MENTORING AS A SUPPORT MECHANISM IN TURKISH ENTREPRENEURSHIP ECOSYSTEM

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ABSTRACT

In recent years, particularly, the importance of entrepreneurship to the nation's economies has increased significantly. SMEs, or small and medium-sized enterprises, are vital sources of employment and national income. Because of this, it's critical to create effective support systems to promote entrepreneurship and increase it's influence on the economy of the nation. One of these support mechanisms is mentoring described as directing novice entrepreneurs to success in business processes. In this paper, we aimed to investigate all aspects of mentoring in the ecosystem from the program structures to mentor-mentee match making. A new concept of technical mentoring is risen from the need of deep technology startup founders' need of support for solving the technical difficulties they face regularly. Also, a mentoring model for technology incubators is proposed with all its dynamics. In conclusion, it can be stated that mentoring has highly flexible nature in the entrepreneurship ecosystem.

Key Words: Mentoring, Entrepreneurship, Technical Mentoring, Mentee-Mentor Matching, Mentoring Programs

Jel Codes: M13

TÜRKİYE GIRIŞİMCİLİK EKOSİSTEMİNDE BİR DESTEK MEKANİZMASI OLARAK MENTORLUK

ÖΖ

Özellikle son yıllarda girişimciliğin ülke ekonomileri için önemi ciddi ölçüde artmıştır. KOBİ'ler (küçük ve orta ölçekli işletmeler) gelişmekte olan ülkelerde önemli istihdam ve milli gelir kaynaklarıdır. Bu nedenle, girişimciliği teşvik etmek ve ülke ekonomisi üzerindeki etkisini artırmak için etkili destek sistemleri oluşturmak kritik öneme sahiptir. Bu destek mekanizmalarından biri de yeni girisimcileri iş süreclerinde başarıya yönlendirmek olarak yapılarından tanımlanabilecek mentorluktur. Bu yazıda. program mentor-menti eslestirmesine kadar ekosistemdeki mentorluğun tüm yönlerini arastırmayı amacladık. Derin teknoloji girişim kurucularının düzenli olarak karşılaştıkları teknik zorlukları çözmek için desteğe duydukları ihtiyaçtan teknik mentorluk kavramı doğdu. Ayrıca tüm dinamikleri ile teknoloji kuluçkaları için bir mentorluk model önerisi oluşturuldu. Sonuç olarak mentorluğun girişimcilik ekosisteminde oldukça esnek bir yapıya sahip olduğu söylenebilir.

Anahtar Kelimeler: Mentorluk, Girişimcilik, Teknik Mentorluk, Menti-Mentor Eşleştirmesi, Mentorluk Programları Jel Kodları: M13

1. INTRODUCTION

The idea of entrepreneurship began to be used in the 1600s. Due to the rise of supply-side economics and industrial depression, the concept of entrepreneurship has been promoted since the 1970s (Casson & Buckley, 2010).

In literature, there are different definitions of entrepreneurship. Barot specifies that it is the creation of a new business (Barot, 2015). Professor Howard Stevenson from Harvard Business School defines entrepreneurship as "it is the pursuit of opportunity beyond resources controlled". He implies that an entrepreneur focuses on novel chances in the market with limited resources continuously (Eisenmann, 2013).

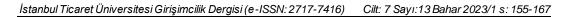
People known as entrepreneurs are the most important protagonists of this stage. Entrepreneurs make the entrepreneurial decision and start the business by creating it (Kubaş & Özmen, 2020). The entrepreneur is the person that is driven by the motivation of producing original goods and services under his/her brand.

The impact of entrepreneurship on economic growth had been widely studied in the last 20 years. It is suggested that entrepreneurship culture has a significantly positive effect on economic growth but the effect is not uniform throughout the years. Also, the effect of the ecosystem is different for developed countries than developing countries; Doran et al. claim that necessity entrepreneurship is more common in developing or underdeveloped countries which means that entrepreneurs founding businesses because of a lack of alternative employment opportunities. Therefore, he is suggesting that the policies should be altered in these countries to facilitate economic growth (Doran et al., 2018).

In Türkiye, Small and Medium-Sized Enterprises (SMEs) have a huge contribution to the economy and growth; in fact, according to the data provided by TOBB (Union of Chambers and Commodity Exchanges of Türkiye) in 2020, 99.8 % of all enterprises are SMEs which is about 3.2 Million establishment (The Union of Chambers and Commodity Exchanges of Türkiye, 2020). They are providing 73.8 % of the jobs and carrying out 64.5 % of total turnover which is 5.8 Trillion Turkish Liras. SMEs in Türkiye also make up 56.3 % of exports by selling 101.8 billion \$ worth of goods. Therefore, it can be stated that developing more advanced entrepreneurship policies that contains various support mechanisms will have a significant positive effect on the whole economy. It can also help fixing the income inequality by improving the economic states of the lower income groups.

1.1. MAIN STAKEHOLDERS IN THE STARTUP ECOSYSTEM AND SUPPORT MECHANISMS

In Türkiye, the entrepreneur ecosystem consists of many different stakeholders. The startup ecosystem in Türkiye started to develop in the early '80s and have been risen ever since (Kamaç & Kışman, 2020). The commonly known stakeholders are shown in Figure 1.



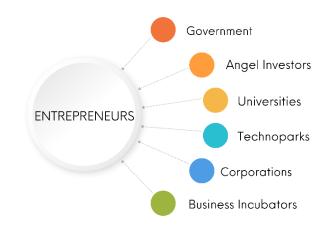


Figure 1. Common Stakeholders in the Turkish Entrepreneurship Ecosystem (Authors' own contribution).

1.1.1. GOVERNMENT

The Turkish Government supports entrepreneurs via various programs and funds, these programs include basic and advanced entrepreneurship training. KOSGEB as the main governmental establishment for startups in the country is a successful example of government support mechanisms for the entrepreneur (Namal et al., 2018). It provides a variety of specific support programs including all kinds of SMEs, but the main focus of KOSGEB is emerging technology startups.

1.1.2. ANGEL INVESTORS

In June 2012, the parliament of Türkiye passed a new law about the angel investor system, and Angel Investor Networks have begun to appear in the same year. According to the data of *startupcentrum*, there are more than 700 accredited angel investors in Türkiye by 2021 (Uzunkaya, 2022). Angel investors invest in startups with their own money, taking all the risk on their own (Teker & Teker, 2016).

1.1.3. UNIVERSITIES

Intending to evolve the economy of the country into a startup-driven economy, entrepreneurship education gained importance in the last two decades in Türkiye. However, Askun and Yıldırım claimed that the courses given in the universities are not sufficient to build a strong entrepreneurship mindset in students (Askun & Yıldırım, 2011). To facilitate the transformation of the scientific discoveries made in the universities into technological products, most universities have started to establish their technology development zones.

1.1.4. TECHNOPARKS

After the Technology Development Zones Law has passed by the parliament, technoparks started to be established rapidly starting from ODTU Teknokent in 2000. There are 97 Technoparks in Türkiye 82 of which are actively in use (Ministery of Industry and Technology, 2023). The most effective advantage of technoparks is tax exemptions for participating startups (Kubaş & Özmen, 2020).

Most technoparks also have some incubator and accelerator structures to support entrepreneurs in all aspects.

1.1.5. CORPORATIONS

The speed of change in technology and businesses force corporations to adjust their innovation strategy. Creating all the innovation inside the company is not viable these days. One way to fill this gap is through Corporate Venture Capital (CVC). CVC investments are minority investments in small startups in the early stage.CVC firms are expecting three outcomes from these investments; making their core business stronger, taking advantage of the ecosystem, and exploring new technologies and markets (Pinkow & Iversen, 2020). Some CVCs in Türkiye are providing mentoring and education via their business incubators but most CVCs are supporting the ecosystems with funds.

1.1.6. BUSINESS INCUBATORS

Despite their unlimited potential to grow and create value for the economy, startups always face serious problems like limited resources, limited funds, and limited access to services (Talak, 2019). Business incubators provide solutions to these problems with a wide variety of services like common offices, financial resources, management support, and technical or business-related knowledge (Leitão et al., 2022). As the startup ecosystem is growing rapidly, the number of incubators is increasing exponentially. Universities, governmental organizations, technoparks, and even some corporations have begun to run their incubator.

In short, there are six different main stakeholders in the Turkish startup ecosystem and they are all providing similar support mechanisms to entrepreneurs which include but are not limited to; financial resources, access to business networks, common office spaces, management support, prototyping-manufacturing and mentoring. We will investigate mentoring from different aspects including mentoring functions, mentoring program structures, match-making of menteementor and the concept of technical mentoring in this paper.

2. MENTORING

In the entrepreneurship ecosystem, the "mentoring" word is generally used as directing the firms to success in business processes. For instance, exentrepreneurs share their experiences about processes with new ones so that ex (experienced) entrepreneurs are called as mentors (Nabi et al., 2021). Also, novice entrepreneurs face many problems and with the help of their mentors, they are directed to overcome those problems. Mentoring as a support mechanism for an entrepreneur is investigated many times from different aspects in the literature.

2.1. RELATED WORK

Sullivan examined the subject from the learning angle and stated that learning from an experienced mentor is much more effective than learning by themselves (Sullivan, 2000). It reduces the problem-solving time as well as the problems faced during the journey.

Sijde and Weijmans studied the long-term effects of mentoring relations and tested his hypothesis (Sijde & Weijmans, 2013). According to his data, the intensity of the relationship affects the long-term benefits while the frequency of the communication does not create a significant difference. Also, he concluded that *İstanbul Ticaret Üniversitesi Girişimcilik Dergisi (e-ISSN: 2717-7416) Cilt: 7 Sayı:13 Bahar 2023/1 s: 155-167* the trust between mentee and mentor is the most important element for the benefits.

Memon et al. (2015) approached the mentee-mentor relationship from the mentor's perspective and advised them that each mentee has different needs therefore one mentorship structure can not meet all needs (Memon et al., 2015). He stated that each startup needs a custom mentorship program to raise its success rate. Also, every stage of the startup life-cycle requires a different set of support.

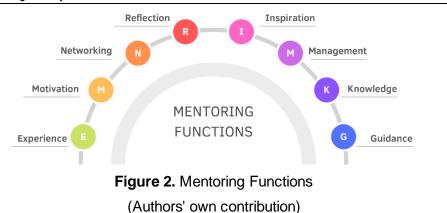
Acar and Özenli searched for the effect of the mentorship programs on the investment behavior of the investors of the startups (Acar & Özenli, 2018). They conclude that the startups that had mentors along the phases are more likely to be successful in finding investors. Also, mentoring support helps reduce the waste of money and time.

Cull searched for the success factors in entrepreneurship and found out that startup owners need someone objective to analyze the business rather than some family member to be successful (Cull, 2006). Also, he stated that mentors need to fill three different roles during the three phases of the mentee-mentor relationship; in the beginning, the mentor needs to be more tactical than strategic and help the mentee gain small tricks to reach pace. In the mid-point mentors are expected to act as a motivator and encourage the novice entrepreneur to not give up. In the end, the mentor needs to be objective and spirit up the mentee for the lift-off.

As a result, most of the work done on the topic stated that a good mentor-mentee relationship is a crucial part of the success of the startup company. In addition, even though entrepreneurs have all the necessary sources of investment, it can be impossible to reach a stable state in their business without having the experience and knowledge to finalize the investment opportunities. Because of that, it is very important to work together with mentors (Acar & Özenli, 2018). In addition to sharing knowledge, skills, and experiences, mentoring also offers new opportunities to entrepreneurs to develop and strengthen self-confidence and entrepreneurial self-efficacy. It has been stated that mentoring has institutional and individual contributions and that people who work with the mentor contribute to reaching their goals, solving problems and job satisfaction (Ateş, 2019).

3. MENTORING FUNCTIONS

Mentoring is beneficial for the mentee in many aspects, and these benefits can be called as mentoring functions. They are not completely independent and can overlap sometimes. Mentoring functions are shown in Figure 2. All concepts will be explained in the next sections.



3.1. EXPERIENCE

Learning as a skill set is vital for an entrepreneur because in the startup ecosystem, everything changes continuously and new challenges appear constantly. According to the research done by Chouke, learning from a colleague is the second best way to gain knowledge after learning by doing (Sullivan, 2000). Therefore, experience sharing by a mentor helps the entrepreneur learn better and faster. Also, it assists the mentee to foresee future challenges before it is too late.

3.2. MOTIVATION

An entrepreneur can make every effort to reach the desired result. He can try all the ways to reach the goal with extraordinary effort. However, sometimes, even if they try, they may not be able to do the job properly. The reason why entrepreneurs are not productive and not working may lie in the fact that they are not competent to do their jobs at the required level. Therefore, one of the ways to motivate entrepreneurs to work is the presence of a mentor. The mentee usually does not see their strengths and the mentor helps them show and develop their strengths (Gisbert, 2017). Because the mentor often realizes their abilities more than theirs. That the mentors believe in them makes entrepreneurs encouraged and gives assistance to support weaknesses.

Entrepreneurs in a mentoring relationship are more self-confident and more willing to use their skills. The mentor motivates and boosts up the courage of the mentee (St-Jean, 2011).

3.3. NETWORKING

The concept of network is frequently used in social and physical contexts but social or business networking is essential in the entrepreneurship ecosystem. Social connections in the business world can lead to successful business relations. Especially in the early stages of the company, personal relations are the driving force of the business. A wide and focused social network is an important asset to reach specific information or even resources that startups do not have at the beginning of their entrepreneurship journey (Elfring et al., 2021). An experienced mentor can provide his/her network to the mentee to facilitate his/her entrance into the business environment. In this way, the novice entrepreneur can access the critical information he/she needs more easily.

3.4. REFLECTION

Istanbul Ticaret Üniversitesi Girişimcilik Dergisi (e-ISSN: 2717-7416) A mentor is not a lecturer, he can not always give the mentee what they need, however, they can help the novice entrepreneur reflect on their actions, decisions, and plans to get better results (Sullivan, 2000). In other words, the mentor can reflect on the mentee's behavior to enable him to make wiser decisions. This type of mentoring activity is important for a novice entrepreneur because self-evaluation in a business environment is not always easy or accurate. With the mentor's mirroring the mentee's progress to him, the mentee can see his strengths to keep and weaknesses to work on more (St-Jean, 2011). This process can be considered as a self-progress report for the novice entrepreneur analyzed by a mentor as an outsider.

3.5. INSPIRATION

The mentors can be generally seen as role models by the mentees. The mentor quotes some excerpts from his own life and can inspire the mentee to learn from those situations (St-Jean, 2011). The entrepreneurs apply these lessons to them and use them to solve some problems.

3.6. MANAGEMENT

Even if the entrepreneur knows how to produce products and services, it is not enough to own a successful business. Management of a startup includes many more aspects to consider. Management of a business includes planning, decision making, motivating, marketing, finance, resource management, market analysis, and many more (Cooney, 2012). Learning these skills is not something a novice entrepreneur can do on his own, it requires a lot of experience. Therefore, a mentor who has a management history can easily help a mentee manage his business and be ready for the problems ahead.

3.7. KNOWLEDGE

Startups usually have insufficient information about many topics in the entrepreneurial ecosystem. Hence, one of the mentoring functions is knowledge sharing about important topics, especially market, product, and finance. Entrepreneurs want to gain business-specific knowledge from their mentors (Nabi et al., 2021). Mentors can help the mentees how to reduce costs, find potential sources of funding, and advertise their products.

3.8. GUIDANCE

Mentors guide the mentees by sponsoring, coaching, and supervising them for taking responsibility to deal with challenges (Ahsan et al., 2018). Since their visibility increases in the entrepreneurship ecosystem. Mentors also provide some advice about all actions on product and business. Consequently, entrepreneurs show progress in almost all aspects with this guidance.

4. MENTORING CLASSIFICATIONS

Mentoring relationships can be classified in terms of several aspects like structure, the status of the mentor, program goals, number of participants, type of communication, and more (Mullen & Klimaitis, 2021).

The structure of mentoring programs can be expressed in three types. A traditional mentoring program called formal mentoring is a program where everything is fixed including the number and the dates of the meetings between mentee and mentor.

In these types of programs, the duration of the program is limited and it is mostly from six months to a year. Fixed duration and meetings keep both mentee and mentor in check for the health of the relationship. In formal programs, there are mostly goals established and measurable outcomes. These are the elements that ensure the relationship is on the right track. In formal mentoring programs, mentees and mentors are needed to be trained about the program to maximize gains from the program (Bortnowska & Seileri, 2019).

On the other hand, there is no fixed structure in informal mentoring programs. Meetings, duration, goals, and objectives all depend on the mentee and the mentor. Training for mentees and mentors is not necessary for informal relationships. Mentee-mentor matches are made by themselves in most programs while it is done by the program executives in formal mentoring programs (Watkins & Milne, 2014).

The number of participants is not necessarily one for each party, it is possible but relatively uncommon in entrepreneurship that one mentee has several mentors or one mentor has several mentees. A concept called group mentoring is also applied in some programs in which there is no match between mentees and mentors. Instead, there are multiple mentors and mentees then relationships are formed in specific needs. Also, the position of the mentor can diversify in the mentoring relationship. They can have the superior role with a significant difference in experience and age but it is also possible that they can be only a few more years experienced and still can be a peer mentor. In some cases, peer mentoring is more effective than the former option (Kubberød et al., 2018).

The focus of the program can be different according to the aims of the program, when the mentor is playing a superior role, the focus is on the mentor and he is leading the way for the program. However, it is more common to focus on the mentee and build the relationship around his/her special needs. It is convenient to focus more on the mentee's needs in entrepreneurship mentoring because the goal of the program is to improve the performance of the startup company.

The concept of e-mentoring is rapidly rising with the advances of enabling technologies and the effect of the pandemic took place in 2020. Although interacting face to face with a mentor is still highly common, online mentoring programs are becoming widespread with their various advantages (Rowland, 2012). It's possible that those who rely on social networking will be more benefited by e-mentoring given how technology is used nowadays. In many disciplines, e-mentoring can contribute to the creation of new knowledge. Greater opportunities and access to knowledge transmission may be offered by e-mentoring.

4.1. CONCEPT OF TECHNICAL MENTORING

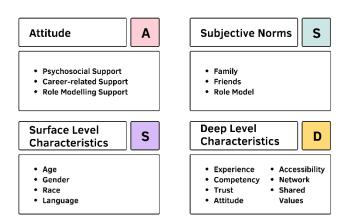
In traditional entrepreneurship, founders are mostly dealing with non-technical business problems to be solved and they need someone experienced in business to guide them. However, in technology start-ups, founders or engineers frequently face highly sophisticated technological obstacles to be fixed. At this point, the concept of technical mentoring emerges. Unlike traditional start-ups, tech start-up founders can not have full knowledge about new technology, thus they need experts in that area of technology to help them solve complex problems. According to the report published by a technology incubator Istanbul Teknopark, technical support is listed as one of the most vital needs of the tech entrepreneur (Duran et al., 2021). One technical mentor can not deal with all the technical problems faced

Istanbul Ticaret Üniversitesi Girişimcilik Dergisi (e-ISSN: 2717-7416) in a start-up so every problem requires a different set of skills and experience. Therefore, permanently matching technical mentors with entrepreneurs is not possible and beneficial. Technical mentors have detailed knowledge about the topic that entrepreneurs are interested in. They have the ability to direct entrepreneurs with their know-how and experiences. Hence, they can easily deal with the obstacles encountered.

5. MENTOR-MENTEE MATCHING

The success of the mentoring program highly depends on the matching of mentee and mentor being accurate and coherent. For matching to be successful, there are several aspects to take into consideration. Memon et al. (2014) suggested a framework to explain the different aspects of the match-up (Memon et al., 2014). He stated that there are 4 main themes of characteristics to look into when matching two people in a program. First theme is the attitude which is defined as a person's positive or negative perception towards performing an action in the relationship. Second theme is the subjective norms that is social pressure perception to act or do not act in a certain way, and the pressure can be caused from the family, friends or a role model. Third theme is surface level characteristics that is about the visible characteristics of a mentor, e.g. gender, age and language. A mentor's control beliefs may be undermined by a mentee's excessive differences from him or her, which could affect the entrepreneur's intentions for mentoring. Last theme of the matching framework is deep level characteristics which can not be seen or evaluated easily but still quite effective in the dynamics of the relationship. These themes are affecting the overall intentions of both parties towards the mentoring process. The sub-characteristics of the framework are listed in the Figure 3. The mentee and the mentor should be harmonious in these terms to avoid mismatches.

INTENTIONS TOWARDS MENTORING





(Memon et al., 2014)

6. DISCUSSION AND PROPOSED MENTORING MODEL FOR TECHNOLOGY INCUBATORS

All different mentoring types and structures have their advantages and disadvantages, therefore it is important to analyze the needs of the start-ups

hosted in the incubator. The main difference between traditional start-ups and tech start-ups is the technical challenges faced during the journey. Therefore it is important to address that technical mentoring is essential in technology incubators. Since it is not applicable to assign a technical mentor to a start-up, group mentoring can be tailored into the technical mentoring model for specific needs. A group of experts in various technological fields can be registered as a technical mentor pool to be available in need. When an entrepreneur needed help, an expert in a related field could be addressed as a consultant.

The aforementioned studies suggest that formal meeting structure yields more successful programs therefore a formal matching of an experienced business mentor could be appointed to each start-up to watch their journey closely and be there when needed. This business mentor is not necessarily experienced in the field that start-up operations but he/she needs to be experienced in mentoring.

Peer learning is another powerful tool that can be used to improve learning outcomes from mentoring programs. Despite working in different fields of technologies, start-up founders or employees still can learn a lot from each other thus, common activities, periodic events, and social cohesion meetings can be implemented to facilitate peer learning. Also, an online forum where all users can exchange valuable ideas could enhance the impact.

The duration of a mentee-mentor relationship can vary for each program, since the development process of a deep-tech company is considerably longer than that of a traditional start-up, the mentoring program should also be longer than traditional ones. In the literature, duration is varying between 6 to 12 months hence, it is possible to extend those programs to 18 months if needed.

Matching mentees with mentors is also an important factor for the success of the program. A technical mentor pool is vital for a tech incubator to be able to meet the needs that will come from the entrepreneurs. Matching technical mentors with start-ups is unnecessary and will result in inaccurate relationships, instead the technical mentoring can be done case by case in need. However, studies suggest that a business mentor who will stand by novice entrepreneurs is essential. Matchmaking of a business mentor and entrepreneur should be done by considering the characteristics mentioned in the last section. The harmony and trust between the mentee and the mentor is the key element for successful matches.

Mentoring should not be confused with therapy or consultancy, these elements may be involved in a mentoring relationship up to some amount but mentoring is a two-way learning journey with the sole aim of making the entrepreneur successful. Therefore, to maximize the gains from the relationship, both mentee and mentor should be trained in professional mentoring programs.

Finally, monitoring the progress of the mentoring program is essential. It's a good idea to monitor simple statistics like the number of meetings and participation. Regular surveys from mentors and mentees can also be used to evaluate whether or not the program is functioning.

7. CONCLUSION

Novice entrepreneurs are facing many problems regarding the nature of startup ecosystem. To meet this need in the ecosystem, there are many stakeholders with different motives. Government, universities, public and private incubators,

Istanbul Ticaret Üniversitesi Girişimcilik Dergisi (e-ISSN: 2717-7416) Cilt: 7 Sayı:13 Bahar 2023/1 s: 155-167 accelerators, corporations, technoparks and angel investor networks are main stakeholders in the ecosystem for the entrepreneur. They all have similar support mechanisms but there are key differences as well.

One of the most important support mechanism for a novice entrepreneur is mentoring. Since the survival time window of a startup is narrow, "learning from mistakes" or "learning by doing" style of building experience is costly for founders. Therefore, learning from an experienced fellow is much easier and results in better outcomes. Although not mentioned frequently in the literature, for tech startup founders in specific, getting technical support is tough as well as expensive especially in niche technology areas. So, an informal structure of technical mentoring can be considered as essential for founders in deep technology startups.

Since there is no "one program fits all" solution for any stakeholders, tailored hybrid mentoring structures should be adopted to specific needs of the startup portfolio of the stakeholder. All different programs have their advantage and disadvantages therefore none of them will meet all requirements of a support mechanism.

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