1
Universitas Muria Kudus	Organize and develop superior higher education based on local wisdom to become globally competitive. Create more innovative research in science, technology, and art.	1	Universitas Multimedia Nusantara	Become a leading university in ICT at the national and international level, and create graduates with global insight and high competence in their areas accompanied by an entrepreneurial spirit and noble character.	1
Universitas Ciputra	Become a university that creates world-class entrepreneurs with Integrity-Professionalism-Entrepreneurship (IPE) character, and nationalism, who can contribute positively to Indonesia.	1	Universitas Sains dan Teknologi Komputer	N/A	1

HEI Name	Vision / Mission Statement Related to Entrepreneurship	UA Count	HEI Name	Vision / Mission Statement Related to Entrepreneurship	UA Count
Universitas Muhammadiyah Purworejo	Provide education that produces human resources that master and can apply science and technology, entrepreneurial ability, ethics, fairness, and global competitiveness in management based on Islamic values.	1	Universitas Garut	N/A	1
Universitas Islam Kalimantan Muhammad Arsyad Al Banjari	Prepare intellectuals in various fields with an entrepreneurial spirit, relevance, and quality.	1	Universitas Katolik Widya Mandala Surabaya	N/A	1
Universitas Brawijaya	N/A	1	Institut Pariwisata dan Bisnis Internasional	N/A	1
Institut Teknologi Kreatif Bina Nusantara Malang	N/A	1	Universitas Pendidikan Indonesia	N/A	1
Sekolah Tinggi Teknologi Kreatif Bina Nusantara Bandung	N/A	1	Institut Bisnis dan Keuangan Nitro	N/A	1

HEI Name	Vision / Mission Statement Related to Entrepreneurship	UA Count	HEI Name	Vision / Mission Statement Related to Entrepreneurship	UA Count
Universitas Islam Riau	N/A	1	Universitas Muhammadiyah Metro	N/A	1
Institut Bisnis Dan Informatika Kesatuan	N/A	1	Universitas Mega Buana Palopo	N/A	1
Universitas Al-Irsyad Cilacap	N/A	1	Universitas Negeri Makassar	N/A	1
Universitas Fort De Kock	N/A	1	Sekolah Tinggi Ilmu Ekonomi Amkop Makassar	N/A	1
Universitas Mahendradatta	N/A	1	Universitas Budi Luhur	Become a global-minded University based on entrepreneurship, technology, and intellectual virtue.	0
Universitas Malikussaleh	N/A	1	Universitas Darma Persada	Develop human resources who are creative, innovative, and with an entrepreneurial spirit who have foreign language skills.	0
Universitas 'Aisyiyah Surakarta	N/A	1	Universitas Dehasen Bengkulu	Become a leading university in the field of entrepreneurship at the national level.	0

HEI Name	Vision / Mission Statement Related to Entrepreneurship	UA Count	HEI Name	Vision / Mission Statement Related to Entrepreneurship	UA Count
Universitas Pahlawan Tuanku Tambusai	N/A	1	Universitas Dr. Soetomo	Develop a competency-based Management study programme by prioritizing quality and excellence in creating professional and noble entrepreneurs and intrapreneurs.	0
Universitas Sumatera Utara	N/A	1	Universitas Kristen Indonesia	Develop a quality undergraduate Management education to give birth to future business leaders who are entrepreneurial and ethical and practice integrity.	0
Universitas Banten Jaya	N/A	1	Universitas Muhammadiyah Cirebon	Encourage entrepreneurial attitude.	0
Universitas Agung Podomoro	N/A	1	Universitas Papua	Become a research college that is independent and dignified, with a conservation spirit and an entrepreneurial character.	0
Institut Teknologi dan Bisnis Jakarta	N/A	1	Universitas PGRI Yogyakarta	Become a superior university and produce devoted, professional, innovative graduates with national commitments and a global perspective.	0
Sekolah Tinggi Bio Sains Swadiri	N/A	1	Institut Teknologi dan Bisnis Kalla	N/A	0