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## Article

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# Three Actors of Entrepreneur Mentoring and Their Impact on Perceived Mentoring Effectiveness: The Korean Formal Mentoring Context

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## ABSTRACT

**Purpose:** This study investigates the impact of three actors that influence entrepreneur mentoring—mentor, mentee, and operating agency—on mentoring effectiveness within the context of formal mentoring in Korea. Specifically, the study considers the characteristics of the mentee, mentoring functions provided by the mentor, and support from the operating agency as antecedents to explain the perceived mentoring effectiveness of the mentee.

**Design/methodology/approach:** I conducted two studies. Study 1 involves data from mentees participating in the entrepreneur mentoring program hosted by the Korea Venture Business Association from March to June 2018. Data for Study 2 was collected from mentees participating in the mentoring program hosted by incubating center of university located in South Korea from November to October 2022. Hierarchical regression analysis was used to examine the hypotheses.

**Findings:** First, Study 1 shows that willingness to receive mentoring positively affects entrepreneurial competence improvement, but this impact was insignificant in Study 2. Second, the problem-solving function provided by the mentor presents a significant positive effect on both mentoring satisfaction and entrepreneurial competence improvement. Third, the motivating function undertaken by a mentor only has a significant positive effect on improving entrepreneurial competence in Study 1. This motivating function positively affects mentoring satisfaction and entrepreneur competence improvement in Study 2. Fourth, support from the operating agency has a significant positive impact on both mentoring satisfaction and improving entrepreneurial competence after controlling for the mentor and mentee effects.

**Research limitations/implications:** This study provides a theoretical contribution to the research on entrepreneur mentoring. In this regard, it suggests three actors-based models of mentoring effectiveness and practical implications for organizations executing entrepreneurship mentoring programs. Accordingly, it confirms that the operating agency's managerial role is necessary for enhancing entrepreneur mentoring effectiveness.

**Originality/value:** Entrepreneur mentoring is implemented via formal mentoring in many developing countries. However, little attention has been paid to the operating agency as the primary determinant affecting mentoring effectiveness. The current study addresses this gap by examining the effects of three actors in formal mentoring—mentee, mentor, and operating agency—on the mentee's perceived mentoring effectiveness.

*Keywords: Entrepreneur mentoring effectiveness, Formal mentoring, Support of operating agency, Mentoring functions, Characteristics of mentee*

## I. Introduction

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In recent years, government policies supporting

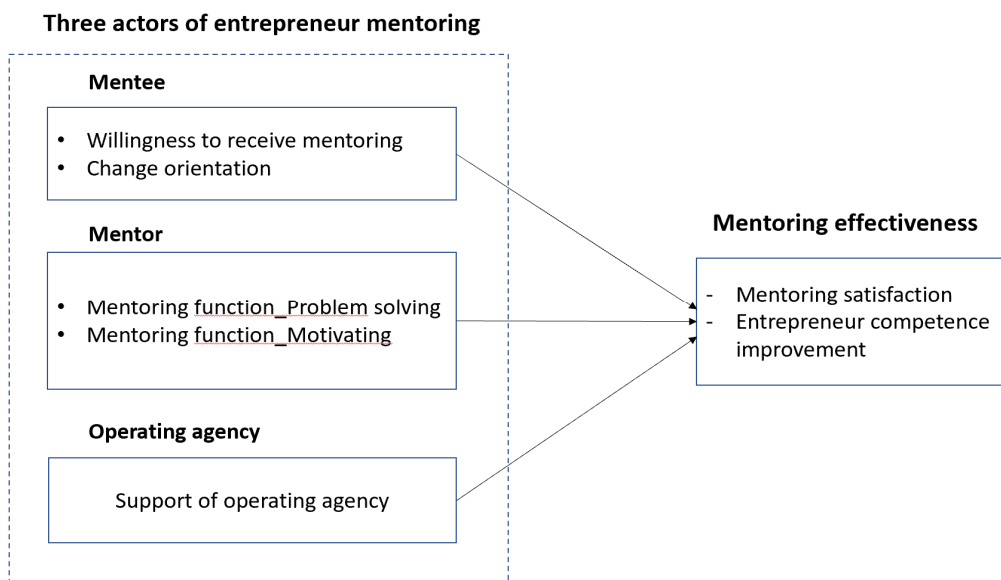
entrepreneurship have increased rapidly in Korea. In this regard, mentoring for startup entrepreneurs is one such supporting policy. In Korea, mentoring programs for entrepreneurs are mainly executed by public organizations, such as government institutions, venture associations, and university incubation centers. These examples of mentoring are called formal mentoring (Allen, Eby, & Lentz, 2006; Eddy, Tannenbaum, Alliger, D'Abate, & Givens, 2001). In formal mentoring, the operating agency plans and manages the entire mentoring process. Thus, the operational competence of operating agencies is necessary for the success of formal mentoring programs.

Previous studies have explained the effectiveness of formal mentoring and have suggested the determinants of formal mentoring effectiveness (Chao, Walz, & Gardner, 1992; Fagenson-Eland, Marks, & Amendola, 1997; Ting, Feng, & Qin, 2017). However, these studies tend to explain it in terms of the theoretical frame of informal mentoring relationships. Literature on informal mentoring explains mentoring effectiveness by including two actors—mentor and mentee. In formal mentoring, the operating agency, which designs and manages the mentoring process, is one of the crucial actors for effective mentoring. In the practical vein, the role of the operating agency in formal mentoring effectiveness has been emphasized (Bisk, 2002; Jones, 2013). Formal mentoring studies have also posited that the role of the operating agency—matching, mentor training, pre-mentoring expectation discussions, ongoing support, and evaluating mentoring—are critical success factors of formal mentoring programs (Clutterbuck, 2004; Cranwell-Ward, Bossons, and Gover 2004). However, relatively few studies have been specifically directed toward understanding the determinants of effective formal entrepreneur mentoring programs, and little attention has been paid to the agency's operating role as the primary determinant affecting the effectiveness of an entrepreneur mentoring program. This study addresses this gap by examining the effects of three actors in formal mentoring—mentee, mentor, and operating agency—on the mentee's perceived mentoring effectiveness.

Moreover, this study has three specific objectives.

First, it considers the characteristics of mentees as antecedents of mentoring effectiveness. Drawing on motivation-opportunity-ability theories of behavior (Blumberg & Pringle, 1982), it examines the impact of mentees' intention to engage in mentoring and change orientation on mentoring effectiveness. Second, this study investigates the influence of mentoring functions undertaken by mentors on mentoring effectiveness. Mentoring relations serve two separate but interrelated functions: career-related and psychological (Kram, 1983; Kram & Isabella, 1985). In the context of entrepreneur mentoring, the mentor provides career-related support for the mentee to learn how to achieve tangible outcomes, such as earning startup funding and marketing skills for running businesses. Psychological support from the mentor indirectly facilitates the novice entrepreneur's new business success, motivating them by enhancing their self-efficacy and entrepreneurial competence (Chao et al., 1992; Noe, 1988). This study modifies these two mentoring functions to include providing business solutions and motivating, thereby reflecting the entrepreneur mentoring context. Finally, this study suggests that the effectiveness of formal entrepreneur mentoring depends on the effort of the operating agency. The operating agency's support for mentoring, such as educating mentors, managing the mentor-mentee relationship by receiving feedback and rematching, providing resources for mentoring, and evaluating mentoring effectiveness, may positively influence mentoring effectiveness. This study examines whether the operating agency's support for mentoring has a significant effect on mentoring effectiveness after controlling the effects of the mentee and the mentor. The research model used in this study is presented in Figure 1.

Theoretically, this study contributes to the body of research on mentoring relationships by extending the explanation of mentoring effectiveness from the two-actors-based model to a three-actors-based model, including the operating agency as the primary actor in the mentoring relationship. Also, the current study provides practical implications for operating agencies that carry out entrepreneur mentoring programs. By providing evidence of the direct impact of the operatin-



**Figure 1.** Research model

g agency on mentoring effectiveness, I highlight the operating agency's role in developing an effective mentoring relationship.

## II. Literature Review

### A. Entrepreneur Mentoring in Korea

Over the past few years, the Korean government has implemented policies designed to support entrepreneurs and create a new economy through entrepreneurial innovation. In this regard, the Ministry of Small and Medium-Sized Enterprises and Startups (MSS) is responsible for policies related to ventures and startups. Entrepreneur mentoring is one such policy that supports entrepreneurs during the early stages of their business process. Furthermore, it is implemented by public agencies such as venture associations and universities' startup incubators that operate mentoring programs based on the MSS's budget. The entrepreneur mentoring process is as follows: The operating agency launches the entrepreneur mentoring program by selecting

mentors who are qualified for the program. The mentoring relationship is then initiated by matching mentors with mentees. In informal mentoring, mentor-mentee matching is initiated by the mentee, who instinctively approaches the entrepreneur network to find a volunteer mentor. However, entrepreneur mentoring differs from informal mentoring because matching is conducted through an operating organization. The informal mentoring relationship continually progresses through spontaneous social exchanges between the mentor and mentee toward developing a peer-like and friendly relationship. Formal entrepreneur mentoring is challenging to develop in a mentor-mentee mentoring relationship because this relationship formally ends with the termination of the mentoring program. In this case, not only does the operating agency manage the official mentoring schedule but also undertakes related activities, such as group workshops and mentor training programs, to facilitate mentorship relationships within a limited time. As discussed above, the role of the operating agency in managing and facilitating the mentoring relationship is likely to impact the effectiveness of entrepreneur mentoring. Therefore, this study examines whether the operating agency's

support for mentoring has a significant impact beyond its impact on the effectiveness of mentoring by the mentor on the mentee.

## B. The Perceived Effectiveness of an Entrepreneur Mentoring Program

The literature on entrepreneur mentoring has argued that the outcomes of formal mentoring are proximal and distal (e.g., Allen et al., 2006; Hamlin & Sage, 2011; Hegstad & Wentling, 2005; Kram & Isabella, 1985). Proximal outcomes for the mentee in formal mentoring include acquiring new knowledge and skills and satisfaction with the mentor and program (Hegstad & Wentling, 2005; Wanberg, Welsh, & Hezlett, 2003). The fundamental goal of mentoring is to change a mentee's attitudes, behaviors, and competencies (Wanberg et al., 2003). These changes in the mentee lead to satisfaction (Hamlin & Sage, 2011). Distal outcomes for mentees include enhanced performance, job satisfaction, career development, life satisfaction, and better rewards and remuneration. Ting et al. (2017) divided the mentoring effect into two levels—the experience and utility levels—based on the perceptual perspective in the entrepreneurial mentoring context (Hamlin & Sage, 2011; Hegstad & Wentling, 2005; Ting et al., 2017; Wanberg et al., 2003). Experience-level outcomes include satisfaction with the mentoring process and results, and utility-level outcomes include the mentee's personal and business growth.

Based on the suggestions in previous literature, this study adopts mentoring satisfaction and perceived entrepreneurial competence improvement as proxies of mentoring effectiveness. Mentoring satisfaction is a concept similar to the experience-level effectiveness explained in Ting et al. (2017) since it reflects the degree of satisfaction with both the process and the result of mentoring. Perceived improvements in entrepreneurial competence measure how much mentees perceive they have learned entrepreneurial skills and knowledge through mentoring, which is reflective of the effectiveness of utility-level mentoring applied by Ting et al. (2017).

## C. The Characteristics of the Mentee and the Perceived Effectiveness of Entrepreneur Mentoring

Mentoring is a dynamic relationship between the mentee and the mentor. Therefore, the characteristics of these two participants are the primary determinants of mentoring effectiveness. This research provides a theoretical framework based on the motivation-opportunity-ability (MOA) framework (Blumberg & Pringle, 1982) that explains the effect of the mentee's characteristics on mentoring effectiveness. The MOA framework suggests that motivation is the first component stimulating behavior. Motivation captures the individual's willingness to act. Self-motivated individuals are likely to have high work goals and achieve good performance. The second component of the MOA framework is opportunity, which represents the environmental or contextual mechanisms that enable action. The ability of individuals is the final component of the MOA framework that explains the behavior of self-motivated individuals. Ability refers to the individual's skills or knowledge base related to their actions (Rothschild, 1999).

Entrepreneur mentoring programs allow mentees to enhance their entrepreneurial knowledge and skills. Mentees need adequate motivation and the ability to use this mentoring opportunity. Mentees who have high intentions of participating in mentoring are likely to be motivated to learn from mentors through mentoring. Therefore, a mentee's willingness to engage in mentoring helps build a positive mentoring relationship with a mentor. Hodges (2009) also found that the success of mentoring is affected by the mentee's expectations. Mentee willingness to participate in mentoring reveals their autonomous motivation. According to self-determination theory (Deci & Ryan, 1985; Deci & Ryan, 2000), autonomous motivation is superior to controlled motivation when the behavior of interest is complex and involves learning (Gagné & Deci, 2005). In the Korean context, mentee participation in the entrepreneur mentoring program is a mandatory requirement included in the venture support from the government. This situation means that mentees

participating in the entrepreneur mentoring program are likely to have controlled motivation to get the extrinsic rewards of venture-fostering policies. Therefore, it is expected that if mentees are willing to be mentored, the effectiveness of mentoring will increase more than if they have only a controlled motivation toward mentoring, as expressed in the following hypotheses H1-H1b

**H1:** A mentee's willingness to receive mentoring positively impacts mentoring effectiveness.

**H1a:** A mentee's willingness to receive mentoring positively impacts mentoring satisfaction.

**H1b:** A mentee's willingness to receive mentoring positively impacts the perceived improvement of entrepreneurial competence.

Both mentor and mentee need appropriate competencies for effective mentoring (Clutterbuck, 2005). Competence is defined as the consistent, observable, and measurable ability to perform a defined task or an element of a task. It includes skill, personality, and attitude (Ackley & Gall, 1992; Clutterbuck & Lane, 2004; Lane, 2016). This research suggests that the mentee's changed orientation is an attitudinal competence for mentoring effectiveness. In their case study, Audet and Couteret (2012) suggested that the mentee's openness to change is what fundamentally affects mentoring. The primary outcome of mentoring for a mentee is "protégé's change" through learning, which leads to satisfaction with the mentoring program (Wanberg et al., 2003). Change orientation is similar to "felt responsibility for change" or "an individual's belief that they are personally obligated to bring about constructive change" (Morrison & Phelps, 1999, p. 407). People with high change orientation will have a positive perception of taking charge in their work (Morrison & Phelps, 1999; Parker, Williams, & Turner, 2006). Therefore, a mentee with a high change orientation actively engages in mentoring by perceiving a responsibility to engender change through mentoring. Thus, hypotheses H2-H2b are proposed as follows:

**H2:** A mentee's change orientation positively impacts mentoring effectiveness.

**H2a:** A mentee's change orientation positively impacts mentoring satisfaction.

**H2b:** A mentee's change orientation positively impacts the perceived improvement in entrepreneurial competence.

## D. Mentoring Functions and the Perceived Effectiveness of Entrepreneur Mentoring

The body of literature on mentoring has traditionally suggested that the mentor fulfills two broad functions for the mentee over the phases of the mentoring experience: career-related support and psychosocial support (Hamlin & Sage, 2011; Kram, 1983; Kram & Isabella, 1985). Career-related support provides the mentee with sponsorship, exposure, coaching, and protection to increase their visibility in the organization, which can lead to promotions and salary increases (Chao et al., 1992; Hamlin & Sage, 2011; Kram & Isabella, 1985; Waters et al., 2002). Psychosocial support refers to enhancing the mentee's self-esteem and perceived competence by providing counseling, friendship, and role models. It is argued that the roles and nature of mentoring functions in new business-startup mentoring differ from those in an intra-organizational context (Hamlin & Sage, 2011; Kram & Isabella, 1985; Waters et al., 2002).

In the context of entrepreneur mentoring, the career-related support that helps mentees earn promotions and salary increases is not needed for entrepreneurs. The career-related function necessary for the entrepreneur is likely based on the mentor's business experience and technical expertise rather than the mentor's organizational influence in areas such as power and networks (Waters et al., 2002). Hence, career-related support in entrepreneur mentoring will occur in the form of providing business solutions to mentees (Waters et al., 2002). Also, the frequency of psychosocial support in entrepreneur mentoring is limited compared to intra-organizational mentoring. Mentoring within an organization means that the physical distance

between the mentor and the mentee is close and that both parties interact frequently. However, in entrepreneur mentoring, the interaction between mentor and mentee is limited because they do not work in the same organization. Therefore, psychosocial support from the mentor in entrepreneur mentoring tends to be offered less often than in the context of intra-organizational mentoring (Kram, 1988; Ragins & Cotton, 1999). However, in Noe's study (1988) of a formal program, mentees reported the value of the psychosocial benefits to mentors. This finding concluded that regardless of the frequency of the offering, psychosocial support from the mentor still helps the mentee.

The current study proposes that two types of mentoring functions offered by the mentor will have a positive relationship with the perceived effectiveness of mentoring in entrepreneur mentoring. Drawing on previous arguments (Kram & Isabella, 1985; Waters et al., 2002; Wooten et al., 1999), the research dimensions of the mentoring functions were constructed, including providing business solution functions (measured by the extent of learning entrepreneurial knowledge and skills from a mentor) and motivating functions (measured by the extent to which a mentor can inspire a mentee). Therefore, hypotheses H3-H4b are proposed as follows:

**H3:** A mentor's business solution function positively impacts the effectiveness of mentoring.

**H3a:** A mentor's business solution function positively impacts satisfaction with mentoring.

**H3b:** A mentor's business solution function positively impacts the perceived improvement in entrepreneurial competence.

**H4:** A mentor's motivating function positively impacts the effectiveness of mentoring.

**H4a:** A mentor's motivating function positively impacts satisfaction with mentoring.

**H4b:** A mentor's motivating function positively impacts the perceived improvement in entrepreneurial competence.

## E. The Support of the Operating Agency and the Perceived Effectiveness of Entrepreneur Mentoring

Entrepreneur mentoring in Korea has been mainly implemented by agencies such as the Korea Venture Business Association. The operating agency manages all the phases of mentoring, such as matching mentees with appropriate mentors, offering proper resources to build a mentoring relationship between mentors and mentees, handling challenges that occur during mentoring, and evaluating mentoring after its completion. It is natural to build a mentor-mentee relationship in informal mentoring because both parties work together in the same organization. However, the mentor and mentee in entrepreneurial mentoring do not work in the same organization. Therefore, the chances of building a mentoring relationship at the initial stage are limited. To compensate for this shortcoming, the operating agency holds a formal meeting to initiate the mentor-mentee relationship and also supports the process by providing a space for mentoring and regular training for mentors. Finally, the operating agency evaluates the effectiveness and satisfaction of mentors and mentees after terminating a mentoring relationship, aiming to improve the quality of the mentoring program. As discussed above, the operating agency plays a crucial role in developing mentoring relationships in the context of formal mentoring. This study suggests that the operating agency's support positively affects the effectiveness of entrepreneur mentoring after controlling the effects of the mentee and mentor. Accordingly, Hypotheses 5-5b are proposed as follows:

**H5:** The perceived support of the operating organization positively impacts the effectiveness of mentoring.

**H5a:** The perceived support of the operating organization positively impacts satisfaction with mentoring.

**H5b:** The perceived support of the operating organization positively impacts the perceived improvement in entrepreneurial competence.

### III. Study 1

#### A. Methods

##### 1. Sample and data collection

The data were collected from mentees who had participated in the entrepreneur mentoring program hosted by the Korea Venture Business Association from March to June 2018. The survey was conducted immediately after finishing the last mentoring session. A questionnaire was distributed to a total of 94 mentees, and 80 mentees completed it, resulting in a response rate of 85%.

##### 2. Measurement

Scales ranging from "1" ("strongly disagree") to "5" ("strongly agree") were used for all variables. Translation and back-translation procedures (Brislin, 1986) were employed to translate English items into Korean. A variable titled "*a willingness to receive mentoring*" (Cronbach's  $\alpha = .77$ ) was developed to assess whether mentees had an active and autonomous intention to participate in mentoring. Respondents indicated on a five-point scale whether they agree or disagree with four statements, for example, "I am joining this scheme because I was persuaded" and "I will be very committed to working with my mentor" (*change orientation* (Cronbach's  $\alpha = .67$ )), both of which were developed to measure the extent to which mentees agreed with whether they had a positive orientation toward change. Two items were assessed on the degree to which the mentee considered change important and the extent to which they were willing to accept the change (e.g., "It is more important to create performance than to think about goals or manage charts;" "In the long run, it is effective to constantly seek change."). *Problem-solving* (Cronbach's  $\alpha = .97$ ) was measured based on the degree to which the mentor provided ideas and solutions for solving the mentee's business problems, using four items from Cho and Park's (2017) measure of the mentoring function (e.g., "My mentor found an idea to solve my problem at an

appropriate point;" "My mentor found a solution that could present new thinking and perspective.") *Motivating* (Cronbach's  $\alpha = .93$ ) was measured using four items from Cho and Park (2017) to assess the degree to which the mentor praises and encourages the mentee to immerse themselves in the business (e.g., "My mentor praised me for something I did well during mentoring," "My mentor was considerate of me and motivated me while I conducted business or while I was preparing to start a business."). *Perceived support of the operating agency* (Cronbach's  $\alpha = .98$ ) was measured by the perceived degree of the operating organization's program support used by Marshall et al.'s (2016) mentor perceived program support (MPPS), a five-point scale. Accordingly, respondents in my study indicated on a five-point scale whether they agree or disagree with three statements such as "Information was provided to help improve the mentoring relationship," "Activities that can be done with the mentee were provided," and "The operating organization guided me on how to deal with difficulties that arise during the mentoring process." *Mentoring satisfaction* (Cronbach's  $\alpha = .82$ ) was measured using the three protégé satisfaction items in the mentoring program scale developed by Lyons and Oppler (2004) to measure the extent to which the mentee is satisfied with the mentoring (e.g., "I am satisfied with the mentoring" and "Through mentoring, I achieved what I wanted."). *Perceived entrepreneurial competence improvement* (Cronbach's  $\alpha = .98$ ) was measured using eleven items on the extent to which the mentee perceived that they had improved in technical, strategic, and managerial competence (e.g., "I have improved my ability to seek technical tie-ups," "I have improved my strategic thinking ability," and "I was able to identify the capabilities of organizational members and entrust them with appropriate tasks"). Age, gender, and education level were used as control variables because of their potential impact on the effectiveness of mentoring. For instance, mentor age and gender may influence building a relationship with the mentor. Also, a mentee's education level may influence the amount of learning through mentoring.



## B. Results

The means, standard deviations, and intercorrelations of major variables are presented in Table 1. As indicated in Table 1, the correlations for all variables were in the expected direction.

A multiple regression analysis was performed to examine the hypotheses. Hypothesis 1 predicted that the mentee's willingness to receive mentoring would positively affect the perceived effectiveness of mentoring. As indicated in Table 2, willingness to receive mentoring did not show a significant effect on mentoring satisfaction, which does not support

H1a ( $\beta = .03, p = .67, n.s.$ ). However, the results of the multiple regression analysis show that willingness to receive mentoring positively affects improvements in entrepreneurial competence, supporting hypothesis H1b ( $\beta = .11, p < .05$ ).

Hypothesis 2 proposed that the mentee's change orientation would increase the perceived effectiveness of mentoring. As seen in Table 2, the main effects of change orientation both on mentoring satisfaction and improved entrepreneurial competence were not significant. Therefore, H2a ( $\beta = -.06, p = .39, n.s.$ ) and H2b ( $\beta = .03, p = .59, n.s.$ ) were not supported in this study. Hypotheses 3 and 4 predicted the

**Table 1.** Descriptive Statistics and Correlations for Study 1

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1 Gender <sup>a</sup>	.38	.49										
2 Age	40.43	10.14	-.60**									
3 Education <sup>b</sup>	3.18	.92	-.24*	.31**								
4 Willingness to receive mentoring	4.08	.74	-.26*	.17	.11	(.78)						
5 Change orientation	4.07	.66	-.14	.09	.10	.02	(.62)					
6 MF <sup>c</sup> _Problem-solving	3.90	.98	.05	.08	-.03	.37**	.19	(.97)				
7 MF <sup>c</sup> _Motivating	3.98	.85	.17	-.10	.07	.27*	.08	.81**	(.91)			
8 Support of the operating agency	3.74	1.07	.08	-.12	.08	.30**	.24*	.71**	.67**	(.98)		
9 Mentoring satisfaction	3.80	.97	.09	-.03	-.10	.33**	.10	.80**	.70**	.69**	(.80)	
10 Entrepreneurial competence improvement	3.71	.92	-.04	.11	.10	.45**	.28*	.78**	.74**	.74**	.71**	(.98)

Note. *N* = 74. <sup>a</sup> 0 = male, 1 = female. <sup>b</sup> 1 = high school, 2 = college, 3 = university, 4 = graduate school. <sup>c</sup>MF = Mentoring Function. Cronbach alphas are on the diagonal in parentheses. \*  $p < .05$ . \*\*  $p < .01$ . (two-tailed)

**Table 2.** Results of Regression Analysis for Study 2

Predictor variables	Mentoring satisfaction	Entrepreneurial competence improvement
<i>Control variables</i>		
Gender <sup>a</sup>	.01	-.01
Age	-.02	.13
Education	-.11	-.01
<i>Independent variables</i>		
Willingness to receive mentoring	.05	.15*
Change orientation	-.05	.06
Mentoring function_problem-solving	.52**	.27
Mentoring function_motivating	.11	.25*
Support of operating agency	.26*	.34**
<i>F</i>	19.06**	23.10**
<i>R</i> <sup>2</sup>	.70	.74

Note. *N* = 74. standardized coefficients are shown. <sup>a</sup> 0=male, 1=female, \*  $p < .05$ . \*\*  $p < .01$  (two-tailed)

relationship between the mentor's functions and perceived mentoring effectiveness. The results of the multiple regression analysis in Table 2 showed that *Problem-solving* was positively related to mentoring satisfaction, supporting hypothesis H3a ( $\beta = .53, p < .01$ ) and improved entrepreneurial competence, supporting hypothesis H3b ( $\beta = .27, p < .05$ ). *Motivating* was positively related only with improved entrepreneurial competence as predicted by H4b ( $\beta = .27, p < .05$ ) and did not have a significant effect on mentoring satisfaction ( $\beta = -.10, p = .43, n.s.$ ). Hypothesis 5 proposed a relationship between the organization's program support and the perceived effectiveness of mentoring. As indicated in Table 2, the organization was positively related to mentoring satisfaction ( $\beta = .27, p < .05$ ) and improved entrepreneurial competence ( $\beta = .37, p < .01$ ). Accordingly, hypotheses H5a and H5b were supported.

## IV. Study 2

### A. Methods

#### 1. Sample and data collection

The data for Study 2 were collected from mentees who had participated in the entrepreneur mentoring program hosted by the university's incubating center. This center is affiliated with the Graduate School of Entrepreneurship located in South Korea. Novice or potential entrepreneurs contact the center when to seek mentoring from experts. The center then matches mentees and mentors enrolled in this institution. Mentors consist of entrepreneurial experts such as accelerators, professors, and start-up CEOs. Mentoring program of Study 2 is not held on a large scale at once but is held continuously for each mentee case. Mentoring is undertaken according to the preliminary mentor-mentee arrangement, which is mediated by the center. The online survey was conducted from November to October 2022 for mentees participating in the mentoring program at the center. A total of

51 mentees responded to the questionnaire, which was used for the analysis.

#### 2. Measurement

The same measurement as those used in Study 1 was used for measuring each variable, except *change orientation*. The reliability of the main variables is shown in Table 3. *Change orientation* (Cronbach's alpha = .97) was measured using five items from Parker et al. (2006) to assess the degree to which the mentee considers themselves personally obligated to engender constructive change. The items were designed to reduce social desirability bias, so low change orientation sound "legitimate" (e.g., "Tried and tested ways of doing things are usually the best," "Too often work practices are changed just for the sake of change," "In the long run, this job is done more efficiently if people stick to what they already know"). Because of the variation in mentees' mentoring times, the frequency of mentoring along with the mentees' age, gender, and education levels were used as control variables.

### B. Results

Table 3 shows the descriptive statistics and correlations for the variables. The correlations support the proposed model. Table 4 shows hypothesized test results by conducting regression analyses. The effects of willingness to receive mentoring on mentoring satisfaction ( $\beta = .04, p = .72, n.s.$ ) and improvement of entrepreneurial competence ( $\beta = .03, p = .74, n.s.$ ) were not significant. Also, change orientation did not significantly affect mentoring satisfaction ( $\beta = .00, p = .96, n.s.$ ) and the improvement of entrepreneurial competence ( $\beta = .04, p = .69, n.s.$ ). Therefore, as shown in Table 4, hypotheses H 1 and H2, which predicted that mentees' characteristics positively impact the dependent variables were not supported. In terms of mentoring function, *problem-solving* was positively related to satisfaction with mentoring ( $\beta = .41, p < .01$ ) and improved entrepreneurial competence

**Table 3.** Descriptive Statistics and Correlations for Study 2

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1 Gender <sup>a</sup>	1.31	.47											
2 Age	35.28	8.83	-.19										
3 Education <sup>b</sup>	3.17	.96	.08	.54**									
4 Mentoring frequency	5.65	3.36	.39*	.08	.28*								
5 Willingness to receive mentoring	4.47	.43	.17	-.17	-.07	.25	(.64)						
6 Change orientation	3.06	.74	.17	-.05	-.15	-.20	-.17	(.66)					
7 MF <sup>c</sup> _Poblem-solving	4.01	.84	.22	-.39**	-.27	.20	.40**	-.25	(.92)				
8 MF <sup>c</sup> _Motivating	4.22	.81	.29*	-.37**	-.18	.22	.46**	-.18	.70**	(.93)			
9 Support of the operating agency	4.04	.90	-.01	-.27	-.26	.17	.37**	-.18	.60**	.59**	(.82)		
10 Mentoring satisfaction	4.18	.84	.09	-.21	-.15	.20	.42**	-.24	.76**	.71**	.74**	(.91)	
11 Entrepreneurial competence improvement	3.84	.89	.09	-.31*	-.01	.19	.43**	-.25	.74**	.76**	.64**	.78**	(.96)

Note. *N* = 51. <sup>a</sup> 0 = male, 1 = female. <sup>b</sup> 1 = high school, 2 = college, 3 = university, 4 = graduate school. <sup>c</sup>MF = Mentoring Function. Cronbach alphas are on the diagonal in parentheses. \* *p* < .05. \*\* *p* < .01. (two-tailed)

**Table 4.** Results of Regression Analysis for Study 2

Predictor variables	Mentoring satisfaction	Entrepreneurial competence improvement
<i>Control variables</i>		
Gender <sup>a</sup>	-.06	-.20*
Age	.11	.38**
Education	.05	-.16
Mentoring frequency	.01	-.03
<i>Independent variables</i>		
Willingness to receive mentoring	.04	.03
Change orientation	.00	.04
Mentoring function_poblem-solving	.41**	.40**
Mentoring function_motivating	.27*	.44**
Support of the operating agency	.36**	.18 <sup>†</sup>
<i>F</i>	12.16**	15.73**
<i>R</i> <sup>2</sup>	.74	.78

Note. *N* = 51. standardized coefficients are shown. <sup>a</sup> 0=male, 1=female, <sup>†</sup> *p* < .10. \* *p* < .05. \*\* *p* < .01 (two-tailed)

( $\beta = .40$ ,  $p < .01$ ). Therefore, H3a and H3b were supported. Also, motivating had significant effects both on mentoring satisfaction ( $\beta = .27$ ,  $p < .01$ ) and improved entrepreneurial competence ( $\beta = .44$ ,  $p < .01$ ). H4a and H4b were supported. Lastly, the support of the operating agency had a significant effect on mentoring satisfaction ( $\beta = .36$ ,  $p < .01$ ). Therefore, H5a was supported.

The support of the operating agency showed marginal significance on the improvement of entrepreneurial competence ( $\beta = .18$ ,  $p < .10$ ). Therefore, H5b was marginally supported.

## V. Discussion

The importance of entrepreneurial ventures has been growing in many countries. In Korea, entrepreneurial mentoring is a crucial element of the entrepreneur support policy. This study investigates the effect of three actors influencing entrepreneur mentoring—the mentee, the mentor, and the operating agency—on the perceived effectiveness of mentoring. The results of this study are summarized as follows: First, the positive influences of mentees' characteristics on the

effectiveness of mentoring were not consistent between mentoring programs. As shown in the results of Study 1, the willingness to receive mentoring significantly and positively affected the improved entrepreneurial competence. Furthermore, the more the mentee had an active and voluntary intention to participate in mentoring, the greater the improvement in entrepreneurial competence through mentoring. Improved entrepreneurial competence is the outcome of mentoring related to learning. In learning effectiveness, the learner's voluntary intention is one of the most critical antecedents. According to the MOA theory of behaviors, autonomous motivation leads to more behavioral effort and persistence, resulting in more positive behavioral outcomes than controlled motivation. Therefore, mentees with a high willingness to receive mentoring consider mentoring a learning opportunity to enhance their entrepreneurial competence and put more effort and persistence into mentoring to learn from expert mentors. Similar findings are reported in help-seeking research (Mueller & Kamdar, 2011) and feedback-seeking research (Ashford, Blatt, & VandeWalle, 2003; Grant & Ashford, 2008), in which autonomous motivation is known as a predictor of these behaviors. On the other hand, the results of Study 2 showed that willingness to receive mentoring did not significantly affect the effectiveness of mentoring. There is a plausible explanation regarding this inconsistent result of the willingness to receive mentoring between both studies. Participating in Study 1's mentoring program was a mandatory requirement included in the venture funding. Therefore, the attitude of mentees about participating in this mentoring program may be less voluntary. In this vein, the willingness of mentees to participate in mentoring could be a critical antecedent of mentoring effectiveness. On the other hand, mentees participating in Study 2 approached the center voluntarily to be mentored by an expert. Therefore, their preference for mentoring may be high overall. Accordingly, the willingness to receive mentoring may not be an accurate predictor of the effectiveness of mentoring in Study 2.

The effect of change orientation on mentoring effectiveness was not significant in the current study

although openness to change is stressed in the learning process. This result indicates that entrepreneurial mentoring may be different from learning and training in the unique relationship that is developed between mentee and mentor. Mentoring is a reciprocal process between mentee and mentor, while learning or training is a relatively unilateral process from trainer to trainee. Clutterbuck and Lane (2004) suggest that mentees need competencies to initiate and manage the mentoring relationship for developing effective mentoring. Therefore, the mentee's competence in building and managing the mentoring relationship may be more proper for explaining their perceived mentoring effectiveness than competence like change orientation.

Second, the positive effects of problem-solving function on mentoring satisfaction and entrepreneur competence improvement were significant both in study 1 and study 2. These results show that receiving business solutions and advice from a mentor is a crucial predictor of mentoring effectiveness. However, the contradictory nature between problem-solving function and entrepreneurial competence improvement must be considered when entrepreneur mentoring is conducted, in that providing solutions for mentees by expert mentors would lose the chance to independently solve their problems. Mentees are less likely to improve in their competence if they lose their opportunities to struggle to overcome their own business troubles. In study 1, the motivating function improved the mentees' entrepreneurial competence even though it did not significantly affect mentoring satisfaction. The motivating function has a positive effect both on mentoring satisfaction and entrepreneur competence improvement in study 2. A startup business is based on the premise of uncertainty and high risk. The result of the current study shows that mentor psychological support helps mentees acquire entrepreneurial competence by enhancing their confidence in conducting initial business.

Finally, according to the results, the perceived support of the operating agency had a direct positive effect on mentoring satisfaction and improved entrepreneurial competence after controlling for the effect of mentee- and mentor-related determinants, which are considered

the main actors of the mentoring relationship in the study on the traditional mentoring relationship. These findings show that the support of the operating agency as a third actor in the mentoring relationship is a stable predictor for explaining the effectiveness of entrepreneurial mentoring. According to these results, the three-actors-based model is more proper than the two-actors based- model in explaining the effectiveness of formal entrepreneur mentoring. The three-actors based model, including the operating agency as well as the mentor and mentee, provides new perspectives to enhance formal mentoring effectiveness, which previous studies have referred to as difficult to achieve within the framework of the two-actors-based model.

### A. Theoretical and Practical Implications

The results of the current study contribute theoretically to the study of entrepreneur mentoring. First, this study suggests antecedent factors that affect formal mentoring effectiveness and verifies the effectiveness of the factors. Previous studies have explained mentoring effectiveness by only considering the mentee and mentor as actors. However, this study expands the literature on mentoring by suggesting that the operating agency should be considered a crucial actor in formal mentoring and has verified its effect on mentoring effectiveness. Second, this study's findings verified the influence of both types of mentoring functions on the effectiveness of entrepreneur mentoring. In the early stages of business, mentoring is a major source of information for novice entrepreneurs. The problem-solving function provided by the mentor contributes to both mentoring satisfaction and improved entrepreneurship competence. Therefore, more than anything else, the entrepreneur mentor requires cognitive competence to solve the mentee's business problems. The effect of the motivating function on mentoring satisfaction was inconsistent between studies. However, the motivating function has a consistent, positive effect on improved entrepreneurial competence regardless of the sample. This result is consistent with previous studies in that the verbal

persuasion of the mentor encourages exploration on the part of the mentee and a change in their attitude and beliefs (Brodie, Van Saane, & Osowska, 2017; Marlow & McAdam, 2012; Radu Lefebvre & Redien-Collet, 2013; St-Jean & Audet, 2013; St-Jean & Tremblay, 2020). Therefore, this study theoretically contributes to the field of entrepreneur mentoring by discussing the mentoring function required for entrepreneurs in the early stages of startups.

This study provides practical implications for organizations that implement entrepreneur mentoring programs. Countries in the early stage of economic development require government-led policies to foster startups, contributing to the maturing of the startup ecosystem. The results of this study revealed that the competence of the operating organization to manage formal mentoring is essential to increasing the effectiveness of entrepreneur mentoring. For example, an operating organization enhances mentoring effectiveness by training mentors so they can effectively support startup mentees. This approach creates a high-quality startup mentor pool that allows matching mentors to suitable startup mentees.

### B. Limitations and Future Research

The limitations of this study are as follows: First, cross-sectional data was used to test the model. This method has limitations in explaining the causal independent variable-dependent variable relationship. Therefore, in future research, verifying the research model based on longitudinal data will be necessary. Second, the data were from a single source and self-reported. I consider that the mentee is the most appropriate source to measure main variables because a dependent variable is defined as the mentee's perception of mentoring effectiveness. Although it is appropriate to measure the variables of this model through self-reporting by mentees, common method bias can be a methodological threat to the antecedent and outcome. In future research, it will be necessary to measure variables from multiple sources when collecting research data or to vary the time of variable

measurement to reduce common method bias. Third, two items used to measure change orientation in Study 1 had imperfect scale reliability. This imperfect scale reliability of change orientation may have affected the result of the testing model. To compensate for this problem, I adopted five items to measure change orientation developed by Parker et al. (2006) in Study 2. However, despite the consistently insignificant result of change orientation in mentoring effectiveness, the possibility that the scale problem has affected the hypothesis test must be considered. Finally, the generalizability of this study's three-actors-based model beyond the Korean context remains to be established. The Korean startup ecosystem has a brief history compared to North American and European startup markets, and there are not enough mentors with rich experience in startups. Therefore, the mentors who participate in entrepreneurship mentoring are often experts or consultants possessing traditional business experience. In addition, in Korea's entrepreneurial economy, the government-led venture-nurturing policy has significantly impacted the development of the venture ecosystem. This uniqueness of the Korean startup ecosystem is embedded in this research model. Therefore, I propose that a future study on the effectiveness of entrepreneurship mentoring based on the three-actors model are conducted in various cultures.

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