

Original Article

Prioritization of Factors Influencing the Effectiveness of Business Mentoring Using Analytical Hierarchy Process (AHP)

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Received Date: 19 January 2024

Revised Date: 30 January 2024

Accepted Date: 02 February 2024

Published Date: 07 February 2024

Abstract: *The demand for starting a new business is on the rise, but managing the risks of startup failure can be daunting. One way to increase the chances of success and sustainability is through business mentoring. Despite the availability of various providers, such as startup incubators, the effectiveness of mentoring services needs improvement. This study utilizes the Analytic Hierarchy Process (AHP) to analyze and rank factors influencing the effectiveness of business mentoring for early-stage startups in Indonesia. The author utilized literature reviews and in-depth interviews with experts in the Indonesian startup ecosystem to identify factors affecting the effectiveness of business mentoring. Using the AHP approach, these factors were weighted to determine their relative importance. Startup industry players in Indonesia can utilize the research findings to enhance their business mentoring programs. This study's identified factors may also serve as a basis for future research to develop a more effective mentoring program framework.*

Keywords: *Business mentoring, Early-stage startup, Effective mentoring program, Factors influencing mentoring effectiveness, Startup incubator, startup.*

I. INTRODUCTION

There is a rising trend of individuals aspiring to become startup founders in Indonesia. This is driven by the increasing number of success stories of Indonesian startups that have grown into large companies, serving as an inspiration to the younger generation. By 2023, Indonesia is expected to have 2486 digital startups, making it the 6th largest in the world, according to Rudy Salahuddin, a deputy at the Coordinating Ministry for Economic Affairs. It is heartening to see a growing number of Indonesians leaping into entrepreneurship. However, it is crucial to acknowledge that success in the business world demands a unique skill set and a conducive ecosystem. Launching and expanding a startup is an arduous endeavor that carries a significant risk of failure.

It is estimated that nine out of ten startups will fail^[1]. Startup failures can be attributed to various factors. The top three reasons for such failures are running out of money, no market need, and losing in competition^[2]. One intervention that can increase the survival rate of a startup is to have a business mentor. Business mentoring can have a positive influence on the survival rate of a startup^[3]. A startup founder can benefit greatly from a business mentor, particularly in terms of their ability to learn and effectively manage challenges^[4].

Despite its enormous potential, it is currently felt that business mentoring activities are still not being implemented optimally. Several factors that cause business mentoring not to be optimal are caused by time constraints, lack of training, and poor mentor-mentee matching^[5]. On the implementation side, business mentoring is also often hampered by a lack of resources, research, and practical guidance. The lack of sufficient training programs and support for mentors is hindering the optimal implementation of business mentoring^[6].

In order to improve the effectiveness of business mentoring activities, it is important to have an innovative business mentoring framework. This framework will help organizations in delivering value to their clients who seek business mentoring facilities. Moreover, startup founders can also benefit from this framework as it will assist them in optimizing the function of business mentors, allowing them to grow their businesses and tackle challenges more effectively on a daily basis.

This research aims to find out :

1. What are the factors that significantly impact the effectiveness of business mentoring for early-stage startups for the mentor, mentee, and mentoring process?
2. How does the importance level of each factor compare to the effectiveness of business mentoring for early-stage startups?



II. LITERATURE REVIEW

A) Startup Business Concept

There are various definitions of startups that are currently popular. According to the Cambridge Dictionary, a startup is a small business recently established. According to Paul Graham, co-founder of Y Combinator, a startup is a company that is designed to grow quickly^[7]. Being a newly established business is not enough to be called a startup. It must be prepared to have the potential for rapid growth. Therefore, one of the critical components of a startup is a scalable business model that can drive business growth.

According to Eric Ries, who authored *The Lean Startup Book*, a startup is a human institution that aims to develop a new product or service under circumstances of great uncertainty. Ries' definition does not specify the size or industry of the startup. As long as the institution is in the process of validating its business model, it is still considered a startup. The goal of a startup is to identify the right thing to build, something that customers want and are willing to pay for. All of these aspects are summarized in a business model.

According to Chrisman et al.^[22], a startup has several characteristics that can influence its performance. These characteristics include the entrepreneur, business strategy, resources, organizational structure, process, and system.

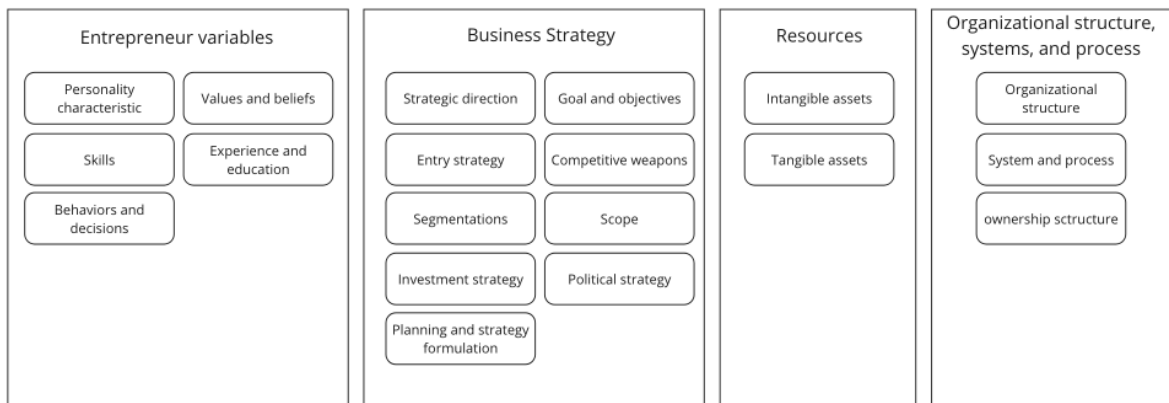


Table 1 Startup Characteristics based on Chrisman^[22]

B) Business Incubation

Business incubation is a process carried out by an organization to facilitate the entrepreneurial process^[9]. A business incubator provides various facilities and services to support the development of early-stage businesses, which are still very fragile. Some facilities and services that a business incubator can provide include affordable office space and shared administrative services^[10], expert support from professionals, and access to business ecosystems for startups.

The early stage of developing a startup is the most vulnerable phase, as it comes with limitations in capital and experience. For first-time founders, numerous challenges exist to overcome, new things to learn, and problematic situations to address. However, business incubators can help mitigate these challenges.

In today's entrepreneurial ecosystem, business incubators play a crucial role in reducing early-stage startups' risk and failure rate. While they are instrumental in supporting startups, it's important to note that other factors, like the founders and the team, also influence a startup's success. Therefore, being part of a business incubator does not guarantee the success of a startup.

C) Mentoring Concept

Mentoring is a process where individuals with more skills and experience act as role models, teachers, counselors, and colleagues to those with less experience to foster personal and professional development^[11]. Mentoring involves sharing experiences, empathetic listening, and reflecting on mentor-mentee relationships. The mentoring process provides two types of benefits – career development and psychological development for both the mentor and mentee.

Business mentoring is a unique type of mentorship that takes place between a novice entrepreneur, known as the mentee, and an experienced entrepreneur. This relationship provides the mentee with an opportunity to grow both personally and professionally. Business mentoring is distinguished from other forms of mentorship by its emphasis on activities that contribute to the development and success of an entrepreneur. Business mentoring may involve a range of functions, including offering psychological support, providing career guidance, and serving as a role model^[12].

In business mentoring, a mentor's role is to offer practical guidance, share their experiences, and help the entrepreneur deal with the challenges of building and growing a business^[4]. A mentor needs to establish a strong relationship with the mentee to build trust. Business-related topics are sensitive, and few people can be confidants when it comes to such stories. Hence, trust needs to be established from the beginning so that the mentee can share the real conditions of their business with their business mentor.

D) Factors that Impact the Business Mentoring Effectiveness

From the literature review conducted, several factors influence the effectiveness of business mentoring.

Factors affecting the ideal mentor role: concern and empathy^[4], mentor experience^[13], availability^[4], effective communication^[14], and a genuine passion for developing others^[15].

Factors Affecting the Ideal Role of a Mentee: Trust and mutual liking^[16], openness to receiving input^[17], growth mindset^[15], and willingness to take initiatives^[19].

Factors Affecting the Optimization of the Mentoring Process: the duration and frequency of meetings^[18], mentor-mentee matching process^[15], goal commitment^[16], and infrastructure^[20].

Mentor	Mentee (Startup Founder)	Mentoring Process
Network (Gibbons, 2004)	Mutual Liking (Amstrong, 2002)	Mentor-Mentee Matching Process (Sanchez-Burks, 2017)
Experience & Track Record (Lyons, 2004; Allena Eby, 2004)	Openness to feedback (Shea, 1994)	Mentoring frequency & Duration (Cull, 2006; Lankau, 2005)
Availability (Sullivan, 2000)	Growth Mindset (Sanchez-Burks, 2017)	Goal Commitment (Amstrong, 2002)
Effective Communication (Kalbfleisch, 1993)	Take Initiatives (J. Searby, 2014)	Infrastructure (formal mentoring) (Ragins, 1999)
True passion develop other (Gibbons, 2004)		

Fig. 1 Factors that Impact the Optimization of the Mentor-Mentee Role and the Mentoring Process

III. RESULTS AND DISCUSSIONS

A) Research Design

The author plans to use qualitative research methodology to investigate the factors that influence the effectiveness of business mentoring. To achieve this, the author will conduct in-depth interviews with stakeholders from various backgrounds and business scales. The interviews aim to gain additional insights into important factors that influence business mentoring. The data set obtained from these interviews will be combined with the data set from the results of the literature review. After the data set of factors is formed, quantitative methods will be used to carry out further analysis.

The quantitative method that will be applied is AHP simulation. This technique is used to determine the level of importance of each factor that has been identified. Knowing the significance of each factor will provide the necessary information to develop an innovative business mentoring framework for the next iteration.

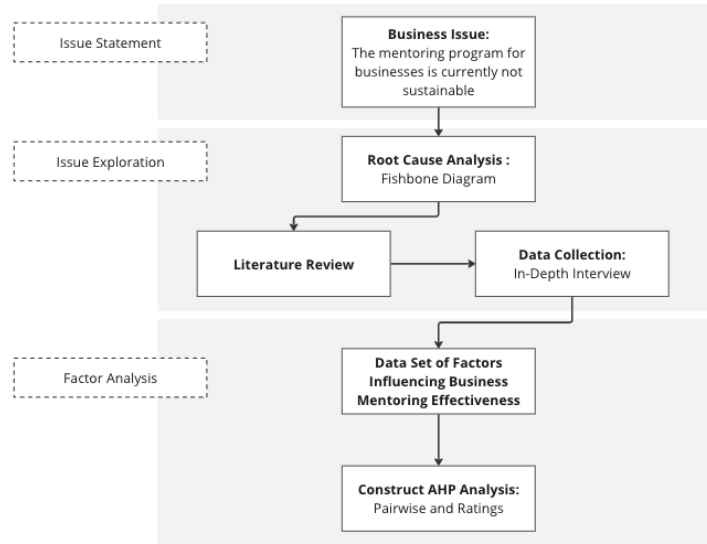


Fig. 2 Factors that Impact the Optimization of the Mentor-Mentee Role and the Mentoring Process

B) Data Collection

In-depth interviews will be conducted to obtain additional data regarding factors that can influence the effectiveness of a business mentoring activity. Interviews were also shown to get an initial view of how the mentoring activity scheme that the interviewee believes can be effective for providing added value to entrepreneurs who become mentees. This interview method is an effective means of collecting factual and contextual data and information regarding the current condition of the startup ecosystem in Indonesia.

Some of the sources interviewed by the author will consist of:

1. Founder and CEO of unicorn startup (Valuation above USD 1 billion)
2. Founder of a startup that has had an IPO
3. Founder of a startup that has been acquired by a large company
4. Unicorn candidate startup founder (Valuation above USD 100 million)
5. Medium-scale startup founder (Startup age over 5 years)
6. Early-scale startup founder (Startup age under 5 years)
7. Startup mentor at a private business incubator
8. Startup mentor at an educational institution business incubator

In order to conduct an in-depth interview, the author created a set of open-ended questions to ask the interviewee. These questions were designed to probe further into the interviewee's answers as long as they were still relevant to the research topic. The table below shows the list of questions that were asked during the interview.

No	Questions
1	Have you participated in any formal mentoring events conducted by certain institutions? If yes, can you describe them?
2	Do you have an informal mentor whom you meet regularly? If yes, who is your mentor?
3	Which business mentoring experience from your past was the most impactful and memorable for you?
4	Can you please provide more details about the impact of this particular mentoring experience?
5	Do you believe that participating in business mentoring activities has helped in your personal development?
6	What criteria of a mentor that you think should be effective for a business mentoring?
7	What are the essential qualities of a mentee that can help in achieving effective business mentoring?
8	Can you describe the process of implementing mentoring that can make it more effective for businesses?
9	If you could go back in time, what changes would you make to get a more optimal business mentoring impact?

Table 2 In-Depth Interview Question

C) Data Analysis

From the results of the interviews, the next step is data analysis. During this stage, the interviewer creates a transcript of the interview from the recording and performs coding to identify relevant keywords that were mentioned during the interview process. Below are some of the keywords related to the factors that influence the effectiveness of business mentoring that were discussed during the interview.

Mentee Factors	Interviewees mentioned	Frequency mentioned
Open mind	4	4
Openess	4	4
Listen & Implementing feedback	3	3
Proactiveness	3	3
Humble	1	1
Internal motivation	1	1
Respect people	1	1

Table 3 Factors in the mentee that influence the effectiveness of business mentoring

Mentor Factors	Interviewees mentioned	Frequency mentioned
Experience	6	13
Hands on	5	8
Capability	4	7
Care	5	6
Knowledge	5	6
Network	3	4
Effective communication	3	3
Root cause analysis	2	2

Table 4 Factors in the mentor that influence the effectiveness of business mentoring

Process Factors	Interviewees mentioned	Frequency mentioned
Mentoring preparation	3	5
Systematization of topics	2	3
Mentor-mentee compatibility	2	2
Monitoring followup	2	2
Regular meeting	2	2
Meeting environment	1	1
Meeting medium	1	1

Table 5 Factors in the mentoring process that influence the effectiveness of business mentoring

The author will analyze the keywords collected during the in-depth interview process and combine them with the factors influencing the effectiveness of business mentoring obtained from the literature review and in-depth interviews. The author will group similar factors together to make the analysis easier.

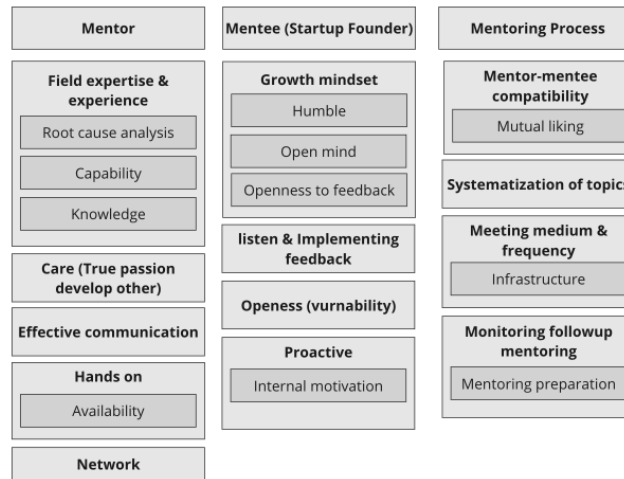


Figure 3 The Result of Processing Factor Affecting Effectiveness of Business Mentoring

D) AHP Simulation to Perform Factor Ranking

After conducting a literature review and qualitative research, the author will rank factors that influence business mentoring effectiveness using AHP simulation. In this research, AHP simulation will only be used to rank the factors that have been collected from the previous data collection process. However, the author will not use it for decision-making because the goal of this research is to recommend an effective business mentoring framework for early-stage startups in Indonesia. As a result, the AHP stage that will be carried out will only reach the Pairwise comparison and not the Rating stage.

Pairwise comparison is a useful method for comparing the level of importance of different criteria or sub-criteria during decision-making. To apply this method, the factors obtained from previous data collection stages must be transformed into decision-making criteria and sub-criteria.

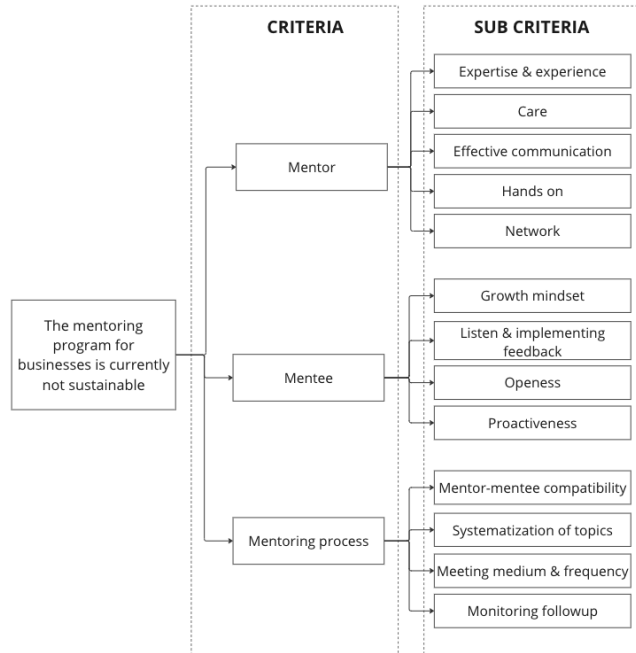


Figure 4 Goal, Criteria, Sub Criteria for Pairwise Comparison

In order to build a mentoring program business framework, it is necessary to rank the sub-criteria aspects. Therefore, it is not necessary to rank the criteria themselves as they are all important components in the form and should be prioritized. To compare each sub-criteria within each criterion, a pairwise comparison will be used.

The author will use the AHP online system, developed by Klaus D. Goepel in 2013 at BPMSG^[21], to process the data obtained from the questionnaire. This tool will help to determine the weight of each criterion when there are many participants and also calculate the consistency ratio of each comparison process.

The table below shows the results of pairwise comparisons on each factor.

Rank	Mentor Factors	Weights	Rank	Mentee Factors	Weights
1	Expertise and Experience	34,30%	1	Growth Mindset	42,90%
2	Hands on	17,80%	2	Openess	21,30%
3	Care	17,10%	3	Followup Feedback	19,50%
4	Network	17,00%	4	Proactiveness	16,30%
5	Effective Communication	13,90%		Lambda	4,021
	Lambda	5,166		Consistency Ratio	0,8%
	Consistency Ratio	3,7%			
Rank	Mentoring Process Factors	Weights			
1	Mentor-Mentee Compatibilit	47,50%			
2	Systematization of topics	20,70%			
3	Monitoring Follow-up	19,50%			
4	Medium and Frequency	12,30%			
	Lambda	4,066			
	Consistency Ratio	2,4%			

Table 6 Calculated weight of every factor for business mentoring

All of the results obtained from the pairwise comparison calculations can be accepted as the consistency ratios are below the maximum standard of 10%. This indicates that the processed data is consistent. Additionally, we have identified the factors that have a more dominant weight compared to other factors. Once we have this weight ranking, we can objectively assess which factors are more important and need to be prioritized over others.

IV. CONCLUSION

The trend of building startups needs to balance managing the high risk of failure. To reduce the risk of failure, especially in the early stages of a startup, business mentoring activities with an experienced and capable mentor can be very helpful. In Indonesia, many institutions, including private and educational institutions, offer business mentoring programs as one of their main services. However, the effectiveness of these programs can still be improved by enhancing the business mentoring process.

To address this issue, this research aims to provide recommendations for a business mentoring framework that can increase the effectiveness of a business mentoring program. The author conducted a literature review and in-depth interviews to identify the factors that influence the effectiveness of business mentoring programs. Then, the author used AHP simulation to weigh the level of importance of these factors.

Based on this, the research questions underlying this research have been answered.

1. What are the factors that significantly impact the effectiveness of business mentoring for early-stage startups for the mentor, mentee, and mentoring process? Based on a series of literature reviews and qualitative research by conducting in-depth interviews with several expert sources, several factors were found that influence the effectiveness of business mentoring for early stage startups. Factors in the Mentor aspect: expertise and experience, care, effective communication, hands-on, and network. Factors in the Mentee aspect: growth mindset, follow-up feedback, openness, and proactiveness. Factors in the Mentoring Process aspect: mentor-mentee compatibility, systematization of topics, monitoring follow-up, and meeting medium and frequency.
2. How does the importance level of each factor compare to the effectiveness of business mentoring for early-stage startups?

After conducting an AHP simulation using pairwise comparison, the level of importance of each factor that influences the effectiveness of business mentoring is obtained.

Rank	Mentor Factors	Weights	Rank	Mentee Factors	Weights	Rank	Mentoring Process Factors	Weights
1	Expertise and Experience	34,30%	1	Growth Mindset	42,90%	1	Mentor-Mentee Compatibility	47,50%
2	Hands on	17,80%	2	Openess	21,30%	2	Systematization of topics	20,70%
3	Care	17,10%	3	Followup Feedback	19,50%	3	Monitoring Follow-up	19,50%
4	Network	17,00%	4	Proactiveness	16,30%	4	Medium and Frequency	12,30%
5	Effective Communication	13,90%						

Table 6 Factors Affecting Business Mentoring Effectiveness

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