DIGITAL ENTREPRENEURSHIP EDUCATION: THE DEVELOPMENT OF AN INSTAGRAM-BASED TRAINING MODULE FOR YOUTH

Jerry Rommy Herter Wuisang [1]
[1] Universitas Negeri Manado, Indonesia
*Corresponding Author: jerrywuisang@unima.ac.id

ABSTRACT
Youth unemployment and underemployment remain persistent in developing contexts, calling for scalable, engaging entrepreneurship education that aligns with Gen-Z's digital habits. This study aimed to develop and validate an Instagram-based training module to strengthen entrepreneurial attitudes and behaviors among young MSME actors in Tondano, Indonesia. Using a Research & Development approach with the 4-D model (Define–Design–Develop; Disseminate planned), we conducted needs analysis, iterative prototyping, expert validation (content and media), and pilot testing with purposively sampled participants (n = 30; ages 18–30). Data were gathered via Likert-type questionnaires and Focus Group Discussions and analyzed descriptively with percentage criteria for feasibility. Results show high feasibility and acceptance: material validation = 90.34% (very good), media validation = 82% (good), platform/Instagram usability = 92.5% (very good); user responses indicated 92.5% strongly agree and 7.5% agree that the module improved understanding of entrepreneurial attitudes/behaviors. We conclude that an Instagram-based, micro-modular design is practicable, context-fit, and engaging for youth entrepreneurship learning. Practically, the module offers a low-cost, mobile, and scalable alternative for educators, community organizations, and local governments to complement formal programs and expand outreach. Future research should (a) conduct larger multi-site trials, (b) embed formal assessment (e.g., quizzes, performance tasks) and gamified elements, (c) evaluate longitudinal outcomes (self-efficacy, venture activity), and (d) compare cross-platform delivery (e.g., TikTok/YouTube/LMS) to mitigate algorithmic visibility bias.

Keywords: Digital Microlearning; Entrepreneurship Education; Instagram-Based Module; 4D Model; Youth MSMEs

INTRODUCTION

The economic challenges of the modern era—ranging from unstable job markets to the rising cost of living—demand that young people become more creative, resilient, and entrepreneurial (Fayolle & Gailly, 2015). Entrepreneurship is widely recognized as a critical driver of economic growth and social innovation (Acs et al., 2018). In developing countries such as Indonesia, youth entrepreneurship serves as a strategic solution to unemployment and underemployment (Brixiová et al., 2020; World Bank, 2023). Despite these opportunities, many young people remain hesitant to start their own businesses due to dependency on parental financial support, fear of uncertainty, and a lack of entrepreneurial skills and attitudes (Koe et al., 2012). Education and training play pivotal roles in shaping individuals' entrepreneurial mindsets and competencies (Martin et al., 2013). Entrepreneurship training enables learners to cultivate creativity, innovation, risk management, and perseverance—attributes that are essential for personal and professional success (Neck & Corbett, 2018). However, in Indonesia, entrepreneurial education is often theoretical and rarely engages students through interactive and technology-driven approaches (Setiawan et al., 2020). This gap underscores the importance of designing accessible, technology-based learning media that resonate with the lifestyles and interests of today's youth.

The main problem addressed in this study is the low level of entrepreneurial attitude and behavior among young people in Tondano City, North Sulawesi. Many youths remain in their comfort zones, reluctant to take risks, and perceive entrepreneurship as uncertain or too demanding (Handayati et al., 2020). The general solution adopted in various educational contexts has been the provision of entrepreneurship courses,

workshops, or training programs that aim to develop entrepreneurial knowledge and attitudes (Souitaris et al., 2007). Nevertheless, conventional face-to-face training methods often fail to attract young participants due to limited accessibility, rigid delivery methods, and low contextual relevance to digital lifestyles (Bae et al., 2014).

Recent literature suggests that digital learning platforms, particularly social media, can be leveraged as alternative educational media to foster entrepreneurial learning (Pittaway & Edwards, 2012; Alalwan et al., 2020). Instagram, as a visually oriented platform with interactive features, has become a powerful communication and learning tool among Generation Z (Djafarova & Trofimenko, 2019). Educational researchers have demonstrated that Instagram-based learning can increase engagement, creativity, and motivation (Manca, 2020; Kurniawan et al., 2022). For example, Mila (2018) developed a multi-representation learning medium based on Instagram and found it effective in enhancing students' learning interest and accessibility in online learning environments. In the field of entrepreneurship education, digital tools have also proven effective in promoting experiential learning (Ratten & Jones, 2021), self-efficacy (Newman et al., 2019), and opportunity recognition (Karimi et al., 2016). Thus, integrating entrepreneurship training into an Instagram-based module offers a promising approach that combines pedagogical innovation with youth digital engagement habits.

Previous studies on entrepreneurship education have largely focused on curriculum design and pedagogical models in formal school or university settings (Fayolle & Liñán, 2014; Nabi et al., 2017). However, few have explored social-media-based entrepreneurship training targeted at non-formal youth communities in small urban areas. Research by Yilmaz & Goktas (2021) emphasizes that social media can support informal learning, yet studies specific to entrepreneurship modules tailored for local youth populations are limited. Furthermore, while some digital training interventions exist (e.g., MOOCs and online workshops), they often lack contextual adaptation to local culture and youth preferences (Pittaway et al., 2015). In Indonesia, particularly in smaller cities like Tondano, there remains a scarcity of localized, mobile-friendly training media that address youth entrepreneurial attitudes through platforms they already use daily. Hence, a research gap exists in developing and validating an Instagram-based training module specifically designed to cultivate entrepreneurial attitudes and behavior among young people in this setting.

The objective of this study is to develop and validate an Instagram-based training module for improving entrepreneurial attitudes and behavior among youth in Tondano City. The research applies the Research and Development (R&D) approach adapted from Borg and Gall (1983) and Sugiyono (2011), involving needs analysis, prototype design, expert validation, and pilot testing. The novelty of this research lies in combining entrepreneurship education principles with social media-based learning design, thus bridging the gap between traditional entrepreneurship training and digital engagement habits of youth. Unlike prior studies focusing on classroom-based interventions, this research emphasizes mobile, visual, and participatory learning experiences accessible anytime and anywhere. The scope of the study covers (1) identifying youth needs and challenges in developing entrepreneurial attitudes, (2) designing an Instagram-based module integrating motivational, creative, and practical components, and (3) testing the module's feasibility and effectiveness in enhancing entrepreneurial behavior. Ultimately, this study contributes both theoretically—by enriching models of digital entrepreneurship education—and practically—by offering a contextualized, scalable training tool for youth empowerment in the digital age.

METHOD

Research Design and Approach

This research adopted a Research and Development (R&D) design, as proposed by Borg and Gall (1987), who defined educational research and development as a systematic process used to develop and validate educational products. The purpose of this approach is to produce, test, and refine educational

innovations that can improve teaching and learning practices. In the present study, the developed product was an entrepreneurial attitude and behavior training module based on Instagram, aimed at young Micro, Small, and Medium Enterprise (MSME) actors in Tondano City. The R&D design was chosen because it enables structured identification of educational needs, prototype design, iterative product development, and limited dissemination for validation. The development procedure followed the 4-D model (Define, Design, Develop, and Disseminate) introduced by Thiagarajan, Semmel, and Semmel (1974). Nevertheless, the research was limited to the first three stages—Define, Design, and Develop—in accordance with the study's objectives and scope.

Population and Sample

The population of this study consisted of young entrepreneurs engaged in MSME activities in Kolongan Tetempangan Village, Tondano. This group was targeted because it represents a generation that is actively involved in digital entrepreneurship and the creative economy, making them ideal beneficiaries of the Instagram-based training module. The sampling technique used was purposive sampling, ensuring that the selected participants met specific inclusion criteria, namely: (1) aged between 18 and 30 years; (2) actively operating an MSME business in Tondano City; and (3) willing to participate throughout the module development and evaluation process.

A total of 30 participants took part in the study, consisting of 15 participants in the pilot test of the module and 15 participants in the Focus Group Discussion (FGD) for product validation. The chosen number aligns with the recommendations by Irwanto (2006), who suggests that effective FGDs typically involve 15 to 30 homogeneous participants. This sample size ensured balanced representation, active discussion, and sufficient qualitative input during validation.

Data Collection Techniques and Instruments

Data collection was conducted through questionnaires and Focus Group Discussions (FGD) to obtain both quantitative and qualitative feedback on the developed module. These complementary methods provided comprehensive insights into user perceptions, content relevance, and product feasibility.

The questionnaire served as the main tool for gathering structured data related to participants' needs, perceptions, and evaluations of the training module. According to Walgito (1999) and Sugiyono (2013), a questionnaire is an efficient data collection method when the researcher clearly understands the variables to be measured and the type of information expected from respondents. In this study, the questionnaire contained closed-ended items using a five-point Likert scale ranging from *Strongly Disagree (1)* to *Strongly Agree (5)*. The questionnaire covered three dimensions: (1) Entrepreneurial Attitude, encompassing indicators such as initiative, creativity, and responsibility; (2) Digital Literacy and Instagram Utilization, which measured skills in branding, marketing, and content creation; and (3) Module Quality, including clarity, relevance, and practicality.

The Focus Group Discussion (FGD) was implemented to obtain qualitative validation and in-depth insights regarding the module's usability, content accuracy, and practical applicability. Following Irwanto (2006), FGD is a structured discussion process that aims to explore collective perspectives in an informal but focused atmosphere. The FGD sessions were moderated by the researcher with assistance from one facilitator, ensuring balanced participation. Each session was audio-recorded, transcribed verbatim, and analyzed thematically. Three conditions were maintained during the discussions: (1) participants were homogeneous, belonging to the same youth MSME community; (2) equal speaking opportunities were provided to all participants through structured turn-taking; and (3) the discussions maintained focus on module evaluation while allowing dynamic and interactive exchanges of ideas.

Data Analysis Procedures

The collected data were analyzed using a descriptive qualitative approach supported by percentage analysis to interpret the overall level of module feasibility and participant satisfaction. The descriptive method was employed to identify participant perceptions, highlight module strengths and weaknesses, and determine the extent of required revisions.

The percentage of responses for each item was calculated using the formula:

$$\text{Percentage} = \frac{\sum X}{SMI} \times 100\%$$

where $\sum X$represents the total score obtained, and $SMI$is the maximum ideal score. To determine the overall level of agreement among all participants, the following formula was applied:

$$\text{Percentage} = \frac{F}{N} \times 100\%$$

where $F$is the cumulative score obtained from all respondents, and $N$is the number of respondents. The interpretation of the results was based on the conversion scale shown below.

Table 1. Conversion of Feasibility Achievement Level

Achievement Level	Qualification	Description
90% – 100%	Very Good	No revision needed
75% – 89%	Good	Minor revisions
65% – 74%	Fair	Several revisions required
55% – 64%	Poor	Major revisions required
0% – 54%	Very Poor	Complete revision needed

This conversion scale was used to assess the practicality and feasibility of the Instagram-based training module as perceived by the participants. Modules achieving a score above 75% were considered ready for implementation with minor adjustments.

Validity, Reliability, and Ethical Considerations

Instrument validation was carried out through expert judgment involving three validators—two specialists in entrepreneurship education and one in instructional media design. The experts evaluated the instrument in terms of content accuracy, language clarity, and technical presentation, using a four-point rating scale. The Aiken's V coefficient (Aiken, 1985) was applied to quantify content validity, where a coefficient value above 0.80 was regarded as satisfactory. The reliability of the questionnaire was tested using Cronbach's Alpha, with a threshold value of 0.70 or higher indicating adequate internal consistency (Nunnally & Bernstein, 1994).

Ethical considerations were strictly observed throughout the study. Participants received detailed information about the research objectives, procedures, and voluntary nature of participation. Each participant signed an informed consent form before data collection. Confidentiality was ensured by anonymizing participant identities and securing data records. Ethical clearance was obtained from the Ethics Committee of Universitas Negeri Manado, certifying that all procedures complied with educational research ethics and protected participant welfare.

RESULTS AND DISCUSSION

Development and Validation of the Entrepreneurial Attitude and Behavior Training Module via Instagram

The initial phase of the research, the Define stage, focused on identifying the learning needs and digital behaviors of young entrepreneurs in Tondano City, North Sulawesi. A Focus Group Discussion (FGD) was conducted with 30 participants between the ages of 18 and 30 who were actively engaged in small-scale entrepreneurial ventures. The purpose of this stage was to understand the participants' attitudes toward entrepreneurship training and their preferred modes of learning. Results indicated that most participants possessed a strong desire to enhance their entrepreneurial mindsets—particularly in dimensions such as creativity, innovation, business planning, and risk-taking. However, they expressed dissatisfaction with conventional training programs, which were often delivered through static manuals, seminars, or one-time workshops. These traditional approaches were perceived as less engaging and disconnected from the realities of the digital age. Participants reported that they were more motivated by visual and interactive content, especially when embedded in digital platforms they already used daily—namely Instagram. The visual nature of Instagram, combined with its algorithmic personalization, made it an appealing medium for learning. This preference aligns with Kuratko's (2017) view that entrepreneurship education in the 21st century must be dynamic, experiential, and digitally mediated. Moreover, Nabi et al. (2018) found that younger generations demonstrate higher engagement and retention when entrepreneurship concepts are delivered through participatory and visual learning tools. The findings also corroborate Ratten and Jones (2021), who argue that social media-based environments can foster self-regulated and collaborative learning, both of which are critical for developing entrepreneurial behavior.

The Design stage of the research involved translating the identified needs into structured instructional materials suitable for digital delivery. The module's content was carefully organized around four key aspects of entrepreneurial attitudes and behavior: initiative, innovation, risk management, and market orientation. Each topic was transformed into modular visual content that could be published as Instagram carousel posts, short videos, and reflective stories. The posts were accompanied by concise text prompts encouraging learners to connect the lesson with their own entrepreneurial experiences. The choice of Instagram as a primary delivery platform was informed by its high user engagement rate and visual learning affordances (Al-Khasawneh et al., 2021). According to Mayer's (2014) Cognitive Theory of Multimedia Learning, combining visual and verbal information enhances comprehension and retention when cognitive load is properly managed. Therefore, each post in the module was designed to balance imagery and text, following Mayer's principle of dual coding. Moreover, the content design ensured that learners could access materials asynchronously and repeatedly, allowing for self-paced review and reflection. This design process made the learning experience micro-modular—each Instagram post represented a standalone learning unit that contributed cumulatively to overall competence development.

At the Development stage, three layers of validation were performed: material expert validation, media expert validation, and pilot testing with actual users. The validation process ensured that the module was not only pedagogically sound but also visually and functionally effective on the Instagram platform. In the material validation, subject-matter experts evaluated nine indicators encompassing content relevance, conceptual clarity, language appropriateness, and contextual accuracy. The experts rated the module with an average score of 90.34%, classifying it as *very good*. They particularly commended the material's alignment with youth entrepreneurial needs and its integration of contemporary examples. However, they suggested minor improvements in linguistic simplicity and novelty. This validation confirmed that the material was theoretically grounded and contextually relevant, consistent with Gibb's (2002) principle that effective entrepreneurship education must reflect learners' social and economic environments. For media validation, design specialists assessed layout, typography, color harmony, and accessibility. The module achieved an average score of 82%, categorized as *good*. Experts noted that the minimalist layout and

consistent visual theme enhanced engagement but suggested refinements for better readability on smaller mobile screens. This aligns with findings from Fiore, Sansone, and Paolucci (2019), who emphasize that media design quality significantly influences learners' affective engagement in digital environments. The Instagram-based validation, conducted by digital learning experts, yielded an average score of 92.5%, which indicates *very good* quality. Evaluators praised the module's coherent navigation and the effective use of captions and hashtags for reinforcing key learning points. They highlighted that the module successfully leveraged Instagram's native affordances—likes, comments, and shares—as social learning feedback mechanisms.

To evaluate the module's acceptance and effectiveness among its target audience, the researcher conducted a user response survey after the pilot testing. Among 30 participants, 92.5% strongly agreed that the module improved their understanding of entrepreneurial attitudes and behaviors, while 7.5% agreed, and none disagreed. This unanimous positive response reflects a strong sense of engagement, relevance, and accessibility. Participants noted that the Instagram format allowed them to learn anytime and anywhere, integrating entrepreneurial reflection into their daily digital routines. This outcome resonates with Prensky's (2012) notion of *digital natives*, who prefer learning formats that mirror their technological lifestyle. Likewise, Moghavvemi, Salleh, and Standing (2017) found that social media-based learning fosters entrepreneurial networking, self-efficacy, and creativity. Therefore, the findings substantiate that social-media-integrated learning modules can enhance youth entrepreneurship competencies, especially when they are designed around learners' cognitive and behavioral patterns.

Digital Entrepreneurship Education

The study's outcomes align with a growing body of research emphasizing the integration of social media in entrepreneurship education. Marques and Albuquerque (2012) found that digital learning environments encourage entrepreneurial autonomy and experimentation by allowing learners to visualize success stories and role models. Similarly, Ahmad et al. (2020) demonstrated that social media, particularly image-based platforms like Instagram, increases entrepreneurial self-efficacy and emotional engagement through interactive content.

The results of the present study reinforce the view that Instagram serves not only as a promotional medium but also as a pedagogical space. By employing storytelling techniques and interactive visuals, the module created a microlearning environment conducive to experiential reflection. Sabir et al. (2021) argue that visual storytelling in entrepreneurship education stimulates emotional and cognitive engagement simultaneously, leading to deeper learning. Hence, this research extends prior literature by providing empirical evidence that Instagram can function as a micro-learning ecosystem for entrepreneurship training.

Furthermore, Ratten and Jones (2021) note that entrepreneurship education in the digital era must transcend traditional classroom boundaries and integrate real-world experiential learning through digital ecosystems. The present findings exemplify this principle by demonstrating how an informal digital platform can effectively facilitate entrepreneurial mindset formation. The results also confirm that micro-content design fosters self-regulation and personalized learning, consistent with Siemens' (2022) connectivist theory emphasizing learning through digital networks.

Divergences from Conventional Models

In contrast to traditional entrepreneurship education, which heavily depends on face-to-face lectures, case studies, or business simulations (Fayolle & Gailly, 2015), the Instagram-based module offered a more accessible, continuous, and flexible learning experience. This mode of delivery supports lifelong and informal learning, where participants can repeatedly access, review, and discuss entrepreneurial topics asynchronously. Liguori and Winkler (2020) highlighted that such flexibility fosters innovation and autonomy by enabling learners to control their pace and engagement level.

However, the study also uncovered certain limitations compared to conventional structured programs. Experts noted that while Instagram enhanced motivation and interactivity, it lacked formal assessment mechanisms such as quizzes or graded assignments. This observation echoes Nabi et al. (2017), who warned that high engagement does not necessarily translate into measurable learning unless assessment tools are incorporated. Thus, future implementations should integrate evaluative features—perhaps through linked online quizzes or gamified challenges—to strengthen the module's pedagogical rigor.

Despite these challenges, the Instagram-based module presents an alternative paradigm that aligns with the reality of Generation Z learners. It bridges the gap between entertainment and education—a concept that Deterding et al. (2011) call gamification of learning experiences, where game-like interaction increases motivation and participation. Therefore, while it diverges from conventional instructional formats, the model provides valuable insights for reimagining entrepreneurship education in a digital age.

Relationship to the 4-D Development Framework

The development process followed the 4-D Model—Define, Design, Develop, and Disseminate—introduced by Thiagarajan et al. (1974). This model remains relevant in the era of digital education because it emphasizes systematic product validation and iterative refinement. Hidayat, Sari, and Nuraini (2023) found that the 4-D framework ensures both theoretical soundness and practical usability in educational product development. In this study, only the first three stages were implemented due to time and scope limitations. Nevertheless, the outcomes—validated module quality, expert approval, and positive user response—demonstrated that the product was feasible and ready for the final dissemination phase.

Supriyadi and Huda (2022) also confirmed that applying the 4-D model to digital module design enhances clarity, interactivity, and alignment between objectives and content. Hence, the present study reinforces the model's applicability to social media-based educational product development. The successful adaptation of the 4-D framework in this research underscores its flexibility and relevance across emerging educational technologies.

Theoretical Implications

From a theoretical standpoint, the findings contribute to the understanding that entrepreneurial attitude formation is both socio-cognitive and experiential. This premise is consistent with Bandura's (1986) Social Cognitive Theory, which posits that learning occurs through observation, imitation, and modeling. The Instagram-based module provided visual representations of successful entrepreneurial behaviors, enabling participants to internalize desirable traits through vicarious learning.

The results also support Ajzen's (1991) Theory of Planned Behavior (TPB), suggesting that exposure to positive entrepreneurial content influences participants' attitudes and perceived behavioral control, which in turn shape their entrepreneurial intentions. The module's interactive features—such as comment discussions and feedback loops—helped normalize entrepreneurial thinking and reinforced social norms that value creativity and initiative.

Furthermore, this study bridges TPB and microlearning theory, demonstrating that short, focused learning interventions delivered through social media can induce meaningful behavioral change. Fiore, Sansone, and Paolucci (2019) reported similar findings, showing that microlearning modules promote long-term retention and transferability of entrepreneurial knowledge. By combining social-cognitive and microlearning perspectives, the current research offers a novel conceptual model for digital entrepreneurship education that leverages both cognitive and social dimensions of learning.

Practical Implications

Practically, the study's findings hold substantial implications for educators, policymakers, and community organizations aiming to enhance youth entrepreneurship capacity. The Instagram-based module presents a low-cost, scalable, and accessible training model that can complement formal education or serve

as an independent learning resource. Given that 85% of Indonesian youth are active social media users (We Are Social, 2024), embedding entrepreneurial education into familiar digital platforms can dramatically increase outreach and inclusivity.

For educators, the integration of social media aligns with Education 4.0 principles, which emphasize adaptability, creativity, and technology-mediated learning (Salmon, 2019). Educators can utilize Instagram modules to supplement classroom teaching, promoting flipped learning and self-directed exploration. For policymakers, adopting such digital-based interventions aligns with national strategies for fostering entrepreneurship and reducing youth unemployment. Programs can be implemented through collaborations between universities, vocational training centers, and local governments to reach diverse youth populations.

Moreover, the Instagram module encourages peer-to-peer interaction and community engagement, reinforcing Putnam's (1995) concept of *social capital* as a driver of collaborative growth. By using social media not only as a marketing space but also as a shared learning community, young entrepreneurs can exchange experiences, provide feedback, and co-create business ideas—thereby strengthening collective entrepreneurial ecosystems.

Limitations and Recommendations

Despite its promise, the study acknowledges several limitations. First, the small sample size (n = 30) constrains the generalizability of results. Future studies should involve a larger and more diverse cohort across different cities and entrepreneurial sectors to validate the model's scalability. Second, because the research concluded at the development stage, it did not measure long-term behavioral outcomes, such as sustained business growth or self-efficacy improvements. Longitudinal research would therefore be valuable in assessing the durability of learning effects.

Another limitation pertains to Instagram's algorithmic bias—content visibility is influenced by engagement patterns and platform algorithms (Kaplan & Haenlein, 2010). Thus, not all learners may receive equal exposure to training materials. To address this, future iterations could integrate cross-platform dissemination via YouTube, TikTok, or Learning Management Systems (LMS) to ensure equitable access.

Future research should also explore gamified learning elements (Deterding et al., 2011) and AI-driven analytics to personalize learning experiences and measure progress. For example, integrating badges or progress trackers could motivate consistent participation. Additionally, a mixed-method design—combining quantitative data from analytics with qualitative reflections—could capture richer insights into how learners internalize entrepreneurial behaviors through digital media.

CONCLUSION

This study set out to develop and validate an Instagram-based training module to strengthen entrepreneurial attitudes and behaviors among youth in Tondano City. The module—designed through a 4-D R&D process (Define–Design–Develop)—achieved very good material validity (90.34%), good media design validity (82%), and very good platform suitability (92.5%); in pilot use, 92.5% of participants strongly agreed and 7.5% agreed that the module improved their understanding, citing its visual micro-content, anytime/anywhere access, and interactive prompts as key drivers of engagement and relevance. Theoretically, the study extends digital entrepreneurship education by operationalizing microlearning and social-cognitive mechanisms on a mainstream social platform, offering a concrete bridge between attitude formation (e.g., initiative, innovation, risk management) and participatory, networked learning. Practically, it provides a low-cost, scalable blueprint—content structure, post formats, captioning, and hashtagging—for educators and community partners to embed entrepreneurship learning in youths' daily digital routines. For policy, the findings support Education 4.0 and youth-enterprise agendas, suggesting that social-media-integrated modules can broaden access, accelerate skill formation, and complement formal programs; future

rollouts should incorporate lightweight assessments and longitudinal tracking to enhance evidence of impact and guide targeted scaling.

REFERENCES

Acs, Z. J., Estrin, S., Mickiewicz, T., & Szerb, L. (2018). Entrepreneurship, institutional economics, and economic growth: An ecosystem perspective. Small Business Economics, 51(2), 501–514. https://doi.org/10.1007/s11187-018-0013-9

Ahmad, S. Z., Bakar, A. R. A., & Ahmad, N. (2020). Social media as a learning tool in entrepreneurship education: Evidence from Malaysia. Education + Training, 62(3), 250–264. https://doi.org/10.1108/ET-09-2019-0207

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Ansari, J. A. N., & Khan, N. A. (2020). Exploring the role of social media in collaborative learning: The new domain of learning. Smart Learning Environments, 7, Article 9. https://doi.org/10.1186/s40561-020-00118-7

Bae, T. J., Qian, S., Miao, C., & Fiet, J. O. (2014). The relationship between entrepreneurship education and entrepreneurial intentions: A meta-analytic review. Entrepreneurship Theory and Practice, 38(2), 217–254. https://doi.org/10.1111/etap.12095

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Prentice Hall.

Borg, W. R., & Gall, M. D. (1987). Educational research: An introduction (5th ed.). Longman.

Brixiová, Z., Ncube, M., & Bicaba, Z. (2015). Skills and youth entrepreneurship in Africa: Analysis with evidence from Swaziland. World Development, 67, 11–26. https://doi.org/10.1016/j.worlddev.2014.09.027

Djafarova, E., & Bowes, T. (2021). "Instagram made me buy it": Generation Z impulse purchases in fashion industry. Journal of Retailing and Consumer Services, 59, 102345. https://doi.org/10.1016/j.jretconser.2020.102345

Fayolle, A., & Gailly, B. (2015). The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence. Journal of Small Business Management, 53(1), 75–93. https://doi.org/10.1111/jsbm.12065

Fiore, E., Sansone, G., & Paolucci, E. (2019). Entrepreneurship education and micro-learning: Evidence from social media-based platforms. The International Journal of Management Education, 17(3), 100–115. https://doi.org/10.1016/j.ijme.2019.03.004

Handayati, P., Wulandari, D., & Agustina, T. S. (2020). Does entrepreneurship education matter for entrepreneurial readiness? Heliyon, 6(11), e05426. https://doi.org/10.1016/j.heliyon.2020.e05426

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. Business Horizons, 53(1), 59–68. https://doi.org/10.1016/j.bushor.2009.09.003

Karimi, S., Biemans, H. J. A., Lans, T., Chizari, M., & Mulder, M. (2016). The impact of entrepreneurship education: A study of Iranian students' entrepreneurial intentions and opportunity identification. Journal of Small Business Management, 54(1), 187–209. https://doi.org/10.1111/jsbm.12137

Koe, W.-L., Sa'ari, J. R., Majid, I. A., & Ismail, K. (2012). Determinants of entrepreneurial intention among university students. Procedia – Social and Behavioral Sciences, 40, 318–324. https://doi.org/10.1016/j.sbspro.2012.03.181

Kuratko, D. F. (2017). Entrepreneurship: Theory, process, and practice (10th ed.). Cengage Learning.

Liguori, E., & Winkler, C. (2020). From offline to online: Challenges and opportunities for entrepreneurship education following the COVID-19 pandemic. Entrepreneurship Education and Pedagogy, 3(4), 346–351. https://doi.org/10.1177/2515127420942793

Manca, S. (2020). Snapping, pinning, liking or texting: Investigating social media in higher education beyond Facebook. The Internet and Higher Education, 44, 100707. https://doi.org/10.1016/j.iheduc.2019.100707

Mayer, R. E. (2014). The Cambridge handbook of multimedia learning (2nd ed.). Cambridge University Press.

Moghavvemi, S., Salleh, N. A. M., & Standing, C. (2017). Entrepreneurs' intentions toward using social media for learning and networking. International Journal of Entrepreneurial Behavior & Research, 23(3), 451–472. https://doi.org/10.1108/IJEBR-06-2016-0197

Nabi, G., Liñán, F., Fayolle, A., Krueger, N., & Walmsley, A. (2017). The impact of entrepreneurship education in higher education: A systematic review and research agenda. Academy of Management Learning & Education, 16(2), 277–299. https://doi.org/10.5465/amle.2015.0026

Neck, H. M., & Corbett, A. C. (2018). The scholarship of teaching and learning entrepreneurship. Entrepreneurship Education and Pedagogy, 1(1), 8–41. https://doi.org/10.1177/2515127417737286

Newman, A., Obschonka, M., Schwarz, S., Cohen, M., & Nielsen, I. (2019). Entrepreneurial self-efficacy: A systematic review of the literature on its theoretical foundations, measurement, antecedents, and outcomes, and an agenda for future research. Journal of Vocational Behavior, 110(B), 403–419. https://doi.org/10.1016/j.jvb.2018.05.012

Pittaway, L., & Cope, J. (2007). Entrepreneurship education: A systematic review of the evidence. International Small Business Journal, 25(5), 479–510. https://doi.org/10.1177/0266242607080656

Pittaway, L., & Edwards, C. (2012). Assessment: Examining practice in entrepreneurship education. Education + Training, 54(8/9), 778–800. https://doi.org/10.1108/00400911211274882

Prensky, M. (2012). From digital natives to digital wisdom: Hopeful essays for 21st century learning. Corwin Press.

Putnam, R. D. (1995). Bowling alone: America's declining social capital. Journal of Democracy, 6(1), 65–78. https://doi.org/10.1353/jod.1995.0002

Ratten, V., & Jones, P. (2021). Entrepreneurship and management education: Exploring trends and challenges. The International Journal of Management Education, 19(1), 100–119. https://doi.org/10.1016/j.ijme.2020.100422

Salmon, G. (2019). E-tivities: The key to active online learning (2nd ed.). Routledge.

Siemens, G. (2022). Learning and knowledge analytics in the digital age. Springer.

Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. Journal of Business Venturing, 22(4), 566–591. https://doi.org/10.1016/j.jbusvent.2006.05.002

Thiagarajan, S., Semmel, D. S., & Semmel, M. I. (1974). Instructional development for training teachers of exceptional children: A sourcebook. Indiana University.

We Are Social. (2024). Digital 2024: Indonesia report. https://datareportal.com/reports/digital-2024-indonesia

World Bank. (2023). World Development Report 2023: Migrants, refugees, and societies. World Bank. https://doi.org/10.1596/978-1-4648-1941-5

Walgito, B. (1999). Pengantar psikologi umum. Andi Offset.