



From theory to reality: A qualitative exploration of entrepreneurial attitudes and intention among vocational students using CBT-based learning

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ABSTRACT

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The growing demand for entrepreneurial graduates has positioned vocational education as a frequently prescribed method for promoting self-employment among youth. Competency-based training is adopted within vocational high schools in Indonesia to increase applied skills and entrepreneurial potential among students. Therefore, this present study aims to explore how competency-based training influences entrepreneurial attitudes and intentions among vocational high school graduates. This study adopted a qualitative approach, and data were collected through in-depth semi-structured interviews with 16 vocational schools from various disciplines. The findings indicate that competency-based training drives the development of entrepreneurial attitudes, with the enhancement of self-efficacy and opportunity recognition. Additionally, this study shows that competency-based training and teacher feedback transformed perceptions of entrepreneurship from theory to action. However, the transition from intention to action was constrained by internal challenges faced by vocational high school graduates, such as low confidence and limited business knowledge, as well as external barriers like capital access and lack of mentorship. The results contribute to both theory and practice by explaining how mastery experiences and social modeling embedded in competency-based training influence entrepreneurial mindset formation among graduates. This contribution clarifies learning processes supporting entrepreneurial development and offers practical insights for designing vocational programs aligned with workforce and self-employment expectations.

Contribution/Originality: This research expands training theory by qualitatively elucidating mastery experiences and social modeling that influence entrepreneurial mindsets among vocational students. It builds on earlier quantitative findings by providing classroom-based evidence that connects competence acquisition with intention-to-action pathways in Indonesian vocational education. The study offers pragmatic guidance for the design of entrepreneurship-focused programs and their implementation in Indonesian vocational high schools.

1. INTRODUCTION

Entrepreneurship is a theme that has attracted attention among scholars across countries, including Indonesia (Amalia & von Korflesch, 2021; Kusmintarti, Anshori, Sulasari, & Ismanu, 2018). Prior studies remarked that entrepreneurship is promoted as a key element for economic growth and a solution to youth unemployment (Hunt, 2021; Munyo & Veiga, 2024; OECD, 2021). Concerning Indonesia, vocational high schools, also known as SMK, are

mandated to prepare their graduates to enter the workplace and equip them with the competencies and mindset to pursue self-employment or entrepreneurial ventures (World Bank, 2022). There is evidence that entrepreneurial attitude and intention can be boosted through the involvement of competency-based training (CBT). For instance, preliminary studies remarked that CBT can promote technical skills and entrepreneurial engagement, such as initiative, innovation, and resilience (Mahmudah, Baswedan, & Cahyono, 2023; Widodo, Baswedan, Suyata, & Saputra, 2025).

CBT is pushed as a way to link what students learn in school with what employers want. Sometimes, when the focus is on outcome-based evaluations like passing a test or finishing an internship, people forget how important it is to know how ready and willing students are to start their own businesses (Rohman, 2020). The matter of CBT is also recognized to be relevant to industry needs with the integration of soft skills aspects (Som, Fahmy-Abdullah, Rashid, & Rahim, 2022). According to Lans, Wesselink, Biemans, and Mulder (2014), CBT can either enhance technical skills or students' psychological maturity, which includes self-confidence, motivation, and positive attitudes towards entrepreneurship. Even though entrepreneurship subjects have been included in the vocational school curriculum, the translation of entrepreneurial intentions into real business ventures is still low among students, so CBT has become prominent. This is indicated by findings that vocational students in Indonesia lack a mindset to translate intent into action (Fawaid et al., 2022; Handayati, Wulandari, Soetjipto, Wibowo, & Narmaditya, 2020).

This study is built on considering Ajzen's theory of planned behavior (TPB) and social constructivist learning theory to explore how CBT promotes entrepreneurial attitudes and intention. According to TPB, intention is shaped by one's attitude, perceived control, and social norms (Ajzen, 1991). Concerning in vocational studies, it can be beneficial on how students experience CBT in the classroom, whether they feel supported and capable of starting a business. CBT is focused on real-world tasks, and project-based learning aligns with this view, which indicates that entrepreneurial intention can exist through meaningful participation instead of didactic instruction. As such, this framework guides the study to investigate how students' interaction with teachers, peers, and learning content during CBT can shape their entrepreneurial perceptions.

Despite several quantitative studies in Indonesia that have examined entrepreneurship education outcomes in SMKs, still little scientific qualitative exploration on how CBT in particular influences students' entrepreneurial attitudes and interests (Endang & Kuat, 2023; Marliyah, 2018). Existing studies in this field have only focused on measuring intention scores or self-reported competencies; however, much less explore the narratives and personal experiences that shape responses (Prihatin, Widiastuti, & Rohman, 2023; Widoyoko, Nursidiq, Suyitno, & Setiawan, 2022). Furthermore, while national policies promote CBT and entrepreneurship education, little is known about how students in urban vocational schools, like in Semarang, experience this integration (Saputri, Yulastri, Yuliana, Saputra, & Fiandra, 2024; Widodo et al., 2025). This study seeks to address a deficiency in the existing literature and advocates for evidence-based enhancements in curriculum development and pedagogical approaches.

This study seeks to investigate the impact of CBT on entrepreneurial attitudes and intentions among vocational high school graduates in Semarang, Indonesia. It thoroughly examines students' subjective learning experiences within a CBT framework and how these experiences influence their perceptions of entrepreneurship as a prospective career. This qualitative study extends prior quantitative research in the Indonesian SMK context by providing in-depth insights into classroom processes and student learning experiences that underlie measured learning outcomes. This present study is guided by several research questions (RQ).

RQ1. How does CBT influence the entrepreneurial attitudes and intentions of vocational high school graduates?

RQ2. How do graduates perceive entrepreneurship after completing CBT?

RQ3. What internal and external challenges do graduates face in translating entrepreneurial intention into action?

This study contributes to the growing body of literature on entrepreneurship within vocational settings from the qualitative exploration of how CBT influences entrepreneurial attitudes and intentions among vocational high

school graduates in Indonesia. This study foregrounds the theoretical understanding of CBT that transmits technical competencies as a pedagogical space. In addition, this study highlights structural and cultural barriers, such as a lack of support and access to capital, that bridge the translation of entrepreneurial intention into action. This means that it is even more important for politicians and teachers to make sure that vocational education is in line with larger national and international goals of entrepreneurship and economic empowerment.

2. LITERATURE REVIEW

2.1. CBT in Vocational Education

Competency-Based Training (CBT) is a method of teaching and training that focuses on mastering specific skills and competencies over time spent in class (Timmerberg, Chesbro, Jensen, Dole, & Jette, 2022). CBT is a common method used in vocational and technical education that focuses on gaining skills that are useful in the workplace (Sarfo, 2023).

As part of plans to reform, it is used in many fields, including oil and gas and information and communication technology (Malek, Misnan, Rahim, Ahmad, & Asari, 2025). Previous studies demonstrate improved skill acquisition and retention, alongside considerable implementation challenges (Nacheva & Hristova, 2024). These challenges pertain to the coherence of the competency framework and the necessity for ongoing evaluation. Critical scholarship delineates conceptual ambiguity and interpretive variation linked to diminished learner adaptability (Hodge, Mavin, & Kearns, 2020; Smith, 2023). Empirical studies investigating the integration of CBT and entrepreneurship education in SMKs are still limited.

2.2. Entrepreneurship Education in Vocational Education

Entrepreneurship education within vocational education (SMK) is regarded as a strategic response to the discrepancies between education and the labor market in Indonesia (Mutiaraningrum, Fitriati, Yuliasri, & Saleh, 2024; Widodo et al., 2025). Current models emphasize the enhancement of employability and entrepreneurial skills in accordance with the transition of vocational graduates into professional environments (Widodo et al., 2025). A key design element is the formation of a mindset based on local cultural values and economic conditions in the region (Sadewo, Utami, Handoyo, & Pribadi, 2018).

Instructional practices emphasize project-based learning and collaboration with industry to cultivate practical entrepreneurial skills, rather than employing CBT e.g., (Mutiaraningrum et al., 2024; Sadewo et al., 2018). Most research has focused on how project-based learning improves vocational students' entrepreneurial knowledge and ability to spot opportunities e.g., (Affandi, Mitsuru, Kamil, & Suryadi, 2021; Masdarini, Candiasa, Agustini, & Sudatha, 2024) while the role of CBT has been mostly ignored.

2.3. From Intention to Entrepreneurial Action

The dynamic between entrepreneurial intention and action among vocational school graduates illustrates a complex interaction of psychological, educational, and contextual factors. Studies in Indonesian and Chinese vocational education contexts reveal that technological proficiency and self-efficacy are significant predictors of entrepreneurial intentions; however, these intentions do not consistently translate into actual entrepreneurial behaviors (Cao, 2022; Fawaid et al., 2022; Handayati et al., 2020). Prior studies indicate that graduates face structural and motivational barriers when they leave formal programs. In addition, it is found some obstacles include limited access to start-up help to put things off, which makes the intention–action gap worse (Harima, Gießelmann, Göttsch, & Schlichting, 2021; Rohanaraj, 2023). Entrepreneurship education and social support networks can facilitate this transition, with creativity and an entrepreneurial mindset serving as pivotal psychological drivers (Niu, Niu, Wang, & Wu, 2022).

3. METHOD

3.1. Research Design

This study employed a qualitative research design to explore how graduates of vocational high schools in Semarang, Indonesia, perceive the influence of Competency-Based Training (CBT) on their entrepreneurial attitudes and interests. A qualitative methodology was considered suitable for obtaining profound insights into students' experiences and perceptions of CBT, which quantitative surveys fail to capture (Creswell & Poth, 2018; Merriam & Tisdell, 2016). The research was situated within a constructivist paradigm, which views knowledge as a social construct (Guba & Lincoln, 1994). This design was beneficial for the researcher to examine how students made meaning of their CBT experiences. In addition, the flexibility of qualitative design is beneficial to adapt the interview process according to the unique backgrounds and responses of each participant (Patton, 2015).

3.2. Participants and Sampling

Participants in this study consisted of 16 graduates from vocational high schools (SMK) in Semarang, Central Java. All participants were graduates of a single public vocational high school, which implements competency-based training across multiple vocational programs. The inclusion criteria required that participants had completed at least one full academic year of CBT and had completed their graduation within the past two years. Participants were chosen through a purposive sampling strategy, subsequently followed by theoretical saturation sampling to guarantee diversity among majors (e.g., culinary, accounting, fashion, and mechanical engineering) and to encompass a spectrum of experiences across various CBT implementations. The school was selected due to its established use of CBT and its role as a representative vocational institution in the Semarang region. The sample included both male and female respondents from various socioeconomic backgrounds. Saturation was considered reached when interviews no longer yielded substantively new themes related to students' entrepreneurial attitudes and interest formation. The rationale for this sampling approach was to ensure variation while still maintaining focus on the core objective and understanding how CBT influences the entrepreneurial intention and attitude.

3.3. Data Collection

Data were collected through semi-structured and in-depth interviews to reflect upon and articulate their personal experiences with CBT. The interview protocol was developed based on themes identified in previous literature on entrepreneurship education and vocational pedagogy, which consists of open-ended questions organized around three core areas: (1) learners' perceptions of CBT delivery, (2) their evolving interest in entrepreneurship, and (3) any perceived barriers or enablers to entrepreneurial action. A pilot interview was conducted with three participants to test the clarity and relevance of the proposed questions. In this study, all interviews were conducted in Bahasa Indonesia to ensure the authenticity of responses among involved participants. Before participating in this research, the participants were provided with a written informed consent form detailing the study's objectives and voluntary nature to ensure confidentiality and anonymity. Interviews lasted between 30 and 50 minutes, and the interviews were recorded (with consent) and transcribed verbatim. To maintain contextual significance, chosen excerpts were subsequently translated into English for reporting purposes. Field notes were also used to write down non-verbal cues and the scenario.

3.4. Data Analysis

The collected data from interview transcripts were further analyzed using thematic analysis as proposed by Miles and Huberman (1994), which consists of three stages: data reduction, data display, and conclusion drawing. To begin this process, it involves coding the entire transcript line by line to identify emerging concepts related to entrepreneurial thinking and the perceived impact of CBT. Subsequently, the codes were then grouped into thematic clusters through iterative comparisons across cases, with the main goal of refining and merging overlapping

categories. Once the previous stages were completed, themes were validated through multiple rounds of re-coding and peer debriefing with two independent researchers familiar with qualitative educational studies.

4. RESULTS

4.1. Demographic Profile

Table 1 presents the background of 16 participants (coded A1–A16) who are graduates of Semarang vocational schools in Indonesia. The participants comprise a varied assortment of vocational disciplines, including Culinary Arts, Mechanical Engineering, Fashion Design, Accounting, Hospitality and Tourism, and Multimedia. In terms of gender, 10 participants were female, and 6 participants were male, with an age range of 18 to 21 years. Several participants have been involved in entrepreneurial ventures, particularly those from Culinary Arts (e.g., cake business, online food, home-based catering). Others have taken up employment, such as in hotels, factories, or technical apprenticeships. A few participants involved in this study are continuing their education, while others remain unemployed. Socioeconomic background also varies, with an even distribution between middle- and low-income groups.

Table 1. Informant codes and background overview.

Participant Code	Gender	Age	Vocational Major	Post-Graduation Activity	Socioeconomic Background
A1	Female	19	Culinary Arts	Entrepreneur (Cake business)	Middle-income
A2	Male	20	Mechanical Engineering	Factory worker	Low-income
A3	Female	18	Fashion Design	Unemployed, planning a boutique	Middle-income
A4	Male	21	Accounting	University student	Middle-income
A5	Female	20	Hospitality & Tourism	Hotel receptionist	Low-income
A6	Male	19	Multimedia	Freelance video editor	Middle-income
A7	Female	20	Culinary Arts	Entrepreneur (Online food)	Low-income
A8	Male	18	Accounting	Internship	Low-income
A9	Female	21	Fashion Design	Freelance fashion assistant	Middle-income
A10	Male	20	Mechanical Engineering	Technical apprentice	Low-income
A11	Female	19	Hospitality & Tourism	Further study (Diploma)	Middle-income
A12	Male	18	Multimedia	Content creator	Middle-income
A13	Female	21	Culinary Arts	Unemployed	Low-income
A14	Female	18	Multimedia	YouTube editor	Middle-income
A15	Male	20	Hospitality & Tourism	Hotel staff	Low-income
A16	Female	19	Culinary Arts	Home-based catering	Middle-income

4.2. CBT Influences Entrepreneurial Attitudes and Intention

This study focused on the impact of CBT on entrepreneurial attitudes and intentions. CBT provided students with experiences, such as school-operated micro-enterprises and product simulations, that enhance their understanding of the entrepreneurial process. Several participants remarked that the CBT project can boost their confidence and perceived ability to handle practical business responsibilities (see Table 2). Hence, it can be seen that CBT influenced the entrepreneurial attitudes and intentions of SMK graduates. In this study, participants involved in entrepreneurial ventures, particularly in culinary arts and multimedia, frequently described CBT as a main driver for building entrepreneurial self-efficacy. A1 and A7, for example, noted how school-based business projects allowed them to test their product ideas and build confidence to pursue self-employment. Other participants (e.g., A3 and A9) remarked that CBT helped them identify the value of their creative skills to commercialize in the future. Additionally, middle-income participants framed entrepreneurship as a path to self-actualization and independence, while low-income graduates (e.g., A2, A5, and A13) expressed intentions more cautiously, influenced by financial constraints and family expectations. Interestingly, even those not currently engaged in entrepreneurship (e.g., A4, A10, A15) reflected on CBT as planting the seeds of long-term entrepreneurial aspiration. The data also indicate the role of

digital activation, primarily among multimedia graduates (A12 and A14), who translated their CBT experiences into content-based income.

Table 2. Coding knowledge data on entrepreneurial attitudes and intention.

Participant Code	Selected Open Code	Key Concept
A1 (F, 19, Culinary, Entrepreneur)	"CBT gave me the chance to test my cake recipes and sell them. That gave me courage."	Entrepreneurial self-efficacy
A2 (M, 20, Mechanical, Factory worker)	"Even though I work in a factory, CBT taught me how to plan a side business someday."	Long-term entrepreneurial aspiration
A3 (F, 18, Fashion, Unemployed)	"I want to open a boutique, and CBT helped me realize people like my designs."	Skills monetization awareness
A4 (M, 21, Accounting, Student)	"The budgeting task during CBT made me think seriously about how money works in business."	Financial literacy and business mindset
A5 (F, 20, Hospitality, Receptionist)	"I never thought of business before CBT, but now I want to try online services in the future."	Shift in entrepreneurial mindset
A6 (M, 19, Multimedia, Freelancer)	"CBT showed me that editing is not just skill, but a service people are willing to pay for."	Freelance opportunity recognition
A7 (F, 20, Culinary, Online food seller)	"From our CBT project, I created my own food brand. It started small but it's mine."	Entrepreneurial identity formation
A8 (M, 18, Accounting, Internship)	"After CBT I understand business better, even though I'm still learning in my internship."	Foundation for future intention
A9 (F, 21, Fashion, Freelancer)	"I got my first paid order because of the portfolio I built during CBT class."	Practice-based validation
A10 (M, 20, Mechanical, Apprentice)	"Even if I work in a workshop now, CBT made me want to eventually build my own place."	Long-term self-employment orientation
A11 (F, 19, Hospitality, Further study)	"CBT taught us about branding and customer service. I want to run a guesthouse someday."	Entrepreneurial visioning through CBT
A12 (M, 18, Multimedia, Content creator)	"After learning video marketing in CBT, I opened my own content channel."	Digital entrepreneurship trigger
A13 (F, 21, Culinary, Unemployed)	"Even though I'm not working yet, I'm collecting recipes and learning to cost them."	Delayed but developing entrepreneurial intent
A14 (F, 18, Multimedia, YouTube editor)	"The CBT project helped me turn my editing hobby into real freelance work."	Entrepreneurial activation via school project
A15 (M, 20, Hospitality, Hotel staff)	"I apply what I learned from CBT in customer service now, and I want to open a homestay later."	Practical-to-aspirational progression
A16 (F, 19, Culinary, Catering)	"What started as a CBT food stall became my home catering job. Customers remember me."	School-to-business trajectory

4.3. Perception of Graduates after Completing CBT

The next purpose is to reveal that CBT can reshape how vocational high school graduates in Indonesia conceptualize entrepreneurship. Rather than perceiving entrepreneurship as a distant, formal, or capital-intensive undertaking, graduates began to see it as a practical, skill-based, and accessible career path, which is aligned with their technical training and local economic context.

Three overarching perceptions emerged from the data: (1) entrepreneurship as a practical extension of vocational competence, (2) entrepreneurship as a pathway to self-reliance and income autonomy, and (3) entrepreneurship as a responsive and creative problem-solving process (see Table 3).

Table 3. Coding knowledge data on perception of graduates after completing CBT.

Participant Code	Open Code	Key Concept
A1	"CBT gave me the experience to try business directly, not just theory. It changed how I see work."	Practical exposure reshapes work perception
A2	"Now I know that starting small is okay. I didn't think business was for people like me before."	Inclusivity and feasibility of entrepreneurship
A3	"CBT showed me that fashion design can be more than a skill; it can be a business too."	Skills as business capital
A4	"I appreciate CBT now that I understand how accounting applies to real businesses."	Application of theory to practice
A5	"Before, I never thought I'd be interested in business. But CBT made it feel real and doable."	Attitudinal shift toward entrepreneurship
A6	"I see myself differently now. I'm not just a student, I can be a freelancer or business owner."	Identity expansion through CBT
A7	"Selling during the school bazaar helped me believe that I could continue after graduation."	Validation through real-life selling
A8	"Even though I'm just an intern, I already think about how to manage a business one day."	Entrepreneurial aspiration in formation
A9	"People liked my work in CBT. That feedback stayed with me."	External affirmation fosters confidence
A10	"Working with tools in CBT made me realize I want to have my own garage in the future."	Visioning self-employment
A11	"CBT made business feel less risky. I learned that planning helps reduce uncertainty."	Risk perception transformed
A12	"Before CBT, I only posted videos for fun. Now I know it can be income too."	Monetization awareness of digital skills
A13	"I failed at first, but my teacher encouraged me to try again. That was important."	Resilience and supportive learning
A14	"I realized that my editing skills are valuable not just a hobby."	Recognition of skill value
A15	"I use what I learned in CBT at work, and I'm saving to open something small."	Bridging work experience to business goals
A16	"My CBT project became a real business at home. It gave me a head start."	School-business continuity

Table 3 shows that CBT changed how SMK graduates think about their skills and future career paths in entrepreneurship. Most informants revealed a transition from passive job seekers to active value providers, either through entrepreneurship or practical work. Some informants (e.g., A1, A5, and A6) expressed how CBT demystified business by offering hands-on experience, making entrepreneurship seem feasible. Others (e.g., A3, A9, and A14) mentioned recognizing their skills, including fashion design and editing, as economically monetizable. The validation students received through customer feedback and peer recognition during CBT activities translated into increased confidence and entrepreneurial intention. Moreover, participants (e.g., A11 and A13) pointed out how CBT shifted their understanding of risk from fear-based to manageable through structured planning and trial-and-error learning.

4.4. Internal and External Challenges in Translating Entrepreneurial Intention into Action

CBT was found to enhance students' entrepreneurial attitudes and intentions. Many participants described experiencing a range of barriers that prevented them from transitioning from interest to entrepreneurial action. These can be grouped into two categories: internal (individual-level) and external (structural/societal). Several participants reported internal limitations, such as fear of failure, low self-confidence, and perceived lack of business knowledge outside their vocational skill set. Even students who performed well during CBT projects expressed hesitancy about starting a business independently after graduation.

Table 4. Coding knowledge data on internal and external challenges.

Participant Code	Open Code	Key Concept	Challenge Type
A1	"I was ready to start, but I lacked the capital to expand beyond my kitchen."	Limited financial resources	External
A2	"My parents think business is risky. They told me to focus on a stable job."	Family discouragement	External (Socio-cultural)
A3	"I feel I don't know enough to start, what about taxes, marketing, permits?"	Knowledge and administrative uncertainty	Internal
A4	"I still lack confidence to sell something on my own, even after CBT."	Low self-confidence	Internal
A5	"There's no one to guide me after school. I don't know where to go from here."	Absence of post-graduation support	External (Institutional)
A6	"Balancing freelance work and planning a business is stressful. I lack time and focus."	Role strain and time limitations	Internal
A7	"I'm selling online, but I can't grow without help or a delivery system."	Infrastructure and logistical barriers	External
A8	"People laugh when I say I want to run a business at my age."	Peer pressure and age stigma	External (Social norms)
A9	"It's hard to find customers without marketing money or online skills."	Limited market access and exposure	External
A10	"I want my own garage someday, but I have to save slowly while working now."	Economic survival priority	Internal/External
A11	"I'd start something small, but I still don't know how to calculate risk."	Inability to assess risk	Internal
A12	"I lack support from adults. They don't take my content seriously as a job."	Lack of adult recognition	External (Attitudinal)
A13	"After my business failed during CBT, I lost motivation."	Fear of failure from past experience	Internal
A14	"I have the idea, but I can't convince my family to lend me money."	Family as financial gatekeepers	External (Familial)
A15	"The paperwork and licenses scare me. I don't want to deal with that alone."	Bureaucratic and regulatory barriers	External (Systemic)
A16	"I run a home business now, but without branding or tech, it's hard to scale up."	Lack of branding and digital know-how	External (Capacity)

The analysis in Table 4 reveals that SMK graduates face a complex interplay of internal and external challenges that can affect the translation of entrepreneurial intention into tangible business action. The internal factors include psychological constraints such as low self-confidence (A4), fear of failure (A13), and limited understanding of business procedures (A3, A11). Furthermore, role conflict and time constraints (A6) pose issues for SMK graduates, who face a trade-off between part-time or full-time work and entrepreneurship. Interviews also found that the most common external obstacle preventing individuals from pursuing entrepreneurial endeavors is a lack of capital (A1, A14). This is especially true for low-income or unemployed participants who are not yet eligible for financial assistance or formal credit from banks or other financial institutions. Family and social discouragement (A2, A8, A12) significantly diminish motivation, sometimes stemming from beliefs that entrepreneurship poses risks for youth. Participants also face structural limitations, such as the absence of mentorship or post-graduation guidance (A5), bureaucratic obstacles (A15), and poor access to marketing infrastructure (A9, A16). Even those with initial entrepreneurial engagement (A7, A16) find it difficult to scale without digital or branding capabilities.

5. DISCUSSION

The first finding indicates that CBT can influence entrepreneurial attitudes and intentions by enhancing self-efficacy and opportunity recognition. This supports the Social Cognitive Theory (Bandura, 1986), which emphasizes the role of mastery experiences and social modeling in the interaction between individual agency and environment in shaping behavior. Participants reported that hands-on tasks, such as product creation and school-based business

simulations, increased their entrepreneurial confidence and future aspirations. Similarly, Nowiński and Haddoud (2019) found that experiential pedagogies promote greater self-efficacy and intention among vocational students compared to traditional classroom approaches. Moreover, supportive feedback from teachers and peers during CBT activities acts as verbal persuasion, one of Bandura's four sources of self-efficacy, fostering belief in entrepreneurship as a viable path. This aligns with recent findings by Hasan, Khan, and Mohd Nor (2023), which showed that CBT can enhance entrepreneurial motivation.

The next finding reveals that SMK graduates perceive CBT as a transformative educational experience that can build their understanding of entrepreneurship and self-agency. A shift in perception from viewing entrepreneurship as abstract to recognizing it as a viable skill-linked career pathway. This transformation can be understood through the lens of constructivist learning theory, which notes that learners build meaning through active engagement and social interaction (Fosnot, 2013; Vygotsky, 1978). The school-based projects embedded within CBT created learning environments that promote students to recognize entrepreneurial identities. This finding supports Nowiński and Haddoud (2019), which stated that experiential exposure influences how students envision themselves as future entrepreneurs. Additionally, several participants noted that feedback from educators and their experiences during CBT can enhance their confidence in entrepreneurship and further underscore the significance of social validation in shaping perceived competence (Hasan et al., 2023).

This study shows that SMK graduates often face big internal and external barriers, even though CBT can change how people feel and think about starting a business. For internal challenges, participants expressed doubts about their readiness to launch a business, citing low self-confidence, fear of failure, and limited understanding of licensing or marketing processes. The finding is in agreement with prior study by Ndofirepi (2020) which noted that entrepreneurial self-efficacy plays a critical role in post-educational action. While for external matter, it is known that financial constraints and unsupportive family attitudes have been the main issues for supporting business action (Fatoki, 2019; Kusumawardhani, McCarthy, & Perera, 2021). According to Social Cognitive Theory (Bandura, 1986), CBT can improve self-efficacy through mastery experiences. However, the lack of supportive environmental conditions, such as role models, access to resources, and institutional support, can hinder behavioral implementation.

6. CONCLUSION

This study aimed to explore how CBT can influence entrepreneurial attitudes and intentions among vocational high school (SMK) graduates in Indonesia using a qualitative approach. The findings remark that CBT plays a transformative role in shaping graduates' entrepreneurial mindset with the enhancement of self-efficacy and opportunity recognition. In addition, SMK graduates perceived CBT as a meaningful departure from traditional instruction, which helps them connect technical skills to market demands and entrepreneurial behavior. However, the study also revealed a remaining issue between entrepreneurial intentions and actions. The study identified internal barriers, such as low self-confidence and fear of failure, as well as external barriers, including limited capital and family rejection.

6.1. Implications

This study contributes to the literature on entrepreneurship education by extending Social Cognitive Theory (Bandura, 1986) into the context of competency-based vocational learning. The importance of CBT is highlighted through entrepreneurial self-efficacy, which is influenced by mastery experiences and verbal encouragement. Additionally, the research supports the constructivist perspective, emphasizing how learners construct entrepreneurial meaning through experiential and socially embedded learning processes. The study also responds to calls in the literature (e.g., Hasan et al. (2023)) for qualitative approaches to understanding how educational experiences shape intentions and how these are constrained by structural factors. Furthermore, it offers practical contributions for vocational institutions and policymakers to improve the entrepreneurial infrastructure surrounding

CBT. Educators are encouraged to incorporate more structured reflection and business planning components into CBT curricula to ensure students develop entrepreneurial mindsets and actionable skills.

6.2. Limitation and Suggestion

While this study provides some implications; nonetheless, several limitations should be acknowledged. First, the study focused on a purposive sample of 16 graduates from SMK institutions in Semarang, which can introduce geographic overrepresentation to other regions in Indonesia. Second, the study depends on students' graduate data, while other informants from related parties, such as the education department, teachers, and principals, are needed. Future research should consider expanding the geographic and institutional scope to include rural and private SMK contexts across Indonesia. Lastly, mixed-method or longitudinal designs provide a comprehensive understanding of how entrepreneurial attitudes evolve over time and translate into actual entrepreneurial behavior.

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Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

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