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The effectiveness of entrepreneurship workshop programs in higher education on improving students' soft skills: systematic literature review

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ABSTRACT

This systematic literature review examines review focuses on a particular type of entrepreneurship program entrepreneurship programs' effectiveness in improving students' soft skills in higher education. Through analysis of 25 research articles from Scopus-indexed journals published between 2018-2024, this study investigates the effectiveness, influencing factors, and challenges in implementing entrepreneurship programs. The findings reveal that entrepreneurship programs demonstrate varying degrees of success in developing students' soft skills, with effectiveness heavily influenced by implementation methods and learning contexts. Factors affecting program success include curriculum design, teaching methods, instructor quality, and industry integration. Common challenges include limited funding, insufficient qualified instructors, and gaps between academic content and industry needs. The review suggests that successful implementation requires a holistic approach integrating adaptive curriculum development, instructor capacity building, industry collaboration, and innovative teaching methods. This study contributes to understanding how higher education institutions can design and implement more effective entrepreneurship programs that develop relevant soft skills for contemporary workforce demands. The implication of this research lies in strengthening the capacity building of teachers and learning infrastructure.

1. Introduction

Higher education has a vital role in preparing students to face the challenges of the work world in the era of globalization. In addition to mastery of hard skills, soft skills are a critical factor in the success of graduates' careers in the future [1], [2]. However, there is a gap between students' soft skills and the industry's needs [3], [4]. Based on an initial survey of 100 students at five universities in Indonesia in 2023, it found that 65% of students have low levels of communication skills, 58% lack leadership skills, and 70% are weak in critical thinking and problem-solving skills. Indicates a gap between students' soft skills and the demands of the world of work [2], [5]. Research in the field shows a gap in the effectiveness of entrepreneurship programs. Research by Souitaris *et al*. found that entrepreneurship programs increase students' entrepreneurial intentions but do not significantly affect soft skills [6]. Meanwhile, Oosterbeek *et al*. reported that entrepreneurship programs reduce students' entrepreneurial intentions [7]. On the other hand, Elmuti *et al.* found a positive influence of entrepreneurship programs on soft skills, but the effects vary between individuals [8]. To overcome these problems, universities

implement various entrepreneurship programs to improve students' soft skills [9], [10]. The entrepreneurship program in higher education is a series of structured activities that aim to develop students' entrepreneurial mindsets, attitudes, and skills through learning business theory and practice [11], [12]. The program includes entrepreneurship courses, business training, business plan competitions, student business incubation, and other activities [13], [14]. The implementation of entrepreneurship is expected to improve various soft skills of students, such as creativity, leadership, communication, teamwork, and problem-solving [15]. Several previous studies have shown the positive impact of entrepreneurship programs on the development of students' soft skills [9], [11]. However, the effectiveness of entrepreneurship programs in improving students' soft skills in various higher education contexts still shows mixed and inconsistent results [16], [17].

The implementation of entrepreneurship programs is expected to improve various soft skills of students, such as creativity, leadership, communication, teamwork, and problem-solving [10]. Several previous studies have shown the positive impact of entrepreneurship programs on developing students' soft skills [9], [11]. However, the effectiveness of entrepreneurship programs in improving students' soft skills in various university contexts still needs further research. Given the importance of soft skills for graduates' career success, it is necessary to conduct a comprehensive study on the effectiveness of higher education entrepreneurship programs in improving students' soft skills [18], [19]. A systematic literature review is needed to analyze and synthesize various research findings related to this topic [20], [21]. The review results are expected to provide a comprehensive overview and recommendations for developing effective entrepreneurship programs to improve students' soft skills [22]. The research context focuses on the factors that influence the effectiveness of entrepreneurship programs' effectiveness in improving students' soft skills in higher education. These factors include creativity, leadership, communication, teamwork, and problem-solving, which are seen as important skills to support students' career success. To overcome the challenges in soft skills development, universities have implemented various entrepreneurship programs designed to develop students' entrepreneurial mindset, attitude, and skills through structured activities such as theory learning, business practice, training, business plan competition, and business incubation. Previous research shows a positive impact of these programs on the development of students' soft skills, although the results are still diverse and inconsistent in various university contexts. Therefore, a comprehensive study in the form of a systematic literature review is needed to analyze and synthesize various related findings. The results of this study are expected to provide a comprehensive overview and recommendations that support the development of entrepreneurship programs that are more effective in improving students' soft skills. This study aims to evaluate and provide evidence related to the effectiveness of entrepreneurship programs in higher education in improving students' soft skills through a systematic literature review. The researcher provides research questions to find out what factors affect the effectiveness challenges and solutions in implementing entrepreneurship programs in the development of students' soft skills?

2. Method

This study uses the systematic literature review (SLR) method to review and analyze literature on the effectiveness of entrepreneurship programs in higher education in improving students' soft skills. The SLR protocol refers to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure a systematic and comprehensive review [23]. The systematic literature review (SLR) process systematically identifies, selects, and analyzes research findings relevant to a particular topic. The main stages include identifying the research problem, designing the review protocol, searching the literature using academic databases such as Scopus or Google Scholar, and selecting articles based on inclusion and exclusion criteria. Next, data from the selected articles are extracted, analyzed, and synthesized using narrative or quantitative methods, such as meta-analysis, to find patterns, trends, or research gaps. The process concludes with evaluating study quality and preparing a final report presenting findings and recommendations [24]. Article selection criteria include inclusion criteria: (1) Publication in Scopus Q1-Q4 indexed journals; (2) Study on the implementation of entrepreneurship programs in higher education; (3) Research that presents the results, evaluation methods, or impacts of entrepreneurship programs on students' soft skills; (4)

Articles in English; (5) Published in 2018-2024 (considering the topic so that the latest is still valid). Exclusion criteria include (1) non-primary research review articles, (2) conference proceedings, (3) articles that are not accessible/paid, and (4) articles outside the field of entrepreneurship education and soft skill development. Literature searches were conducted through the Scopus database, considering its reputation as a highly reputable educational source. The search keyword used is The Effectiveness of Entrepreneurship Programs in Higher Education on Improving Students' Soft Skills: Systematic Literature Review. The reference selection process uses Mendeley software. The data analysis technique in SLR adopts a thematic-based narrative synthesis approach. Every article that passes the final selection will be read thoroughly. The analysis begins with an in-depth reading of each article to understand its context, methodology, and critical findings.

Furthermore, the relevant information in each article is coded according to the predetermined research questions, covering aspects such as the implementation of the entrepreneurship program, the impact on students' soft skills, factors affecting effectiveness, and implementation challenges. The coding that emerges from the various articles is then grouped into broader themes that align with the research question. These themes are organized into a coherent and comprehensive narrative, answering each research question with the support of evidence from the analyzed articles. Finally, based on this narrative synthesis, a general conclusion is drawn about entrepreneurship programs' effectiveness in improving students' soft skills in higher education. Through this analysis process, the research aims to analyze the effectiveness of entrepreneurship programs in improving students' soft skills based on relevant research in the Scopus database. The process of filtering articles will be presented using the PRISMA flowchart in Fig. 1.

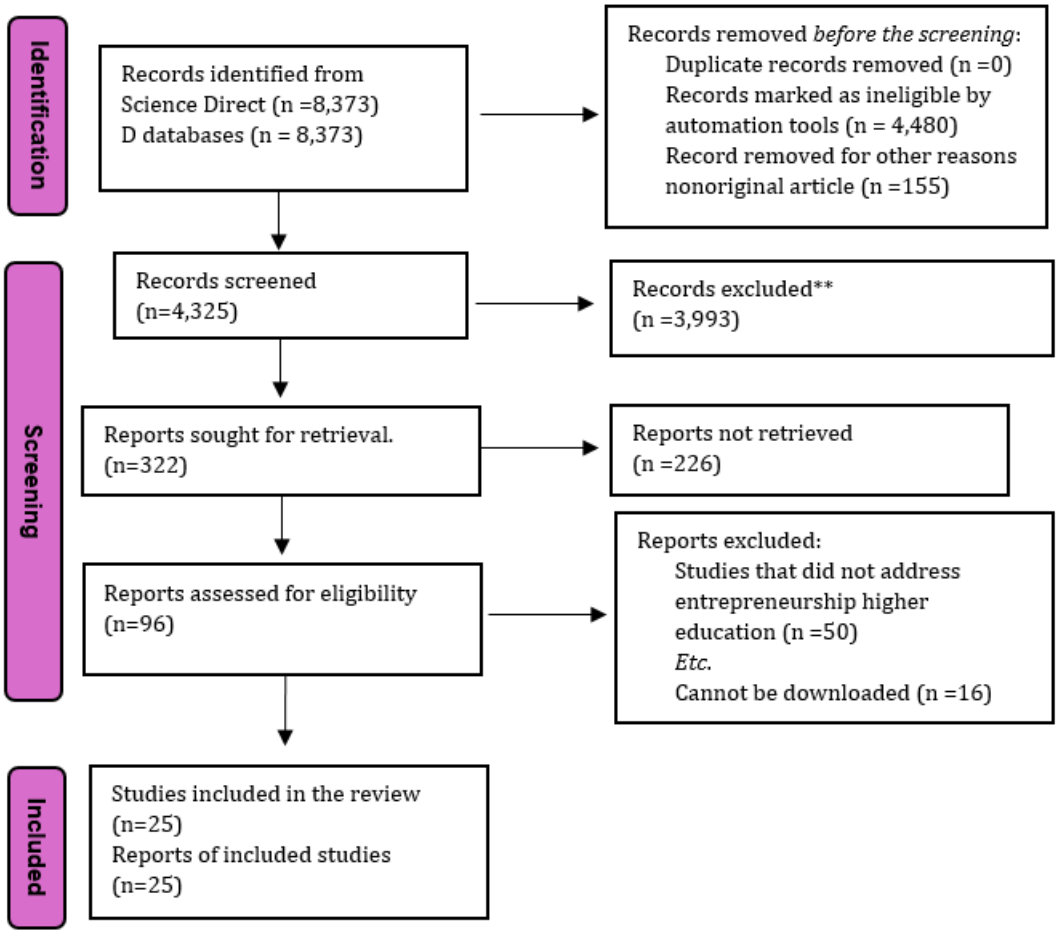

Fig. 1. PRISMA Flow Chart of Entrepreneurship Research

3. Results and Discussion

3.1. The effectiveness of higher education entrepreneurship programs in improving students' soft skills

Entrepreneurship programs in higher education have shown mixed results in developing students' soft skills, with varying levels of success influenced by implementation methods and learning contexts. Abaci's research revealed the effectiveness of these programs in improving students' communication skills, with data showing an increase in entrepreneurial intentions up to 1.3 times [25]. This finding is reinforced by Pan *et al.,* who emphasized that social entrepreneurship education is a gradual process that shapes a career perspective and holistic student skill development [26]. However, there are some significant challenges in the implementation of these programs. Tiberius *et al*. identified a gap in teaching methods, where many programs still focus too much on explicit knowledge transfer and pay less attention to the development of interpersonal skills [27]. This is confirmed by the findings of Dammert and Nansamba, which show that standard training programs supplemented with interpersonal skills training do not always result in significant improvements in business outcomes [28]. The role of academic institutions in developing soft skills is crucial, as emphasized by Dubey and Tiwari, who recommend the importance of collaboration between academics and industry [29]. Ngang *et al*. reinforce this argument by identifying teamwork and communication skills as the two most essential components of soft skills, both in the context of training and workplace applications [30]. Their research shows that these components need special attention in the entrepreneurship curriculum. In a broader context, Amalu *et al.* highlight the importance of balancing academic, industrial, and entrepreneurial skills as a critical industrial sector need. They found that soft skills developed through experiential learning and motivation are key factors for professional success [31]. This finding is in line with the research of Poláková *et al.*, which emphasizes the importance of balancing technical skills with soft skills in the face of increasingly rapid technological developments [32].

The effectiveness of practice-based learning methods is demonstrated by Ginting *et al.* through a team-based training program that successfully develops soft skills such as teamwork, communication, leadership, and ethics [33]. Their program shows significant changes, especially in communication and leadership. Caruana and Mcpherson add an important dimension by emphasizing the need to align learning outcomes with the dynamic needs of the industry [34]. Innovations in learning methods have also shown promising results. Lafortune *et al.* prove that gamified online entrepreneurship training approaches can effectively increase student entrepreneurial activities. However, Munro reminds us of the importance of considering the emotional aspect of skill development, considering the increasingly challenging working conditions in the modern era [35]. Ubfal *et al*. provide a long-term perspective by showing that soft skills training can have a sustained positive effect on targeted skills, although its impact on business outcomes may vary [36]. These findings confirm the need for a more comprehensive approach to evaluating the effectiveness of entrepreneurship programs in higher education. Based on this literature synthesis, entrepreneurship programs' success in improving students' soft skills depends on several key factors: effective integration between theory and practice, the use of experiential learning methods, strong collaboration with industry, and a comprehensive evaluation system. Future research needs to focus on longitudinal evaluation of program impacts, development of more objective assessment methods, comparative studies of various learning approaches, and analysis of the role of technology in the development of soft skills. By considering all these aspects, higher education institutions can design and implement entrepreneurship programs that are more effective in developing students' soft skills that are relevant to the demands of the contemporary world of work.

3.2. Factors Affecting the Effectiveness of Entrepreneurship Programs in Developing Student Soft Skills

Based on a systematic review of the literature, several main factors affect the effectiveness of entrepreneurship programs in developing students' soft skills. First, program design and structure play a crucial role. Tiberius *et al.* identified that an effective program should have specific entrepreneurial goals, not just focus on general business management [27]. They found that successful programs targeted the development of entrepreneurial attitudes and

competencies such as leadership, entrepreneurial mindset, and the ability to identify opportunities. Learning methods and material delivery are the second most significant factors. Pan *et al.* showed that an adaptive learning system that adapts the material to students' abilities is more effective in developing soft skills [26]. This is reinforced by the findings of Lafortune *et al.*, who prove that the gamification approach in online training can significantly increase student engagement and motivation [37]. The quality and competence of instructors are a vital third factor. Esa *et al.* revealed that encouragement from lecturers and two-way communication between students and lecturers is crucial in increasing student involvement in developing soft skills [38]. Ngang *et al.* added that class sizes are too large, and inadequate training periods can hinder the effectiveness of soft skills development [30]. Integration with industry needs is also an important factor. Caruana and McPherson emphasized aligning the curriculum with industry needs and developing sustainable assessment mechanisms [34]. Wilson *et al.* support these findings by showing that industry training is effective in developing professional ethics and teamwork skills [39].

Dammert and Nansamba identified that combining standard training with interpersonal skills training does not always result in significant improvements, demonstrating the importance of designing a well-integrated program [28]. Abaci found a significant positive correlation between students' perception of entrepreneurship and their communication skills, emphasizing the importance of developing communication skills in entrepreneurship programs [25]. Environmental support factors and learning infrastructure also play an important role. Poláková *et al*. underscores the importance of balancing digital and soft skills in the context of Industry 5.0, emphasizing critical thinking, analytical, problem-solving, and creativity [32]. Ginting *et al*. demonstrated the effectiveness of team-based training in developing communication and leadership skills [33]. Ubfal *et al.* provide an important perspective on program sustainability, showing that soft skills training can have a lasting effect on targeted skills, although its impact on business outcomes may vary [36]. Dubey and Tiwari emphasized the important role of academic institutions in developing soft skills and recommended stronger collaboration between academics and industry [29]. Munro highlights the importance of the emotional component in skill development, especially in challenging working conditions [35]. Elkhalladi and Sefrioui added that teachers' knowledge of soft skills and innovative learning methods, such as flipped classrooms, contribute significantly to the development of students' soft skills [40]. Based on this synthesis, it can be concluded that the effectiveness of entrepreneurship programs in the development of soft skills is influenced by the complex interaction between program design, learning methods, instructor quality, integration with industry, and learning environment support. A thorough understanding of these factors can assist higher education institutions in designing and implementing more effective entrepreneurship programs to develop students' soft skills that are relevant to the demands of the contemporary world of work.

3.3. Challenges and solutions in the implementation of higher education entrepreneurship programs

Implementing entrepreneurship programs in higher education faces various challenges, but there are potential solutions based on the latest research. Pan *et al*. identified several fundamental challenges, including financing limitations that hinder program development, lack of qualified teaching staff, and inadequate curriculum to meet entrepreneurship education needs. This research also underlines the negative attitude towards social entrepreneurship that can hinder student engagement. Tiberius *et al*. found that most programs are still dominated by business content and general management, with a relatively small portion of entrepreneurship [27]. This creates a gap between the program's goals and the actual entrepreneurial skills development needs. Amalu *et al*. reinforce these findings by identifying discrepancies between the skills taught and the needs of the industry, as well as resource limitations that hinder the effectiveness of curriculum implementation and student engagement [31]. Challenges in the learning aspect were revealed by Ngang *et al*., who noted that too large class sizes, excessive focus on academic aspects, and inadequate training periods are factors inhibiting the development of soft skills [30]. Esa *et al*. added that the lack of knowledge in teaching entrepreneurial skills among lecturers and the limited time to implement entrepreneurial activities in the curriculum are significant challenges [38].

In the context of a solution, Lafortune *et al*. demonstrated the effectiveness of gamified online entrepreneurship training programs in increasing student entrepreneurial activities [37]. Their research shows that short-term intensive programs can provide better outcomes than traditional settings, especially in challenging conditions such as the COVID-19 pandemic. Abaci suggested expanding the entrepreneurship curriculum's scope to strengthen theoretical knowledge and practical training and improve students' communication skills [25]. Integrating entrepreneurship programs in the university curriculum and increased support for young entrepreneurs in the education system are also recommended as important solutions. Caruana and McPherson propose a constructive alignment approach to ensure alignment between desired learning outcomes and industry needs [34]. Ginting *et al.* showed the effectiveness of team-based training in developing soft skills such as communication and leadership, emphasizing the importance of adapting activities to the needs of participants [33]. Munro emphasized the importance of integrating vocational training early in the program structure and providing practical support for early-stage students [35]. Dubey and Tiwari recommend that academic institutions take action to improve teaching methods to increase student employability [29].

Wilson *et al*. proved that industrial training effectively develops professional ethics and teamwork skills [39], while Poláková *et al.* emphasized the importance of balancing digital skills with soft skills in Industry 5.0 [32]. Elkhalladi and Sefrioui added that using innovative learning methods, such as flipped classrooms, can contribute significantly to developing soft skills [40]. Based on this synthesis, the successful implementation of entrepreneurship programs in higher education requires a holistic approach that addresses various challenges through integrated solutions. This includes the development of an adaptive curriculum, increasing the capacity of teachers, strengthening collaboration with industry, innovation in learning methods, and creating a comprehensive support system. The institution's commitment to adopting these innovative approaches, combined with a deep understanding of existing challenges and solutions, will help ensure the effectiveness of entrepreneurship programs in developing student competencies relevant to the demands of the contemporary world of work.

3.4. Discussion

This study aims to evaluate and provide evidence related to the effectiveness of entrepreneurship programs in higher education in improving students' soft skills through a systematic literature review. A comprehensive analysis of college entrepreneurship programs reveals important patterns and relationships that need to be discussed further. The main findings show a complex relationship between the effectiveness of the program and the factors that affect it, as well as the challenges and solutions in its implementation. Tiberius *et al*. identified the dominance of general business and management content in entrepreneurship programs, which shows a fundamental gap in curriculum design [27]. This is closely related to the challenges identified by Pan *et al*. regarding the limitations of quality teaching staff and inadequate curriculum, describing how structural factors and resources influence each other in determining program effectiveness [26]. Interesting findings emerged when comparing the results of the research of Dammert and Nansamba, which showed that the combination of standard training with interpersonal skills did not always result in significant improvements [28], while Ginting *et al.* successfully demonstrated the effectiveness of team-based training [33]. This difference in results underscores the importance of delivery methods and implementation context in determining the program's success. This strengthens Abaci's argument about the need to expand the scope of the curriculum to include theoretical and practical aspects in a balanced manner [25]. Innovation in learning methods emerged as an important theme in this discussion. Lafortune *et al.* [37] and Elkhalladi and Sefrioui [40] show the great potential of innovative learning methods such as gamification and flipped classrooms. These findings offer a potential solution to the challenges identified by Ngang *et al*. related to large class sizes and time constraints [30]. Technology and adaptive learning methods can help overcome resource limitations while increasing learning effectiveness. The external context and the industry's role are crucial factors in this discussion.

Poláková *et al*. emphasized the importance of balancing digital and soft skills in Industry 5.0 [32], while Amalu *et al*. highlighted the need to balance academic industrial and entrepreneurial skills [31]. These findings indicate that the program's effectiveness depends not only on the internal factors of the institution but also on the program's ability to adapt to industry demands

and technological developments. The implications of these findings lead to several program development priorities. First, there is a need to develop a curriculum that is more flexible and responsive to industry needs, as suggested by Caruana and McPherson. Second, increasing the capacity of teachers and learning infrastructure must be the main focus [34], as recommended by Dubey and Tiwari [29]. Third, the use of technology and innovative learning methods needs to be prioritized to overcome resource limitations. Fourth, strengthening cooperation between academics, industry, and other stakeholders is crucial to ensure the program's relevance. Based on this analysis, several future research areas need to be developed, including longitudinal evaluations of the program's impact on graduate careers, more objective assessment methods to measure soft skills, and a comparative study of the effectiveness of various innovative learning approaches. Further investigation is also needed to understand the factors that affect the sustainability of program impacts and the role of technology in soft skills development.

4. Conclusion

Overall, this study has been successfully identified. The results show that the university entrepreneurship program has significant potential to improve students' soft skills, but its effectiveness depends on various interrelated factors. The research showed mixed but generally positive results regarding the program's effectiveness, especially in developing communication, leadership, and teamwork skills. Abaci and Pan *et al.* prove that a well-designed program can increase entrepreneurial intentions and holistically develop students' career perspectives. The factors influencing program effectiveness are identified in several main categories: (1) program design and structure, including a balance between theory and practice; (2) the quality of learning methods and material delivery; (3) instructor competence; (4) integration with industry needs; and (5) learning environment support. Tiberius *et al.* [27] and Caruana and McPherson [34] emphasize aligning programs with industry needs. Regarding challenges and solutions, the study identified several key obstacles, such as limited resources, a need for qualified teaching staff, and a gap between academic content and industry needs. Recommended solutions include developing adaptive curricula, using innovative learning technology, and strengthening collaboration with industry. The implication of this research lies in strengthening the capacity building of teachers and learning infrastructure. This research makes a significant contribution by identifying that entrepreneurship programs in higher education have great potential to improve students' soft skills, especially communication, leadership, and teamwork skills. In addition, this study successfully mapped the main factors that influence program effectiveness, such as program design and structure, learning methods, instructor competencies, integration with industry needs, and learning environment support. The findings are also complemented by recommendations to overcome barriers, such as limited resources and gaps between academic content and industry needs, through adaptive curriculum development, utilization of innovative learning technologies, and strengthening collaboration with industry. However, this study has weaknesses, including mixed and inconsistent results that are difficult to generalize, lack of attention to local or regional context differences, and limited empirical data to support some of the recommendations. Therefore, more in-depth follow-up research is needed to address these weaknesses and provide more comprehensive guidance in developing entrepreneurship programs in higher education.

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