



Economic Entrepreneurship Skills in High School Students as a Pathway to Future Economic Growth

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Abstract

The subject of this research focuses on the impact of Economic entrepreneurship education in Indonesian high schools. Exploratory qualitative case studies were conducted and the data collection techniques included semi structured interviews, focus group discussion and documentation review. The study results indicate that knowledge-explicitness discrepancy in GAME and EIE courses curb entrepreneurial skills amongst students. The first student related challenge is that existing entrepreneurship education is seen as not applicable to their future career goals and thus requires contextually relevant solutions. The roles, responsibilities and relations of entities in schooling systems are highly legalistic, bureaucratic and hierarchical and limit teachers from practicing creativity. Implication of the results of this study are drawn in terms of emphasizing the value of experiential learning, topicality of entrepreneurship content in high schools of Indonesia, need to have flexible policies to improve the quality of teaching and learning of entrepreneurship in the high schools of Indonesia. Suggestions are made to create what is necessary in schools to help prepare children for future economic development

Introduction

They also highlighted that Indonesia is home to several large and fairly diverse economies, but it is laboring to attain sustainable economic development that creates decent job opportunities for the youths due to high unemployment rate and entrepreneurship is not yet part of the education system in Indonesia (Indrawati & Kuncoro, 2021). Although, the government of Indonesia has recently focused on entrepreneurship through the National Entrepreneurship Movement (Othman et al., 2021), there is a lack of practical and contextual training and learning in high school education. This gap between policy propositions and other actual educational practices to some extent restricts the capacity of high school students to cultivate the entrepreneurial attributes required for future growth of the economy (Kirby, 2004).

Studies have shown that appropriate entrepreneurship education within high school setting greatly enhances students' preparedness for economic environment that encourages innovation and entrepreneurship (Blesia et al., 2021). Market sensed, in Indonesia particularly, entrepreneurship has been taught as an extra curriculum activity and inmost cases, not integrated properly and therefore, having less practical implication and interaction. This is worrisome, especially since Indonesia's economy needs a population that is ready to manage contingencies – and create jobs – with innovative skills (Rosyadi et al., 2022).

Given that students attending high schools do not have a chance of gaining practical entrepreneurial experience, they do not get exposed to actual economic situations as often, and therefore cannot develop their ability to use critical thinking and problem-solving (Škėrienė & Jucevičienė, 2020). Recent scholars have pointed out that while students can learn theories or

gain or develop content knowledge, they seem to lack the ability to apply what they learned or come up with practical solution. This gap is a major barrier to Indonesia to realise its vision of creating a knowledge based and entrepreneurial society to enhance its economic growth and development in the long run (Cáceres et al., 2020).

Thus, the purpose of this study is to identify the current status of the EE education in Indonesian senior high schools and its relevance to Indonesia's economic agenda. Through understanding of students' and educators' perceptions about and experiences with the analysed entrepreneurial skills, this research aims to discover areas that current approaches to teaching and learning fail in preparing students as entrepreneurs and come up with an set of recommendations to improve on this (Wang & Chugh, 2014). This context-bound study will afford understanding of education generation and economic policy in context pointing to the need for integrating context-specific solutions to enhance the spirit of enterprising amongst Indonesia young people.

Methods

Research Design

This research used a qualitative case study research approach to capture the understanding of the impact and introduction of economic entrepreneurship education in high schools in Indonesia. The use of a qualitative case study approach was justified because it enables the analysis of social processes with all their contingencies that exist in living contexts. This design was especially appropriate for eliciting the viewpoints, narratives, and barriers for enacting teaching and learning of economic entrepreneurship from students, educators and leaders. In this qualitative study, the population of interest was focused on exploring and comparing perceived and actual aspects of entrepreneurship education being offering at various high school settings within Indonesia.

Research Participants

Three high schools from different regions of Indonesia and both public and private sectors were used in the study in order to get variation in the type of curriculum in terms of design, type of resources available, and the regional economic conditions. Convenience sampling was used in this study to decide on schools that provided some sort of entrepreneurship education or had entrepreneurship as one of their curriculum elements. Within these schools, the study focused on three groups of participants: High school students, teachers and school leaders.

A sample of 30 students (10 from each school) was used since all of them were taking courses in which entrepreneurship was a component. The selection process of the students focused on those who had developed at least one course showing that they have prior experience and have completed at least one entrepreneurship related module. Furthermore, 10 teachers (three to four from each school) that were teaching entrepreneurship or economic subject were selected. This selection also involved 5 school administrators from among principals and/or curriculum developers who influence school education policies, 1 to 2 from each school. This recruitment strategy hoped at identifying varied perceptions of the integration and effect of entrepreneurship teaching in every school.

Data Collection

Data were collected through three primary methods: The main research methods adopted for this study include; semi-structured interviews, focus group discussions, the review of documents. The use of such methods enabled the shedding of light on all the different aspects of the research topic and the subsequent triangulation of results.

Each of the 10 teachers and 5 school administrators was given an individual and semi-structured interview. To this end, the interviews sought to determine their understanding of the purposes, approaches, and difficulties inherent in the delivery of entrepreneurship education. Interview questions were initially structured and unstructured to evoke a description from participants of their general understanding of entrepreneurship education, their own teaching or overseeing of entrepreneurial courses, as well as their perceptions of how students responded to such courses. The interviews of which ranged from 45 minutes to an hour were conducted and audio recorded with the participants' permission. The participants' responses were audio-taped and all their expressions were transcribed as they were for the purpose of the study. All the interviewees were administered with similar pre-interview instructions but at the same time the interviewees were free to ask follow up questions on their own based on the responses they received from the participants.

Individual interviews were conducted with 10–12 student participants in each of the three schools, discussing in focus groups of 5–6 students in each of the six focus groups. The focus group was designed to allow for a qualitative examination of the students' understanding and appreciation of the concepts taught within the context of the entrepreneurship education and their perceived relationship between the concepts and their future careers. To structure each discussion, a number of questions was provided, however, every participant was free to answer the questions posed by the others. Each of the sessions was 90 minutes long and was audiotaped for purposes of transcription and analysis.

Document analysis was also carried out as a mean of studying entrepreneurship-related curricula, lesson plans and educational policies of the selected schools. Documents analyzed included curriculum frameworks, teacher's lesson plans, policies on education approaches and any additional teaching and learning resource like student workbooks, project handbooks etc. This facilitated the comparison of the findings with participants and the definition of gaps between official policies and stated practice.

Data Analysis

Data gathered from interviews, focus groups, and document analysis were analyzed using thematic analysis by Braun and Clarke's step by step guidelines (2006). This was done to create a systematic strategy for identifying, categorising and understanding patterns of meaning across the qualitative data.

The first process included was taking word for word notes from all the interviews conducted and focus group discussions. Participants' initial interviews were reviewed several times to familiarize the researchers with the material and "get a sense" of it. In this phase, a note was taken to record the first impressions and findings made by the student. The second process was known as generating initial codes, which was carried out by a process of coding each transcript in a mechanical fashion to highlight the segments of the data which seem to relate to the research questions identified at the study level. Of these, the following was generated: These initial codes informed the development of a coding framework, and the complexity of the codes influenced further changes to the framework. In the third step in this study, similar codes were grouped together to form potential themes. A theme was operationally described as a coherent and significant phenomenon that reflected one aspect of the participants' experience or opinions. The extracted initial themes were discussed and refined by the research group to guarantee internal consistency of identified concepts.

Next, In this step, to ensure relevance and accuracy of the themes identified, they were compared with rest of the coded data and overall set of data which was collected. Any concepts

that were not backed with adequate information or that were unrelated to the subject of investigation were either modified or omitted. The final themes provided here were finally designed and labeled accordingly in order to give a brief but comprehensive interpretation of each of them. Each theme was described in detail and specific quotes from the participants were included to substantiate the themes noted. The last step was generating a summary table for each theme where all quotes used to develop the theme were presented along with further discussion on the theme by the participants. This report was therefore to capture a detailed view of the current position of entrepreneurship education in Indonesian senior secondary schools and the views of different stakeholders.

Result and Discussion

Data collected from the survey highlighted five research themes concerning the applicability and difficulties of economic entrepreneurship education in Indonesian high schools. These themes are: Pillar 1 – Practical Learning and Student Engagement, Pillar 2 – Perceived Relevance of Entrepreneurship Education; Pillar 3 – Teaching Approaches and Pedagogical Strategies; Pillar 4 – Institutional Challenges and Resource Constrained environments.

Practical Learning and Student Engagement

“In our classes, we were mostly given theories about entrepreneurship. We rarely got the chance to practice what we learned, like creating business models or projects.”

This quote underlines an important gap that exists between idea implementation and theory in the process of teaching entrepreneurship. There are major problems such as the absence of practical ways of teaching, which makes some of the ideas of enterprise remaining as theoretical knowledge in the minds of learners. This paper has used experiential learning theory by Kolb (1984), which postulates that there is need for practical implementation in the development of knowledge into skills. Inability to appreciate the practical values of the concepts of entrepreneurship hampers innovative thinking and creative approach to implementing new ideas in entrepreneurial ventures, especial where practical learning is not integrated into the loop.

“I find it hard to relate to what we are learning in class because we are not given opportunities to explore these ideas through real projects or activities.”

Because the student has trouble applying what is being taught in class, this is a sign of having to incorporate more teaching by doing. The author stated that when students are not engaged inactively to apply the knowledge gained, students end up losing concentration, and subsequently, the impact of the knowledge may be less than desired (Jacob et al., 2020). This interesting corresponds with the constructivists’ ideas that asserts that knowledge is best developed through engagement and prior experience.

“Students seem to lose interest when the subject remains at a theoretical level. They get more excited when we incorporate practical activities, but we don’t have the resources to do that often.”

This quote hits on the issue of resources and their assignment to define the range of the practicable endeavors. The implication of the study is that despite the perceived importance of practical learning, the teachers admitted that they could not host such activities due to lack of support from the institutions. This supports conception in prior research pointing towards institution funding in education to promote learning environment (Ifenthaler & Yau, 2020).

“Whenever we had workshops or guest speakers who talked about their experiences in starting businesses, students were much more attentive and asked more questions.”

Based on this observation it can be assumed that actual experiences of real life business scenarios enables the students. Such experiences apply what has been taught in class and make learning more relevant to real life and motivate the students to envision their own entrepreneurial futures (Lynch et al., 2021). This supports the earlier beliefs that the use of guest speakers and mentorship programs are important in entrepreneurship education.

“We had a project once where we had to create a business plan, and I really enjoyed it because it felt like something I could actually use in the future.”

That the student paid a positive attitude towards creating a business plan shows that project based learning project instils practical skills and self confidence. ccion based projects where students have a chance to replicate the actual situations, inculcate the new knowledge in a proper manner, and prepare for the next assignments (Korucu-Kış, 2021).

These results provide enough evidence to understand that there is a constant problem of entrepreneurship education in Indonesian high schools. It seemed that students had a general displeasure of theoretical courses to the point where they can see a disconnect between what they are learning and its applicability. This divorce is not just a technical problem of learning; it is a challenge to learning and practical skill development. If information is viral encased by formal instruction, students are prevented from translating that knowledge into useful skill sets. What is being underscored here is not merely a preoccupation with the doing mode, but a heightened imperative to integrate relevant teaching approaches with know-how of the experiential learning paradigm that focuses on the processes of doing and concrete reflection.

The literature review shows that experiential pedagogy plays a crucial role in hyperening the problem solving ability among learners. The absence of such environments causes what some scholars refer to as educational disengagement whereby the learner loses interest in learning and cannot decipher any relevance of the knowledge acquired to real life situations. This gets to the question of motivation and relevance. In case the teaching of entrepreneurship focuses mainly on theories and lectures, the result that is usually observed is that of passive learning environment into which the students do not have an active participation.

The study establishes a difference between what students are interested in and what goes on in their classroom. The occasions that invited guest speakers or business plan projects offered specific changes in student participation and enthusiasm. This implies that the use of real life experiences and project based learning is not an augmentation but a strategic framework on which student’s orientation to entrepreneurship is built (Kokotsaki et al., 2016). It’s not merely about including activities – that is about shifting classes into learning contexts as far as constructing meanings of knowledge through participation, interaction, and reflection (Halldén et al., 2013).

Furthermore, the professionals including teachers and administrators who value the application of the teachings in real life scenario end up restricted by levels of resource endowment as well as institutional realities. Such constraints raise fundamental questions within the system of education in the country to recommend or provide infrastructure and/or financial support to cater for the implementation of entrepreneurship education (O'Connor, 2013). If schools are to bridge this gap, it’s essential to rethink resource allocation and policy frameworks, ensuring that experiential learning isn’t an afterthought but a central tenet of entrepreneurship education.

Perceived Relevance of Entrepreneurship Education

“Entrepreneurship seems like an important skill, but in our classes, it often feels disconnected from what we really want to do after school.”

This quote brings out a feeling that there is a gap between what entrepreneurship education provides and students’ dream jobs. Another implication is that the curriculum should be made more relevant to students by tying it to their possible careers and practical use. Imposing the concept of entrepreneurship education according to the preferences of students could improve its influence on their further.

“If students don’t see how entrepreneurship relates to their daily lives or future goals, they won’t engage with it seriously.”

Such a statement from the teacher echoes one of the unique considerations that make a teacher incorporate the entrepreneurship context into student life. Without this, students will think of entrepreneurship as being a more of a mere idea that is otherwise not so interesting to them. This brings out the need to package the learning materials with locally based examples and stimulus cases so that there is some sense of realism (Salzman et al., 1999).

“Many students think that entrepreneurship is only about starting a business, but it’s also about being innovative and proactive in any career they choose.”

For me, this quote shows that too many students have a limited view of what being an entrepreneur means, thus pointing to a significant deficit in how it is being addressed in class. It is, therefore, suggested that, while implementing entrepreneurship education, broader types of competencies are accentuated, including problem-solving and innovations, regardless of the field of work. This goes a long way in supporting the call for an expanded implementation of entrepreneurship education.

“I used to think that entrepreneurship was just about selling products, but after doing some projects, I realized it’s also about creating solutions.”

The change of perspective on the part of the student implies that Business-Minded designed undertaken projects could bring a lot of value to the students’ general understanding of the concept of entrepreneurship. Benefits of such projects include enabling students to get a sense of the diverse dynamics of the entrepreneurship process in its creative, innovative, strategic and organizational dimensions (Yun et al., 2020). This finding confirms the importance of including various learning activities into the curriculum.

“We try to emphasize that entrepreneurship is not just for those who want to start businesses, but it’s about thinking creatively and seizing opportunities in any field.”

Specified with the creative thinking probed by the teacher, one notes the departure from the previously rigid concept underlining the entrepreneurial education concept, where students are trained to develop multiple skills the will be applicable in different vicinities. This is well in line with current education thinking about the need to teach the spirit of entrepreneurship and not just the technical aspect of business (Hägg & Kurczewska, 2016).

Time and time again, students’ perceptions of entrepreneurship education show a theme of disconnection, which is a major problem in the implementation of the subject. It is not the content that is problematic but the ways students are being prompted to use this knowledge to construct relations between their learning and their lives. The more the students complained of being able to find the link between the entrepreneurship concept and their future plans, it was clear that a narrative problem was at work. This is where streams and courses need not only

pack entrepreneurship ideas into knowledge but also help students see the relevance of those concepts to their future careers (Brush et al., 2003).

Research mission on this topic highlights that it does not refer to the creation of ventures only but also the development of proper purposeful and flexible attitude that can be valuable in any work sphere. This means, according to the findings of the study, students have a very limited perspective on the essence of entrepreneurship and they tend to regard it as being relevant only to businesspeople. A similar restrictive approach constrains their relationship with the topic and, more importantly, their vision of how entrepreneurial competencies may benefit other professions (Thorpe et al., 2005). Here, educators have the crucial function of changing the perceptiveness of entrepreneurship from being a vocation to possessing attributes of creativity, problem solving, and opportunity identification skills that can be applied in other areas outside the traditional economy.

Curiously, what this divergence suggests, apart from the utility of entrepreneurship education as instrument for economic transformation, is that the process could be a means for character change too. Those students who were able to take part in the hands-on projects or had some contacts with local entrepreneurs mentioned important changes in their strategic patterns moving from linear traditional understanding of the entrepreneurship discipline (Belussi & Gottardi, 2018). This suggests that personalising the relations between course content and the students' experiences is critical to achieve enhanced working memory and long-term retention of entrepreneurial knowledge.

However, it is not good to link entrepreneurship education with the students' dream in bits here and there such as sometimes offering one or two projects or inviting a few guest speakers. It requires a greater total learning process that blends consideration for one's self, cases related to context and particular learning activities into a single fashion. When teachers manage to do this they are not just teaching lessons but storytelling so that students can enter the process of entrepreneurship.

Teaching Approaches and Pedagogical Strategies

“The main challenge is finding ways to make the content engaging without sufficient resources or materials to support it.”

This quote shows restriction that teachers have when it comes to designing and implementing more interesting entrepreneurship lessons. They have pointed out that lack of resources can prevent the modalities that include the use of interactive practical teachings that are necessary for entrepreneurship education. This tallies with literature discussing the preparedness of resource rich contexts for desirably promotive enactment (Rogers, 2020).

“We tried using simulations, but it's hard to keep students motivated without real-world applications.”

This quote captures the fact of difficulty to keep students active in the simulation when the content does not reflect real life. It implies that although simulated teaching can work miracles, the theorem deems its effectiveness worthless if the students do not relate to the simulation in one way or the other. This highlights the need to incorporate simulations that answer as closely as possible to real life entrepreneurial scenarios.

“When we ask students to develop their own business ideas, they seem more invested because it's something they create themselves.”

This observation shows that furthering student engagement is of importance in using more learner-centered strategies as proposed by project-based learning. Enabling students to come up with their own business plans enhances the course goal of student entrepreneurship since the students understand the need to be innovative and independent (Boldureanu et al., 2020).

“I find that using case studies of local entrepreneurs helps students relate to the content more.”

The teacher’s use of local case studies reflects an effective strategy for contextualizing entrepreneurship education. By incorporating examples from familiar contexts, teachers can make abstract concepts more tangible and relevant to students.

“In our classes, we use a lot of group discussions to encourage students to think critically and share their ideas.”

This quote emphasizes about the learning process which involves more of group work intent on refining the students’ critical thinking skills and key problem solving. Students can express ideas and argue with each other in group discussions which reflects a number of principles of entrepreneurship as defined by Gibb.

These points, as well as quotations and critical analysis, are meant to give the reader an overview of this article so as to understand the current situation concerning the teaching of economic entrepreneurship in Indonesian high schools. Every quote is discussed with reference to the relevant theoretical framework and the pertinent literature to enhance our understanding of the results.

Theme 3 Discussion: The Characteristics of Effective Instruction and Presentation Techniques

The results concerning teaching practices identify an apparent paradigm that opposes concept-based instruction with the organisational setting of the university. Many educators who wish to apply collaborative activities, including business games or project-oriented approaches, face organizational constraints because of poor resource availability or policy support. It is not just a problem of how to manage students in the classroom but rather phenomenal which signifies fundamental issues like lacking of organization and appreciation of education (Senge et al., 2012). When teachers are boxed in by their curricula, the students cannot effectively be taken through active and collaborative learning as is the case with entrepreneurship education.

The examine also reveal that the use of students’ activities, for instance, group discussions, case studies, and miniature business, enhance the critical thinking and the practical knowledge gained. However, many of these methods can only occur with a threshold level of institutional support – resources and policies. Lacking such support, teachers are forced to work with their weaknesses; worse still they end up conveying watered down theories, the very thing that research indicates would be best avoided. This raises a question on the overall cause that is served by institutionalism, thus the misalignment of institutional goals for the subjects of entrepreneurship education.

When teachers use real life local case to discuss and make use of the group assignment, they are then not only introducing ‘Flavor’ to their mode of teaching, or adding pleasure to learning, but also providing ways through which students can practice and/or interact with entrepreneurship in ways that are contextual and existential (Lackéus, 2016). This means that there needs to be a change of attitude regarding the process of teaching and learning from an information transmission model to an emancipative process. The aim is not only to educate

students in the area of entrepreneurship but to develop learning spaces in which they can practice it.

Institutional Challenges and Resource Limitations

“Our school tries to include entrepreneurship, but we don’t have enough trained teachers or materials to support it effectively.”

This quote reflects a significant institutional challenge: the question of inadequacy of staff development and training as well as materials and technology required by the teachers. This limitation affects entrepreneurship education negatively as teachers who are not trained well ends up developing bad teaching habits. Studies show that engorging by institutional investments necessary for the successful integration of entrepreneurship education for teachers training and resources (Etzkowitz, 2022).

“We have to prioritize subjects like mathematics and sciences, so entrepreneurship is not always seen as a core subject.”

This is because the reduction of entrepreneurship as a non-core subject demonstrates an institutional concern. This has a familiar problem of general curriculum subjects dominating over vocational ones, meaning that while education for enterprising is not neglected completely, it does not receive enough attention and is often given a scant share of resources. Such institutional thinking can reduce the prospects, accomplishments and recognition of entrepreneurship education in school.

“Most of our budget goes to textbooks and exam preparation, so there’s not much left for additional materials or activities for entrepreneurship classes.”

This quote is indicative of the state of funding for school, where the entrepreneurship classes are usually starved out due to financial constraints. Lack of funds most of the time makes it difficult to provide practical exercises, organised workshops or business games which are crucial in entrepreneurship education (Jones & English, 2004). This expresses the necessity for including entrepreneurship among the strategic direct budgetary goals of financial planning techniques.

“We face challenges in getting students interested in entrepreneurship because we lack facilities like business labs or dedicated spaces for projects.”

Inability to allocate particular buildings or areas where the entrepreneurship projects can be set up is a weakness in this school. Some of the literature points that the special areas for entrepreneurial activities, for instance business incubation or labs, increase the students’ motivation and learning experiences. This quote emphasizes the importance of physical resources in supporting active learning and real-world experiences.

“Teachers want to innovate and introduce more practical activities, but the school’s policies and rigid curriculum make it difficult to do so.”

This quote expects educators to embrace change and at the same time labor under frameworks that standardize their curriculum. This implies that teachers’ practice can be constrained by organisational bureaucracy and policy that would prevent teachers from applying teaching methods based on the learning needs of the learners. With respect to this finding, there is the need to create more porous systems in order to enhance innovation in the teaching of entrepreneurship.

ethical issues, or more specifically, institutional constraints limitations of resources, policies were recognized as the major forms of barriers to effective entrepreneurship education. Schools

that Bowen and recognise enterprise as a reality education subject and not recognizing its relevance in current school systems are leaving a critical gap by not incorporating enterprise and skills-based learning to equip learners for an unknown and ever-evolving economic reality (Lewis, 2016). It is not a question of funding distribution – it is a question of what schools care about and what form the educational priorities take.

The study also reveals that with increased financial constraints, entrepreneurship courses are usually among the first to be implemented hence teachers are unable to provide practical learning activities or infrastructure such as business incubation or enjoyable business anthems. This raises another question concerning school resource management problems and the responsibility schools take to support programs that encourage the spirit of innovation and entrepreneurship (Nonet et al., 2016). Schools that lack dedicated facilities for entrepreneurship education are sending a clear message to students: this subject isn't a priority.

Furthermore, teachers who said they wanted change ended up limited by institutional policies that do not allow freedoms in curricular designs. Such rigidity may partly be due to the fact that policies on entrepreneurship education do not allow teachers to incorporate the dynamic nature of entrepreneurship education unlike other fields of education, and the contemporary student needs and the ever-changing nature of the entrepreneurial. The demand for the increased flexibility of the policy is not just because teachers ought to have more leeway – it is about understanding that the education of the entrepreneur demands less rigidity, very much akin to what Gopinathan (2007) argued.

Conclusion

In addressing its research objectives, this study aims to examine the current status of the implementation of the economic entrepreneurship education in high schools of Indonesia; the perceived barriers to the programme; an analysis of the perceived impact of the programme on students. Implications from the current approaches reveal that learning lacks proper practical application; hence students do not develop crucial entrepreneurial skills. Failure to see the relevancy between theory taught in learning institutions and practical application, therefore, dampens the enthusiasm of students. Entrepreneurship education would best be taught through experiential, contextualized and student's aspirations and opportunities. Nevertheless, the decision and action of the teachers are constrained by the institutional factors such as; lack of resources and; a set curriculum that restricts teachers to use free creativity in their choice of teaching approaches.

These findings underpin a stronger focus on creating a favourable educational context for promoting entrepreneurial competencies with sufficient assets, policy responsiveness, and convergence with overarching macroeconomic objectives. In designing and implementing learning practices and environments, it is only appropriate that schools themselves prepare students for the entrepreneurial disposition and skills for future economic development through the many hands-on, student-centered strategies and contexts. This calls for a comprehensive reevaluation of entrepreneurship education in Indonesian high schools to bridge the gap between education and economic development effectively.

References

- Belussi, F., & Gottardi, G. (Eds.). (2018). *Evolutionary patterns of local industrial systems*. Routledge.
- Blesia, J. U., Iek, M., Ratang, W., & Hutajulu, H. (2021). Developing an entrepreneurship model to increase students' entrepreneurial skills: An action research project in a

- higher education institution in Indonesia. *Systemic Practice and Action Research*, 34(1), 53-70. <https://doi.org/10.1007/s11213-019-09506-8>
- Boldureanu, G., Ionescu, A. M., Bercu, A. M., Bedrule-Grigoruță, M. V., & Boldureanu, D. (2020). Entrepreneurship education through successful entrepreneurial models in higher education institutions. *Sustainability*, 12(3), 1267. <https://doi.org/10.3390/su12031267>
- Brush, C. G., Duhaime, I. M., Gartner, W. B., Stewart, A., Katz, J. A., Hitt, M. A., ... & Venkataraman, S. (2003). Doctoral education in the field of entrepreneurship. *Journal of management*, 29(3), 309-331. https://doi.org/10.1016/S0149-2063_03_00014-X
- Cáceres, M., Nussbaum, M., & Ortiz, J. (2020). Integrating critical thinking into the classroom: A teacher's perspective. *Thinking Skills and Creativity*, 37, 100674. <https://doi.org/10.1016/j.tsc.2020.100674>
- Etzkowitz, H. (2022). Entrepreneurial university icon: Stanford and Silicon Valley as innovation and natural ecosystem. *Industry and Higher Education*, 36(4), 361-380. <https://doi.org/10.1177/09504222221109504>
- Gopinathan, S. (2007). Globalisation, the Singapore developmental state and education policy: A thesis revisited. *Globalisation, societies and education*, 5(1), 53-70. <https://doi.org/10.1080/14767720601133405>
- Hägg, G., & Kurczewska, A. (2016). Connecting the dots: A discussion on key concepts in contemporary entrepreneurship education. *Education+ Training*, 58(7/8), 700-714. <https://doi.org/10.1108/ET-12-2015-0115>
- Halldén, O., Scheja, M., & Haglund, L. (2013). The contextuality of knowledge: An intentional approach to meaning making and conceptual change. In *International handbook of research on conceptual change* (pp. 71-95). Routledge.
- Ifenthaler, D., & Yau, J. Y. K. (2020). Utilising learning analytics to support study success in higher education: a systematic review. *Educational Technology Research and Development*, 68(4), 1961-1990. <https://doi.org/10.1007/s11423-020-09788-z>
- Indrawati, S. M., & Kuncoro, A. (2021). Improving competitiveness through vocational and higher education: Indonesia's vision for human capital development in 2019–2024. *Bulletin of Indonesian Economic Studies*, 57(1), 29-59. <https://doi.org/10.1080/00074918.2021.1909692>
- Jacob, F. I. L. G. O. N. A., John, S. A. K. I. Y. O., & Gwany, D. M. (2020). Teachers' pedagogical content knowledge and students' academic achievement: A theoretical overview. *Journal of Global Research in Education and Social Science*, 14(2), 14-44.
- Jones, C., & English, J. (2004). A contemporary approach to entrepreneurship education. *Education+ training*, 46(8/9), 416-423. <https://doi.org/10.1108/00400910410569533>
- Kirby, D. A. (2004). Entrepreneurship education: can business schools meet the challenge?. *Education+ training*, 46(8/9), 510-519. <https://doi.org/10.1108/00400910410569632>
- Kokotsaki, D., Menzies, V., & Wiggins, A. (2016). Project-based learning: A review of the literature. *Improving schools*, 19(3), 267-277. <https://doi.org/10.1177/1365480216659733>

- Kolb, B. (1984). Functions of the frontal cortex of the rat: a comparative review. *Brain research reviews*, 8(1), 65-98.
- Korucu-Kıř, S. (2021). Preparing student teachers for real classrooms through virtual vicarious experiences of critical incidents during remote practicum: A meaningful-experiential learning perspective. *Education and Information Technologies*, 26(6), 6949-6971. <https://doi.org/10.1007/s10639-021-10555-7>
- Lackéus, M. (2016). *Value creation as educational practice—Towards a new educational philosophy grounded in entrepreneurship?*. Chalmers Tekniska Hogskola (Sweden).
- Lewis, A. L. (2016). *Developmental English professors' experiences with learning management systems at an urban community college: Challenges, benefits, and other perceptions*. Temple University.
- Lynch, M., Andersson, G., & Johansen, F. R. (2021). Merging systems thinking with entrepreneurship: shifting students' mindsets towards crafting a more sustainable future. *Sustainability*, 13(9), 4946. <https://doi.org/10.3390/su13094946>
- Nonet, G., Kassel, K., & Meijs, L. (2016). Understanding responsible management: Emerging themes and variations from European business school programs. *Journal of business ethics*, 139, 717-736. <https://doi.org/10.1007/s10551-016-3149-z>
- O'Connor, A. (2013). A conceptual framework for entrepreneurship education policy: Meeting government and economic purposes. *Journal of business venturing*, 28(4), 546-563.
- O'Connor, A. (2013). A conceptual framework for entrepreneurship education policy: Meeting government and economic purposes. *Journal of business venturing*, 28(4), 546-563. <https://doi.org/10.1162/105474699566242>
- Othman, I. W., Mokhtar, S., Maidin, I., & Moharam, M. M. A. H. (2021). The Relevance of The National Entrepreneurship Policy (NEP) 2030 In Meeting the Needs and Strengthening the Country's Entrepreneurial Ecosystem: A Snapshot. *International Journal of Accounting*, 6(37).
- Rogers, K. L. (2020). *Putting the Humanities PhD to Work: Thriving in and beyond the Classroom*. Duke University Press.
- Rosyadi, S., Sabiq, A., Ahmad, A. A., & Nuryanti. (2022). The Indonesian government capacity in responding to the COVID-19 impacts on the creative economy sector. *Sage Open*, 12(2), 21582440221105820. <https://doi.org/10.1177/21582440221105820>
- Salzman, M. C., Dede, C., Loftin, R. B., & Chen, J. (1999). A model for understanding how virtual reality aids complex conceptual learning. *Presence: Teleoperators & Virtual Environments*, 8(3), 293-316. <https://doi.org/10.1162/105474699566242>
- Senge, P. M., Cambron-McCabe, N., Lucas, T., Smith, B., & Dutton, J. (2012). *Schools that learn (updated and revised): A fifth discipline fieldbook for educators, parents, and everyone who cares about education*. Crown Currency.
- Škėrienė, S., & Jucevičienė, P. (2020). Problem solving through values: A challenge for thinking and capability development. *Thinking Skills and Creativity*, 37, 100694. <https://doi.org/10.1016/j.tsc.2020.100694>
- Thorpe, R., Holt, R., Macpherson, A., & Pittaway, L. (2005). Using knowledge within small and medium-sized firms: A systematic review of the evidence. *International Journal*

of Management Reviews, 7(4), 257-281. <https://doi.org/10.1111/j.1468-2370.2005.00116.x>

Wang, C. L., & Chugh, H. (2014). Entrepreneurial learning: Past research and future challenges. *International journal of management reviews*, 16(1), 24-61. <https://doi.org/10.1111/ijmr.12007>

Yun, J. J., Zhao, X., Jung, K., & Yigitcanlar, T. (2020). The culture for open innovation dynamics. *Sustainability*, 12(12), 5076.