

# **Systematic Literature Review of entrepreneurship mentoring in higher education: A comparative study of Malaysia, China, the USA, and the UK**

Noraini Hashim, Hariyaty Ab Wahid

Universiti Pendidikan Sultan Idris

Correspondence: Noraini Hashim (email: [noraini1378@gmail.com](mailto:noraini1378@gmail.com))

Received: 3 July 2023; Accepted: 18 August 2024; Published: 29 August 2024

## **Abstract**

This paper presents the key findings of a Systematic Literature Review (SLR) aimed at investigating the mentoring approaches practiced by Higher Education Institutions (HEIs) in Malaysia, China, the United States of America (USA), and the United Kingdom (UK) to enhance their support systems for aspiring post-graduation entrepreneurs. Recognizing the growing significance of entrepreneurship in today's society, these HEIs have emphasized entrepreneurial mentorship to support and nurture student entrepreneurs. Using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) methodology, the review focuses on two primary objectives. Firstly, it aims to identify the competencies required by mentor entrepreneurs who are lecturers within these institutions. Secondly, it seeks to identify the specific areas of emphasis in mentoring entrepreneurs within HEIs in the four selected countries. The selected articles are categorized into three main themes: entrepreneur mentoring competencies, entrepreneurship mentoring focus, and the mentoring approaches practiced at HEIs in these countries. The findings reveal that mentor entrepreneurs, typically lecturers, possess essential competencies, including personality traits, practical experience, relevant skills, and comprehensive knowledge of entrepreneurship. Differences and similarities in the focus and approach to mentoring entrepreneurs are observed among the four countries, reflecting their unique entrepreneurial landscapes and cultural contexts. However, commonalities also exist, particularly in the overarching goal of supporting and nurturing aspiring entrepreneurs. In conclusion, this SLR highlights the competencies required by mentor entrepreneurs and sheds light on the diverse approaches adopted by HEIs in Malaysia, China, the USA, and the UK to mentor and guide students in entrepreneurship. These findings can inform the development of effective mentoring programs tailored to the specific needs and challenges faced by aspiring entrepreneurs in different educational contexts.

**Keywords:** Entrepreneurship, HEI's entrepreneurs, mentee, mentor, mentor's competencies, mentorship

## **Introduction**

Entrepreneurial Education (EE) is an area of education that develops thinking (Al-Lawati, Kohar & Suleiman, 2022; Neck & Corbett, 2018; Jwara & Hoque, 2018; Iwu et al., 2019) skill (Al-Lawati et al., 2022; Ustyuzhina, Mikhaylova & Abdimomynova, 2019; Trilaksono et al., 2022) knowledge

(Sanchez-Burks et al., 2017) attitude (Sanchez-Burks et al., 2017) and business practices (Al-Lawati et al., 2022; Trilaksono et al., 2022) required in starting a business (Al-Lawati et al., 2022). In particular, EE is a process of preparing a person to become an entrepreneur (Kubberod & Fosstenlkken, 2018). The goal of EE is to educate students with little interest in business start-ups (Kubberod & Fosstenlkken, 2018) to be entrepreneurs well-guided by mentors.

Students in higher learning institutions nowadays are inclined to become entrepreneurs (Ling, Sheerad Sahid & Norasmah Othman, 2022; Norazlinda Saad & Sankaran, 2021; Nur Fardeana Arifin et al., 2020; Akmal Sabarudin et al., 2022). They also agree that entrepreneurship education today is contributing to the development of entrepreneurs among Higher Education Institutions (HEIs) graduates (Ling, Sheerad Sahid & Norasmah Othman, 2022; Norazlinda Saad & Sankaran, 2021; Nur Fardeana Arifin et al., 2020; Akmal Sabarudin et al., 2022). Notably, the emergence of entrepreneurs is influenced by EE, which includes the mentoring process (Nabi et al., 2021).

The word "mentor" comes from the character of Mentor in Homer's *Odyssey*. When Odysseus, King of Ithaca, fought in the Trojan War, he asked his trusted friend, Mentor, to advise and teach his son, Telemachus. This is where the term mentor exists to refer to someone who provides guidance and upbringing to others (Wold, 2022; Ezimma, 2021; Birkenfeld, Gilchrist & Hoaglund, 2021). In particular, mentoring is considered something that brings positive change, although the original Greek concept offers a more complex picture of the relationship between Mentor and Telemachus (Hu et al., 2021). Mentors at that time served as counselors, mentors, teachers, and coaches for Telemachus. Overall, the aspect offered by Mentor to Telemachus is the protective aspect that led to the emergence of the word 'mentee' derived from the French word meaning 'to protect', i.e., to be protected. A mentor is someone who encourages dreams (Nabi et al., 2021; Blackburn, Chapman & Cameron, 1981) and aspirations support (Martinez et al., 2018; Blackburn et al., 1981) of their mentee. A mentor serves as a professional model (Mouammer & Bazan, 2021; Blackburn et al., 1981), role model (Nabi et al., 2021), advising career (Bricker, 2021; Garcia, 2021; Kram, 1988; Blackburn et al., 1981) and personal advice when it is required (Santa-Ramirez, 2022; Masha et al., 2022; Kram, 1985a) for skill development and develop certain competencies (Murray, 2001).

## Literature review

### *Entrepreneurship mentoring*

Entrepreneurial mentoring is education a method in the formation of an entrepreneur, which is considered as an additional curriculum in studies (Haneberg & Aaboen, 2020; Preedy et al., 2020) where it is an integration between academia and real entrepreneurial experience (Haneberg et al., 2020; Fauchald et al., 2022; St-Jean & Jacquemin, 2022; Hagg, 2021; Haneberg & Aaboen, 2020; Hagg & Gabrielsson, 2020; Kubberod & Fosstenlkken, 2018). Mentoring is an essential aspect of sustaining a start-up business (St-Jean & Jacquemin, 2022; Hartmann et al., 2022; Dost, Shah & Saleem, 2021; Kuratko, Neuberty & Marvel, 2020; Jaharuddin et al., 2019) since mentoring will not only develop competencies in leadership but will also help start-up entrepreneurs to strategize (Chang & Cheng, 2022). Other than that, it also improves business networking (Street et al., 2022; Haneberg & Aaboen, 2020), and mentees can become more self-reliant (St-Jean et al., 2017).

The concept of mentoring an entrepreneur varies from coaching, tutoring, and apprenticeship, which is oriented toward the pursuit of the future rather than simply mastering the technique (St-Jean & Tremblay, 2020). Even mentors need to guide how to conduct business (Nate et al., 2022). Therefore, the basic concept of mentoring is to educate, where the mentor is "driving" and "guiding," which differs from guidance based on motivation or counseling based on psychological help (St-Jean & Tremblay, 2020). Furthermore, mentoring focuses more on business guidance and advice, especially in the early stages of business start-ups (Street et al., 2022; Kubberød & Ladegard, 2021). Entrepreneurship mentoring at HEI can encourage students in HEI towards entrepreneurship (Middleton, 2020; Nabi et al., 2021; Sansone et al., 2021a), it will develop skills and capabilities (Fauchald et al., 2022; Nate et al., 2022; Saino, 2019) of students to become entrepreneurs. Hence, HEI plays a vital role in the process of becoming an entrepreneur (Middleton, 2020). To ensure the success of the entrepreneur mentoring program, the HEI Entrepreneurship Center needs to focus on high-quality mentoring groups. (Mouammer & Bazan, 2021). Several authors have developed a mentoring model. The concept of mentoring at the university, the basis of which is to focus on career development and psychosocial development (Street et al., 2022; Nabi et al., 2021; Liao et al., 2022; Liu et al., 2022; Carpintero, 2015).

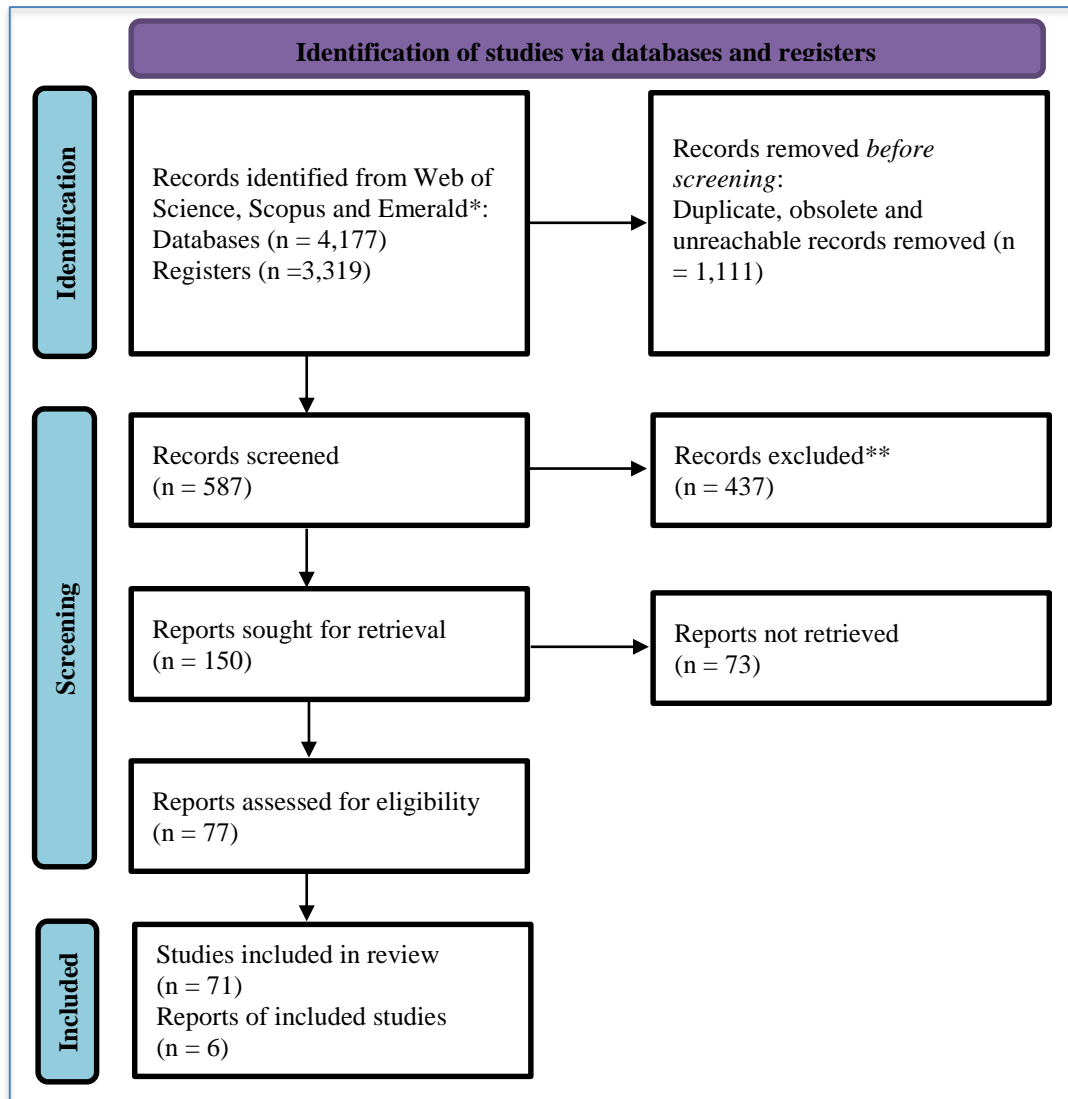
## **Method and study area**

This paper presents the results of a Systematic Literature Review (SLR) to analyze the mentoring of start-up entrepreneurs in HEIs in Malaysia, China, the United States of America (USA), and the United Kingdom (UK) since Malaysia has well-planned entrepreneurship education in HEIs. At the same time, the three other countries were selected since they refer to the list of rankings of the Faculty of Business Management for universities worldwide, the top 10 rankings of the best universities. There are six universities in the USA, three in the UK, and one in China. The main objectives of the review were to identify the mentoring practices for start-up entrepreneurs in HEIs in these four countries, including the competencies of lecturers as mentors and the focus on EE. The authors employed an SLR methodology to address two research questions: 1) What are the competencies of lecturers as mentors for entrepreneurs? 2) What is the focus of entrepreneur mentoring? The findings of this review serve as a valuable reference for literature related to mentoring, entrepreneurial activities in HEIs, and the competence of lecturers as mentors for entrepreneurs. To gather relevant publications, the authors thoroughly searched the Web of Science (WOS), SCOPUS and EMERALD electronic databases from 2018 to 2023. Through a systematic and repetitive approach, they examined the abstracts of numerous research papers, ultimately selecting 77 publications for inclusion in their analysis.

### *Study protocol-PRISMA*

The researcher decided to adopt the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol as the methodology in this SLR process. The data included an initial identification phase, where 4,177 records were identified from databases, and 3,319 records were identified from registers. After removing duplicates, obsolete, and unreachable records, the remaining number of records was 1,111. During the screening phase, 587 records were screened, and out of those, 437 records were excluded. Additionally, during the screening phase, 150 reports were sought for retrieval, while 73 reports were not retrieved. In the eligibility phase, 77 reports were assessed for eligibility, which is related to the objective of the review. Finally, in the included

studies phase, a total of 71 studies and six reports were included in the SLR, following the PRISMA methodology.



Source: Adapted from *The PRISMA 2020 statement: an updated guideline for reporting systematic reviews* by Page et al., 2021

**Figure 1.** PRISMA flowchart for this systematic literature review (SLR)

## Results and discussion

### *Entrepreneur mentor competencies in Malaysia*

To produce an entrepreneur in HEI, all HEI staff are required to be involved in the entrepreneurial ecosystem. Staff refers to academic and non-academic staff who must have an entrepreneurial and self-sufficient mindset (JPT, 2020). From the literature review, among the mentor's competencies among lecturers in Malaysia are; 1) Knowledge: the lecturer must have basic theory business

knowledge (CEDev, 2021; JPT, 2020; Hanim et al., 2020; Rizal et al., 2020) and should know how to apply entrepreneurial practices in the entrepreneurship education (Rizal et al., 2020; Hanim Zainal, Khata Jabor & Abdullahi, 2020); 2) Entrepreneurial experience: lecturers who have their own or personal business (CEDev, 2021; JPT, 2020; Hanim et al., 2020), is more competence in their delivering entrepreneurship education, where they can share their business experience to the students (Hanim et al., 2020); 3) Entrepreneurial and mentoring skills: lecturers should be able to guide the student to be a real entrepreneur (CEDev, 2021; JPT, 2020; Hanim et al., 2020). This refers to mentors should have some skills required to be mentors, including communication, public relations, interpersonal, technology, entrepreneurial guidance, networking, preparing paperwork and guiding skills (Hanim et al., 2020) and entrepreneurial skills (Rizal et al., 2020); and 4) Personality: this includes character and thinking, referring to lecturer should be able to shape start-up business student resilient and flexible to changes and challenges in the environment. In particular, the characters required by mentors are empathy (JPT, 2020), confidence, bravery, democracy (Hanim et al., 2020), not having a personal interest (CEDev, 2021), highly committed and interested in mentoring (CEDev, 2021), having entrepreneurial attitude (Rizal et al., 2020), entrepreneurial mind, consciousness, cooperation, and supportive (Hanim et al., 2020).

#### *Entrepreneur mentor competencies in China*

In Mainland China, the country embarked on a policy of entrepreneurial success (Wright Feng & Zheng, 2021) in 2015 by introducing the program "Mass Entrepreneurship and Innovation" in universities on a large scale. This is where mentoring (Yuan et al., 2022) is a well-established support system and framework and is a pillar of the entrepreneurial ecosystem (Wurth, Stam & Spigel, 2022) in HEI in this country. In this regard, the researchers decided to review the China Mentor Competency since mentoring is the national agenda in this country (Yuan et al., 2022; Wurth et al., 2022). Notably, the competencies for entrepreneur mentors in China are 1) Business knowledge: the in-depth knowledge of entrepreneurship, business strategy, finance, and operations (Zhang & Nong, 2023; Parker et al., 2022; Ting et al., 2017); 2) Mentoring skills: the ability to guide and support entrepreneurs in developing their business ideas and overcoming challenges. This includes effective communication skills, comprising active listening, clear and concise language, and the ability to provide constructive feedback using entrepreneurial skills (Zhang & Nong, 2023; Parker et al., 2022; Ting et al., 2017) expert with innovation (Zhang & Nong, 2023); 3) Mentor experience: the knowledge and experience in a particular industry or sector related to a guided entrepreneur (Zhang & Nong, 2023; Parker et al., 2022; Ting et al., 2017); and 4) Personality: empathy and emotional intelligence: Understanding the emotional journey of an entrepreneur and be able to respond appropriately to their needs including the will to be a mentor, trust, and respect for respect (Zhang & Nong, 2023; Parker et al., 2022; Ting et al., 2017).

#### *Entrepreneur Mentor Competencies in the USA*

Next, the literature highlights the competencies of mentors in the USA. Sanchez-Burks et al. (2017) researched the mentoring ecosystem among start-up entrepreneurs involving mentors from universities and non-university. From this research, it was discovered that the competencies of the entrepreneur's mentor are; 1) Mentoring skills that include skills as an active listener and questioning skills to obtain information from mentee and encouraging skills versus advising (Sanchez-Burks et al., 2017); 2) Mindset about business development, i.e., believing that skills can

be developed and learned to achieve the success of a business (Poskanzer, 2022; Riter, 2020; Sanchez-Burks et al., 2017) where it is also an element in the entrepreneurial attitude (Sansone et al., 2021b); 3) Entrepreneurship knowledge (Sansone et al., 2021b; Sanchez-Burks et al., 2017) and in-depth knowledge of the business field being guided (Poskanzer, 2022); 4) Possess business experience (Poskanzer, 2022), which makes them proficient in the skills required in the field of entrepreneurship (Sansone et al., 2021b); and 5) Internal qualities that involve high moral values, an excellent and ethical way of life, have a character with honesty and integrity (Johnson, 2003).

### *Entrepreneur mentor competencies in the UK*

In addition to the top 10 ranking factors of the Faculty of Business Management of the best Universities in the world, researchers chose the UK HEI to be reviewed since it has an appreciation for the outstanding HEI of EE. The Times Higher Education Entrepreneurial University of the Year award was introduced in 2008 (Pittaway, 2023). Times Higher Education, UK, does not list the specific competencies lecturers or individuals required to be eligible for the Outstanding Entrepreneurship Mentor Award. However, based on the characteristics of the award and some past studies, it can be concluded that some of the competencies that a mentor needs to have in guiding a student or graduate entrepreneur are: 1) Entrepreneurial ability (Pittaway et al., 2023; Natalaya, 2023; Jones et al., 2021b; Decker-Lange et al., 2022), which is referred to strong industry expertise and experience. Mentors with experience in the same industry as the mentee's businesses can provide valuable insights into industry-specific challenges and opportunities (Pittaway et al., 2023), especially in business start-ups (Jones et al., 2021a). Furthermore, having business experience provides a real experience of know-what, know-how, and know-who in the business start-up process (Jones et al., 2021b) at HEI. This can offer advice on overcoming common obstacles and making wise decisions (Pittaway et al., 2023); 2) Entrepreneurial readiness (Decker-Lange et al., 2022), also known as entrepreneurial awareness (Pittaway et al., 2023), which refers to knowledge of entrepreneurship in theory and knowledge of business management (Decker-Lange et al., 2022; Pittaway et al., 2023; Bone et al., 2019); 3) Entrepreneurial thinking (Pittaway et al., 2023; Decker-Lange et al., 2022; Jones et al., 2021a; Jones et al., 2021b), which is the ability of mentors to motivate mentee to make their mentee an inspiration to other students who do not become entrepreneurs (Pittaway et al., 2023). It also refers to empathy and understanding of the mentee to prepare the mentee with holistic thinking (Decker-Lange et al., 2022; Jones et al., 2021b) to face the challenges and struggles in starting and growing a business while providing emotional support (Decker-Lange et al., 2022) and guidance in addition to practical advice (Pittaway et al., 2023; Decker-Lange et al., 2022; Jones et al., 2021a; Jones et al., 2021b); 4) Entrepreneurial network (Pittaway et al., 2023; Decker-Lange et al., 2022; Jones et al., 2021a; Jones et al., 2021b; Bone et al., 2019). Note that mentors with a strong network of relationships can introduce the mentee to potential investors, clients, or partners, secure business financing, and build relationships with the community (Pittaway et al., 2023; Decker-Lange et al., 2022; Jones et al., 2021a; Jones et al., 2021b; Bone et al., 2019); and 5) Entrepreneurial effectiveness (Pittaway et al., 2023; Decker-Lange et al., 2022; Bone et al., 2019), which is the mentor's ability to focus on the success of mentoring programs i.e. the creation of entrepreneurs among HEI students (Pittaway et al., 2023; Decker-Lange et al., 2022; Bone et al., 2019). It also refers to adaptability (Bone et al., 2019), where a mentor must adapt to changing needs and business goals can provide relevant and up-to-date guidance (Pittaway et al., 2023) and even allocate much time for meetings with the mentee (Bone et al., 2019).

Interestingly, entrepreneurial mentoring at HEI is highly encouraged in EE in the UK (Pittaway et al., 2023). It is the best example of universities intensifying EE through various methods, as compared to most other universities (Natalaya, 2022), involving many entrepreneurial development activities such as television programs. For example, Apprentice and Dragon Den star graduate entrepreneurs in the UK inspire current students on campus (Pttaway et al., 2023). In addition, entrepreneur mentors among lecturers also guide students outside the classroom, where they rent business space to provide real business learning space to students (Decker-Lange et al., 2021). In the UK, the education system believes that off-campus activities can express a desire to become an entrepreneur (Pittaway et al., 2023; Decker-Lage et al., 2021) to ensure entrepreneur mentoring occurs both within the campus and off-campus. This includes entrepreneurship competitions and exhibitions, blogs, training, hackathons, incubators, and the establishment of innovation centers at HEI (Decker-Lange et al., 2021).

### *Mentor's competencies*

Based on the literature analysis, lecturer competencies as entrepreneur mentors include personality, experience, skills, and knowledge. While Malaysia, the USA, China, and the UK share the same basic competency model, their definitions and implementation vary, depending on the focus of start-up entrepreneur mentoring in each country. From the comparison of competency standards for four countries, namely Malaysia, China, the USA, and the UK, it was discovered that the focus of mentoring HEI entrepreneurs in the USA and China is on managing business start-up skills (Li, 2022) and innovation products (Sansone et al., 2021b). Meanwhile, in Malaysia and the UK, the focus is on the development of entrepreneurs by focusing on the ability of students to identify business opportunities (Li, 2022; JPT, 2020; KPT 2022a; KPT 2022b; KPT 2020). Table 1 provides the analysis.

**Table 1.** Analysis of entrepreneur mentor competencies

Country	Personality	Experience	Skill	Knowledge
Malaysia	√	√	√	√
United States of America (USA)	√	√	√	√
China	√	√	√	√
United Kingdom (UK)	√	√	√	√

Entrepreneurship mentoring programs can differ across HEIs in different countries due to various factors, including cultural, economic, and educational differences. Here are some differences in entrepreneurship mentoring between Malaysia, China, the USA, and the UK.

### *Entrepreneurship mentoring focus*

Entrepreneurship mentoring in Malaysia is relatively new, with many universities and colleges only beginning to offer entrepreneurship programs in recent years. These programs tend to focus more on technology and digital entrepreneurship, as Malaysia has been pushing for a more technology-driven economy. Note that mentoring programs in Malaysia tend to emphasize the significance of networking and building connections with established entrepreneurs in the industry. Meanwhile, entrepreneurship mentoring in China is highly focused on creating start-ups that can compete globally. In contrast, HEIs in China tend to focus on providing students with

access to resources, such as funding and incubators, that will help them scale their businesses quickly. In addition, mentoring programs in China also place a strong emphasis on building a strong team and developing the necessary skills to attract investors. At the same time, entrepreneurship mentoring in the USA is highly developed and diverse, with many HEIs offering a wide range of programs that cater to different types of entrepreneurs. Mentoring programs in the USA tend to focus on providing students with hands-on experiences and practical skills, such as business planning, marketing, and fundraising. Moreover, the USA is also known for its emphasis on innovation and disruption, with many mentoring programs encouraging students to think outside the box. Finally, HEI entrepreneurship mentoring in the UK is focused on creating sustainable businesses that positively impact society. Additionally, HEIs in the UK tend to offer programs that emphasize social entrepreneurship and the importance of ethical and sustainable business practices. Mentoring programs in the UK also strongly emphasize providing students access to networks of industry professionals who can provide guidance and support as they develop their businesses.

### *Entrepreneurship mentoring approach*

Entrepreneurship mentoring programs in Malaysia, China, the USA, and the UK share similarities in providing guidance and support to aspiring entrepreneurs. However, they also have distinct differences in their approach to mentoring. Mentoring programs in Malaysia often have a more informal approach to mentoring, focusing on building relationships and connections with established entrepreneurs. Furthermore, the mentor may act more as a sounding board, providing advice and guidance as required rather than providing structured support or training. Meanwhile, in China, mentoring programs often take a more hands-on approach, with mentors guiding specific areas such as fundraising and team building. Mentors may also be more involved in the day-to-day operations of the start-up, guiding business development and strategy. At the same time, mentoring programs in the USA often provide more structured support, with mentors guiding a wide range of areas such as business planning, marketing, and fundraising. Other than that, mentors may provide opportunities for practical experiences, such as internships and job shadowing. Finally, mentoring programs in the UK often take a more holistic approach, focusing on developing business and personal skills. Mentors may guide the development of a strong team and cultivate leadership skills, as well as ethical and sustainable business practices. Accordingly, these differences in approach reflect the unique cultural, economic, and educational contexts of each country. For example, China's focus on a more hands-on approach to mentoring reflects the country's emphasis on quick growth and scaling in the start-up industry. The UK's focus on developing personal and ethical skills reflects the country's social responsibility and sustainability values. Overall, while entrepreneurship mentoring programs in these four countries share some similarities, such as providing guidance and support to aspiring entrepreneurs, their differences in approach reflect the unique needs and priorities of each country's start-up ecosystem.

### **Conclusion**

The role of lecturers as university mentors is to assist students in developing their potential and abilities. Several studies have analyzed the concept of mentoring and its main components in higher education. Most researchers agree that mentoring involves relationships that focus on



providing support and encouragement as well as guidance in cognitive development (knowledge), social (skills), and emotional (personality). In addition, several researchers have identified how to make a lecturer a mentor. The business development process from one phase to the next phase is not automatic. Instead, it is deliberate and needs proactive effort from start-up entrepreneurs to drive themselves and their efforts forward (Patzelt, Preller & Breugst, 2021), and mentoring is needed here.

To ensure the success of the entrepreneur mentoring program, the HEIs entrepreneurship center needs to focus on high-quality mentoring groups (Mouammer & Bazan, 2021). Several authors have developed a mentoring model. The concept of mentoring at the university, the basis of which is to focus on career development and psychosocial development (Street et al., 2022; Nabi et al., 2021; Liao et al., 2022; Liu et al., 2022;). In conclusion, while entrepreneurship mentoring programs in Malaysia, China, the USA, and the UK share some similarities, they also differ in their approach and emphasis. These differences reflect the unique cultural, economic, and educational contexts of each country and the varying levels of development and diversity in the field of entrepreneurship (Gelderen, Wiklund & McMullen, 2021). Therefore, understanding these differences can help aspiring entrepreneurs choose the best mentoring program to meet their needs and goals. Additionally, by learning from each other's strengths, weaknesses, and experiences, entrepreneurship mentoring programs worldwide can continue to evolve and improve, ultimately helping to create a more vibrant and innovative global start-up ecosystem.

## Acknowledgment

Appreciation to the Malaysian Ministry of Higher Education (KPT) for sponsoring the Hadiah Latihan Persekutuan (HLP)-Full Paid Study Leave (CBBP 2022) with a scholarship.

## References

- Akmal Sabarudin, Nur Hannan Lokman, Nahzatush Simaa Jantan, Nurul Ashikin Zainrudin, Alis Syazmim Abdul Halim, & Khoiry, M. A. (2022). Tinjauan keberkesanan program keusahawanan di Universiti Kebangsaan Malaysia (UKM) terhadap kebolehpasaran graduan menurut perspektif alumni UKM. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 7(2), 1-14.
- Al-Lawati, E. H., Kohar, U. H., & Suleiman, E. S. (2022). Entrepreneurial culture in educational institutions: A scoping review. *Cogent, Business & Management*, 9(1), 1-59.
- Bergman, B., & McMullen, J. S. (2021). Helping entrepreneurs help themselves: A review and relational research agenda on entrepreneurial support organizations. *Entrepreneurship Theory and Practice*, 46(3), 688-728.
- Birkenfeld, K., Gilchrist, E., & Hoaglund, A. (2021). While odysseus was away mentoring pre-service teachers across generations: Examining roles, guidelines and models. *College Student Journal*, 55(4), 422-428.
- Blackburn, R. T., Chapman, D. W., & Cameron, S. M. (1981). "Cloning" in academia: Mentorship and academic careers. *Research in Higher Education*, 15(4), 315-327.
- Bone, J., Gonzalez-Uribe, J., & Lahr, C. H. (2019). The impact of business accelerators and incubators in the UK. <http://oro.open.ac.uk/67380/1/>

- Bricker, A. (2021). *Becoming a mentor: A narrative study of mentor identity formation among college and university registrars* [Doctoral dissertation, Northeastern University].
- Busch, C., & Barkema, H. G. (2021). Planned luck: How incubators can facilitate serendipity for nascent entrepreneurs through fostering network embeddedness. *Entrepreneurship Theory and Practice*, 46(4), 884-919.
- Carpintero, S. (2015). Qualities that mentors in the university setting should have. *Procedia - Social and Behavioral Sciences*, 197, 255-258.
- Chang, Y., & Cheng, Q. (2022). Entrepreneurial mentoring, financial support and incubator patent licensing: evidence from Chinese incubators. *European Journal of Innovation Management*, 27(6), 1-20.
- Centre of Entrepreneurship Development (CEDev). (2021). *Buku panduan operasi standard inkubator keusahawanan politeknik dan kolej komuniti*. Unit Keusahawanan dan Alumni, Bahagian Ambilan dan Pembangunan Pelajar, Jabatan Pendidikan Politeknik dan Kolej Komuniti.
- Decker-Lange, C., Lange, K., Dhaliwal, S., & Walmsley, A. (2022). Exploring entrepreneurship education effectiveness at British Universities - An application of the world café method. *Entrepreneurship Education and Pedagogy*, 5(1), 113-136.
- Dost, M., Shah, S. M., & Saleem, I. (2021). Mentor expectations and entrepreneurial venture creation: Mediating role of the sense of nothing to lose and entrepreneurial resilience. *Journal of Entrepreneurship in Emerging Economies*, 14(6), 1229-1243.
- Ezimma, N., Okoli, I. E. N., Peace, N., & Adani, N. (2021). Mentoring: The way to academic excellence. *Education Quarterly Reviews*, 4(1), 130-140.
- Fauchald, R. N., Aaboen, L., & Haneberg, D. H. (2022). Utilization of entrepreneurial experiences in student-driven mentoring processes. *The International Journal of Management Education*, 20(2), 100651.
- Garcia, S. D. (2021). The mentoring relation as an interpersonal process in EDUCATE: A qualitative case study of mentor-mentee perspectives. *Research for All*, 5(1), 19-35.
- Hagg, G. (2021). The entrepreneurial diary – A reflective learning activity to enhance the judgmental abilities of student entrepreneurs. *International Journal of Entrepreneurial Behavior & Research*, 27(5), 1142-1165.
- Hägg, G., & Gabriellson, J. (2020). A systematic literature review of the evolution of pedagogy in entrepreneurial education research. *International Journal of Entrepreneurial Behavior & Research*, 26(5), 829-861.
- Haneberg, D. H., & Aaboen, L. (2020). Incubation of technology-based student ventures: The importance of networking and team recruitment. *Technology in Society Journal*, 63, 101402.
- Hanim Zainal, Khata Jabor, & Abdullahi, I. M. (2020). The framework of the implementation of entrepreneurship elements in Malaysian Polytechnic. *Universal Journal of Educational Research*, 8(9), 3970-3980.
- Hartmann, S., Backmann, J., Newman, A., Brykman, K. M., & Pidduck, R. J. (2022). Psychological resilience of entrepreneurs: A review and agenda for future research. *Journal of Small Business Management*, 60(5), 1041-1079.
- Hu, B., Zheng, Q., Wu, J., Tang, Z., Zhu, J., Wu, S., & Ling, Y. (2021). Role of education and mentorship in entrepreneurial behavior: Mediating role of self-efficacy. *Frontier in Psychology*, 12, 775227.

- Iwu, C. G., Opute, P. A., Nchu, R., Eresia-Eke, C., Tengeh, R. K., Jaiyeoba, O., & Aliyu, O. A. (2021). Entrepreneurship education, curriculum and lecturer-competency as antecedents of student entrepreneurial intention. *The International Journal of Management Education*, 19(1), 100295..
- Iyoha, D. O., & Igbinedio, V. I. (2022). Knowledge management: A strategy for mentoring business educators in. *West African Journal of Educational Sciences and Practices (WAJESP)*, 1(2), 62-69.
- Jabatan Pendidikan Tinggi (JPT). (2020). *EIE Panduan Pendidikan Keusahawanan Bersepadu : Entrepreneurship Integrated Education*. Kementerian Pengajian Tinggi.
- Jaharuddin, Purnawan, I., Mujiastuti, R., Prasetyawati, M., & Muthmainnah, R. N. (2019). Strategi melahirkan mahasiswa pengusaha pemula (Studi kasus mahasiswa Universitas Muhammadiyah Jakarta). *Jurnal Kewirausahaan dan Bisnis*, 24(13), 25-37.
- Johnson, W. B. (2003). A framework for conceptualizing competence to mentor. *Ethics & Behavior*, 13(2), 127-151.
- Jones, P., Maas, G., Kraus, S., & Reason, L. L. (2021a). An exploration of the role and contribution of Entrepreneurship Centres in UK higher education. *Journal of Small Business and Enterprise Development*, 28(2), 205-228.
- Jones, O., Meckel, P., & Taylor, D. (2021b). Situated learning in a business incubator: Encouraging students to become real entrepreneurs. *Industry and Higher Education*, 35(4), 367-383.
- Kementerian Pengajian Tinggi (KPT). (2020). *Pelan Tindakan Keusahawanan: Institusi Pendidikan Tinggi (PTK-IPT): Memartabatkan Keusahawanan Dalam Memperkasakan Negara*. Kementerian Pengajian Tinggi.
- Kementerian Pengajian Tinggi (KPT). (2022a). *Trajektori Gemilang Anugerah Keusahawanan; Kementerian Pengajian Tinggi: Rakaman Keunggulan Inovasi Keusahawanan*. Kementerian Pengajian Tinggi.
- Kementerian Pengajian Tinggi (KPT). (2022b). Universiti Malaysia Terengganu. [https://cecumt.weebly.com/uploads/1/2/0/7/120709961/slaid\\_kamus\\_kpi\\_2021\\_sppkk\\_.pdf](https://cecumt.weebly.com/uploads/1/2/0/7/120709961/slaid_kamus_kpi_2021_sppkk_.pdf)
- Kram, K. E. (1988). *Mentoring at work: Developmental relationships in organizational life*. University Press of America.
- Kubberod, E., & Fosstenløykken, S. (2018). Peer mentoring in entrepreneurship education: Towards a role typology. *Education + Training*, 60(9), 1026-1040.
- Kuratko, D. F., Neuberty, E., & Marvel, M. R. (2020). Insights on the mentorship and coachability of entrepreneurs. *Business Horizons*, 64(2), 199-209.
- Li, L. (2022). *A Comparative Study on Students' Learning Expectations of England* [Unpublished doctoral dissertation, University of Chester].
- Liao, S., Javed, H., Sun, L., & Abbas, M. (2022). Influence of entrepreneurship support programs on nascent entrepreneurial intention among university students in China. *Frontier Psychology*, 13, 955591.
- Ling, L. S., Sheerad Sahid, & Norasmah Othman. (2022). Hubungan sikap dan tingkah laku keusahawanan terhadap pemilihan kerjaya keusahawanan dalam kalangan pelajar. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 7(3), e001345.
- Liu, M., Gorgievski, M. J., Zwaga, J., & Paas, F. (2022). Understanding and motivating student feedback seeking: Insights from a lean start-up based entrepreneurship program. *The International Journal of Management Education*, 21(2), 100750.

- Martinez, J. L., M. M., Radoń, A., Ambrogi, M., Marcus, B., & Szczygiel, E. (2018). *How to mentor not able bodied persons for developing inclusive entrepreneurship. The Guide*. Fundación Docete Omnes.
- Masha, A. K., Shava, E., Mambiravana, T., & Bwowe, P. W. (2022). Promoting youth empowerment through business mentorship in South Africa. *Prizen Social Science Journal*, 6(1), 48-57.
- Middleton, K. W., Padilla-Meléndez, A., Lockett, N., Quesada-Pallarès, C., & Jack, S. (2020). The university as an entrepreneurial learning space: The role of socialized learning in developing entrepreneurial competence. *International Journal of Entrepreneurial Behavior & Research*, 26(5), 887-909.
- Mouammer, L., & Bazan, C. (2021). Effect of mentorship on the early entrepreneurial journey of university students. Proceedings 2021 Canadian Engineering Education Association (CEEAA-ACEG21) Conference (pp. 1-7), June 21-23, University of Prince Edward Island.
- Murray, M. (2001). *Beyond the myths and magic of mentoring: How to facilitate an effective*. John Wiley & Sons.
- Nabi, G., Walmsley, A., & Akhtar, I. (2021). Mentoring functions and entrepreneur. *Studies in Higher Education*, 46(6), 1159-1174.
- Natalaya, R. (2022). *Conceptualising Entrepreneurial University: Case of the United Kingdom* [Doctoral dissertation, University of Reading].
- Nate, S., Grecu, V., Stavvytsky, A., & Kharlamova, G. (2022). Fostering entrepreneurial ecosystems through the stimulation and mentorship of new entrepreneurs. *Sustainability*, 14(13), 7985.
- Neck, H. M., & Corbett, A. C. (2018). The scholarship of teaching and learning entrepreneurship. *Entrepreneurship Education and Pedagogy*, 1(1), 8-41.
- Norazlinda Saad, & Sankaran, S. (2021). Pengetahuan dengan kesediaan pelajar program pendidikan terhadap kursus keusahawanan di Universiti Utara Malaysia. *Sains Insani*, 6(1), 45-51.
- Nur Fardeana Arifin, Radin Siti Aishah Radin A Rahman, & Norasmah Othman. (2020). Tahap personaliti big six dan hubungannya dengan kecenderungan keusahawanan digital dalam kalangan pelajar kolej komuniti (Big six personality level and its correlation to digital entrepreneurship among community college students). *Jurnal Pendidikan Malaysia*, 45(1) Isu Khas, 101-110.
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D et al. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372, n71. doi:10.1136/bmj.n71
- Parker, L., Xu, S., & Chi, C. (2022). Chinese Preservice teachers' perspectives of mentoring relationships in an international learning partnership. *Journal of Teacher Education*, 73(5), 525 –537.
- Patzelt, H., Preller, R., & Breugst, N. (2021). Understanding the life cycles of entrepreneurial teams and their ventures: An agenda for future research. *Entrepreneurship Theory and Practice*, 45(5), 1119-1153.
- Pittaway, L., Henry, C., Kirby, D., & Thompson, J. (2023). The history of entrepreneurship education in the United Kingdom, 1860-2020. <https://dx.doi.org/10.2139/ssrn.4318025>
- Poskanzer, E. J. (2022). *Constructing entrepreneurial networks: Evidence from a mentoring program* [Doctoral dissertation, Massachusetts Institute of Technology].

- Preedy, S., Jones, P., Maas, G., & Duckett, H. (2020). Examining the perceived value of extracurricular enterprise activities in relation to entrepreneurial learning processes. *Journal of Small Business and Enterprise Development*, 27(7), 1085-1105.
- Riter, L. (2020). *Entrepreneurial educators: A narrative study examining professional transition experiences of educators who have experimented with the launching of an educational activity* [Unpublished doctoral dissertation, Northeastern University].
- Rizal, A., Enny Segarahati, B., Nurul Aesyah, I. C., Azilah, A., & Harlina, N. (2020). Determine priority problems in developing entrepreneurship for students using ANP method: Indonesia-Malaysia case. *International Journal of Technical Vocational and Engineering Technology [iJTvET]*, 2(1), 134-143.
- Saino. (2019). The effect of entrepreneurship mentoring on entrepreneurial intention in the studentpreneur corner program at state University of Surabaya. *Jurnal Pendidikan Bisnis dan Manajemen*, 5(2), 66-76.
- Sanchez-Burks, J., Brophy, D. J., Jensen, T., Milovac, M., & Kagan, E. (2017). Mentoring in Start-up ecosystems: A multi-institution empirical analysis from the perspectives of mentees, mentors and university and accelerator program administrators. [https://deepblue.lib.umich.edu/bitstream/handle/2027.42/139028/1376\\_Sanchez-Burks.pdf?sequence=1](https://deepblue.lib.umich.edu/bitstream/handle/2027.42/139028/1376_Sanchez-Burks.pdf?sequence=1)
- Sansone, G., Ughetto, E., & Landoni, P. (2021a). Entrepreneurial intention: An analysis of the role of Student-Led Entrepreneurial Organizations. *Journal of International Entrepreneurship*, 19, 399-433.
- Sansone, G., Battaglia, D., Landoni, P., & Paolucci, E. (2021b). Academic spinoffs: The role of entrepreneurship education. *International Entrepreneurship and Management Journal*, 17, 369-399.
- Santa-Ramirez, S. (2022). Sink or swim: The mentoring experiences of Latinx PhD students with faculty of color. *Journal of Diversity in Higher Education*, 15(1), 124-134.
- St-Jean, E., & Jacquemin, a. A. (2022). Does mentoring reduce entrepreneurial doubt? A longitudinal gendered perspective. *International Journal of Gender and Entrepreneurship*, 14(3), 375-396.
- St-Jean, É., Tremblay, M., Janssen, F., Baronet, J., Loué, C., & Nafa, A. (2017). May business mentors act as opportunity brokers and enablers among university student's? *International Entrepreneurship Management Journal*, 13, 97-111.
- Street, C. P., Ng, P. Y., & Al-Dajani, H. (2022). Refugee women business mentors: New evidence for women's empowerment. *Sustainability*, 14(15), 9154.
- Ting, S. X., Feng, L., & Qin, W. (2017). The effect of entrepreneur mentoring and its determinants in the Chinese context. *Management Decision*, 55(7), 1410-1425.
- Trilaksono, T., Marchalina, L., Sasmoko, Indrianti, Y., & Yusak, N. A. (2022). Entrepreneurship education strategy in higher education in ASEAN: Competitive Intelligence and readiness to change. *Asia-Pacific Management and Business Application*, 10(3), 239-260.
- Ustyuzhina, O., Mikhaylova, A., & Abdimomynova, A. (2019). Entrepreneurial competencies in higher education. *Journal of Entrepreneurship Education*, 22(1).
- van Gelderen, M., Wiklund, J., & McMullen, J. S. (2021). Entrepreneurship in the future: A Delphi study of ETP and JBV Editorial Board Members. *Entrepreneurship Theory and Practice*, 45(5), 1239-1275.

- Wold, R. (2022). *Design, business models, and embedded values: Developing a mentor program management platform as a model of humane technology* [Doctoral dissertation, University of Minnesota].
- Woolley, J. L., & MacGregor, N. (2022). The influencer of incubator and accelerator participation on nanotechnology venture success. *Entrepreneurship Theory and Practice*, 46(6), 1717-1755.
- Wright, E., Feng, S., & Zheng, Y. (2021). Unemployed graduate to the next Jack Ma? A counter-narrative to the entrepreneurship movement in higher education. *Higher Education*, 83, 863-880.
- Wurth, B., Stam, E., & Spigel, B. (2022). Toward an entrepreneurial ecosystem research program. *Entrepreneurship Theory and Practice*, 46(3), 729-778.
- Youth Business International (YBI). (2018). *Exploring the impact of voluntary business mentoring on young entrepreneurs*. Youth Business International.
- Yuan, X., Hao, H., Guan, C., & Pentland, A. (2022). Which factors affect the performance of technology business incubators in China? An entrepreneurial ecosystem perspective. *PLoS ONE*, 17(1), e0261922.
- Zhang, X., & Nong, S. (2023). *Reflections on entrepreneurship education in the context of information technology: How entrepreneurship tutors affect the identification of entrepreneurship opportunities for college students* (pp. 415-420). Proceedings of the 2022 3rd International Conference on Artificial Intelligence and Education (IC-ICAIE 2022).