



Mentor-Mentee Interaction and Mentees' Psychosocial Development: The Mediating Effect of Mentees' Self-Efficacy*

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ABSTRACT

Purpose: Mentoring is an attractive extracurricular, partnership, and/or cooperative learning incorporated in higher learning institutions' curriculums. Extant studies circulated in the 21st century reveal that good interaction between mentors (i.e. lecturers) and mentees (i.e. students) will tremendously raise mentees' self-efficacy. This situation may lead to the enhanced psychosocial development of mentees'. Even though this relationship has extensively been evaluated, the role of mentees' self-efficacy as an essential mediating variable is rarely explained in the higher learning mentoring research literature. Thus, this research aimed to evaluate the relationship between mentor-mentee interaction, mentees' self-efficacy, and psychosocial development. **Research Methods:** This study used a survey method to gather 679 usable questionnaires from undergraduate students at public institutions of higher learning in Sarawak, Malaysia. **Findings:** The SmartPLS path analysis model results indicate that mentees' self-efficacy mediates the relationship between mentor-mentee interaction and mentees' psychosocial development.

Implications for Research and Practice: Practitioners can use this result to understand diverse views on mentees' self-efficacy and plan constructive mentoring relationships to maintain and support higher education institutions' visions and missions in globalisation and economic turbulence.

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Introduction

Mentoring programs are normally understood as attractive extracurricular, partnership, and/or cooperative learning incorporated in higher learning institutions' curriculum. Higher learning institutions' leadership set up broad mentoring policies and procedures, but faculties or schools implement mentoring programs. Typically, there are several ways to conduct mentoring programs, such as dyadic, face-to-face, and long-term relationships to upgrade mentees' intellectual, psychological, and affective development. This developmental process may foster mentees' professional, academic, career, and/or personal development in higher learning institutions.

Several researchers, such as Nkomo and Thwala (2018); McConnell, Geesa, and Lowery (2019); and Laurie, Kim, Jose, and Rob (2020), suggest that effective mentoring programs have the following requirements: First, mentors and mentees understand the objectives and benefits of a mentoring program. Second, mentors offer guidance and instruction to facilitate mentees' development through various roles, such as a teacher, coach, sponsor, collaborator, counsellor, role model, leader, encourager, and close friend. Third, mentors and mentees must be actively involved in formal mentoring activities (e.g. comply with the faculties' rules and regulations) and informal mentoring activities (e.g. meetings arranged according to convenience times). Fourth, mentors develop an emotional bond with mentees based on trust and honesty. Finally, upgrade the use of digital technologies (e.g. internet, mobile phones, and social media) in mentoring relationships. Implementation of this mentoring design is helpful in support mentees in completing studies, ease adapting to new environments, upgrade mentees' achievements in challenging experiences, increase mentees' employability, and prepare mentees to play significant roles in society (David & Cimpean, 2018; Etzkorn & Braddock, 2020; Lejonberg, Elstad, Sandvik, Solhaug & Christophersen, 2018).

Mentor-mentee interaction often occurs in a formal and informal style. In formal mentoring styles, the interaction between mentors (lecturers) and mentees (students) is via formal meetings (e.g. set for a particular date, time, and venue) to listen, advice, guide, and evaluate the performance of mentees in handling academic and/or personal issues (Etzkorn & Braddock, 2020; Melike, 2020; Pleschová & McAlpine, 2015). Mentors and mentees communicate at convenient times to meet specific requests, ad-hoc, spontaneous, and unintentional matters in informal mentoring styles. For example, the mentee asks for personal or academic advice before or after taking a class with the mentor or having a discussion over lunch in the campus cafeteria (Lunsford, Crisp, Dolan & Wuetherick, 2017; Melike, 2020; Pleschová & McAlpine, 2015). However, the differences in interaction styles may complement each other in building and strengthening students' positive friendships, upgrading students' personal and professional credibility, acclimatising students with new higher education environments, enhancing students' success in the higher learning institutions, preparing students into the real workforce, and meeting the demands of the industry and expectations of the future society (Andreanoff, 2017; Okolie et al., 2020; Vikaraman, Mansor & Hamzah, 2017).

A review of the existing extracurricular higher education literature shows that the mentoring program does not achieve its purpose no matter how well planned it is if there is no effective mentor-mentee interaction (Henry, 2016; Nor' Ain, Azman, Mohd Fazir & Najihah, 2015). According to Crisp and Cruz (2009), Colvin and Ashman (2010), and Azman, Nor' Ain, Ahmad Azan, Wan Nur Ain and Yusof (2015). An effective mentor-mentee interaction consists of two important roles, namely communication and support. There are two primary mentor communication channels: communication from mentors to mentees and communication from mentees to mentors (Harrison, Dymoke & Pell, 2006; Lejonberg & Tiplic, 2016).

Indisputably, there is an acknowledgement that mentor-mentee interaction is a powerful learning method in successful higher learning institutions. Numerous empirical studies support that excellent interaction between mentors and mentees may significantly impact mentee attitudes, particularly mentees' self-efficacy (Henry, 2016; Lejonberg, Elstad, Sandvik, Solhaug & Christophersen, 2018). Unexpectedly, a careful observation about higher education mentoring studies circulated in the 21st century disclose that the relationship between mentor-mentee interaction and mentees' self-efficacy may enhance mentees' psychosocial development (Chelberg & Bosman, 2020; Henry, 2016; Santos & Reigadas, 2005). Although there are extensive studies on the relationship, the mediating effect of mentees' self-efficacy is mainly ignored in the higher learning mentoring research literature (Azman, Mohd Nor, Michael Kho & Norashikin, 2012; Henry, 2016). Many researchers argue that the lack of this focus is due to several reasons. Firstly, numerous past studies have mainly explained the intrinsic properties of mentor-mentee interactions, particularly conceptual discussion about definitions, objectives, types, and significance of mentor-mentee interactions in public and private tertiary education sectors (Goldhaber, Krieg & Theobald 2020; Crutcher & Naseem, 2016; Dutton, 2003; Lejonberg, Elstad & Christophersen, 2015).

Secondly, many early studies assess a direct effect model using simple correlation and variance methods. Firstly, the association between mentor-mentee interactions and specific features of mentees' self-efficacy (e.g. self-confidence and encouragement to perform tasks) (Flood, 2012; Nor' Ain, Azman, Mohd Fazir & Najihah, 2015). Secondly, the association between mentees' self-efficacy and general mentee outcomes (e.g. retention and belief to mentoring practices) (Henry, 2016; Lejonberg, Elstad & Christophersen, 2015). Consequently, the findings are general and weak recommendations offered to practitioners in understanding the different perspectives of mentees' self-efficacy construct and designing creative mentoring relationship activities to maintaining and achieving the missions and vision of higher learning institutions in times of globalisation and turbulent economy (Azman, Najihah, & Khaidzir, 2014; Henry, 2016). Therefore, this condition stimulates researchers to extend the existing literature by evaluating the mediating effect of mentees' self-efficacy in the relationship between mentor-mentee interactions (i.e. communication and support) and mentees' psychosocial development.

Mentors' Communication

Communication from mentors to mentees refers to mentors' willingness to share their knowledge and experiences, provide directions, and share evaluations (such as advice, comments, disapproval, feedback, or praise about mentees' learning and teaching). Meanwhile, communication from mentees to mentors is perceived as reflective communication where mentees openly convey their positive and/or negative views about issues in learning and teaching, as well as providing extensive opportunities to mentees to reflect on what they do and expectations about learning and teaching (Harrison, Dymoke & Pell, 2006; Lejonberg and Tiplic, 2016). Such communication will increase mentees' understandings of mentoring programs aims, roles of mentors and mentees, mentoring approaches, program procedures and related policies, learning content, tasks that should be learned, program evaluations, overall benefits of the programs, and awareness around any mistakes or inappropriate actions they may make. As a result, it may inspire mentees to achieve their intended objectives (Azman et al., 2015; Lejonberg & Tiplic, 2016).

Mentors' Support

Mentors' support has two primary forms: emotional and instrumental aids (Morelli, Lee, Arnn & Zaki, 2015). Emotional support refers to empathy (e.g. love, value, and care) and emotional responsiveness (e.g. responsible in helping others) (Cutrona, Shaffer, Wesner, & Gardner, 2007; Shrout, Herman & Bolger, 2006). Mentors often implement emotional support by encouraging mentees to obtain new knowledge, skills, and attitudes and guide them to appropriately use them in everyday activities (Levinson, 1978). Meanwhile, instrumental support refers to listening to emotional disclosures (e.g. doing well on examinations and getting into an argument) and providing tangible assistance (e.g. the type and number of helping behaviours; such as care during sickness, assisting with learning techniques, and lending money) (Morelli, Lee, Arnn, & Zaki, 2015; Rameson, Morelli & Lieberman, 2012). For example, instrumental support is provided by mentors to assist mentees in realising the similarities between what they learn in mentoring programs and campus environments (Podsakoff, MacKenzie & Podsakoff, 2003). This support is essential because it may help enhance mentees positive outcomes, such as positive stress, motivation, relationships, and performance (Allen, Eby & Lentz, 2016; Stewart & Knowles, 2003; Wanberg, Welsh & Hezlett, 2003).

Mentees' Self-Efficacy

Self-efficacy is a broad construct that includes several important features; such as difficult tasks (as challenges to be mastered), setting challenging objectives and retaining a strong commitment to them, sustain their efforts in failures or difficulties, identify failure characteristics as inadequate effort or lack of knowledge and skills, and being able to control threatening circumstances (Bandura, 1994; Weibell, 2011). Incorporating such features can lead to a greater notion of individuals' self-efficacy, increasing their belief to organise and perform certain actions to achieve a desired

performance level in specific situations. Bandura (2000) mentions that mentees with a high sense of self-efficacy will have high beliefs to meet challenging tasks. They will also have high motivation to learn activities and can improve learning outcomes (Lejonberg & Tiplic, 2016; Van Dinther, Dochy & Segers, 2011). Conversely, mentees with low self-efficacy will have lower aspirations and goals and tend to believe that they do not have the knowledge and skills required to perform difficult tasks. Furthermore, they may avoid completing tasks that they cannot easily perform and low motivation to learn new knowledge, attitudes, and behaviours in organisations (Bandura, 1993; Pajares & Schunk, 2005; Rayle, Kurpius & Arredondo, 2006).

Mentees' Psychosocial Development

Psychosocial is a multidimensional construct constituted from psychology (person inner aspect) and social (person outer aspect). In general, it can be defined as individuals' ability to integrate their psychological factors with social conditions properly. This integration process will help individuals develop positive personal development characteristics, such as a feeling of ease to adapt and/or adjust to new environmental challenges (Azman et al., 2015; Henry, 2016). For instance, mentees with high psychosocial skills are willing to spend more time and energy to improve their positive personality features, such as counselling, role modelling, and friendship. These useful features may enhance mentees' competency and clarity of identity and prepare them for the transition from higher learning institutions to the workplace (Azman et al., 2015; Hamilton, Boman, Rubin & Sahota, 2019).

Relationship between Mentor-Mentee Interactions and Mentee Outcomes

The role of mentors' communication in changing mentees' self-efficacy is coherent with the principal meaning of Giles and Tania's (2007) Communication Accommodation Theory. This theory posits that communication accommodation consists of two major strategies: discourse management and interpersonal control. Discourse management refers to a mentor's facilitation of a mentee's contribution to interactions (e.g. offering turns, evoking self-disclosure, and assisting a constructive voice). Meanwhile, interpersonal control is usually referred to as relationships between interactants within ingroup and outgroup (e.g. good rapport and cooperation between members when interacting). These strategies complement each other in building and strengthening warm relationships between mentors and mentees, such as decreasing or controlling social differences and increasing comfortable interactions (Giles, Coupland & Coupland, 1991; Willems, 2010). This theory in higher learning mentoring shows that communication accommodation is often translated into mentors' communication (Azman et al., 2015; Henry, 2016). Numerous research from various high learning institutions has identified the effect of mentors' communication on mentees' self-efficacy. For example, results of studies conducted by Reynolds and Brannick (2009), Azman et al. (2015), Nor' Ain, Azman, Mohd Fazir, and Najihah (2015), and Lejonberg et al. (2018) suggest that the capability of mentors that implement comfortable communication (e.g. deliver accurate and honest information via technology media, face to face interactions, and providing clear instructions and

awareness) had increased mentees' psychosocial development in higher learning institutions.

The influence of mentors' support in increasing mentees' self-efficacy is consistent with the essence of Levinson's (1978) Early Adult Transition Model. The model posits that an individual's life structure would confront critical conditions when he/she goes through the transformation process from childhood into adulthood (e.g. learning to live separately from their families; this process involves psychological and social aspects). Support from knowledgeable and experienced individuals is essential to increase young individuals' confidence to appropriately handle new lifestyles when they become adults (Johnson, 2015; Levinson, 1978). This model's application in higher learning mentoring is widely translated as mentors' support (Flood, 2012; Lejonberg et al., 2018). Further studies in different higher learning institution settings have recognised the effect of mentors' support on mentees' self-efficacy. For example, results from studies by Flood (2012), Azman et al. (2015), Nor' Ain et al. (2015), Henry (2016), and Lejonberg et al. (2018) reported that the capability of mentors to provide adequate support (e.g. encouragement, dialogue, facilitation, and material aids) had increased psychosocial development of mentees' in respective higher learning institutions.

Many extant studies in diverse colleges and universities recognise that mentor-mentee interactions are a significant determinant of mentees' psychosocial skills. For example, findings from studies by Kreider, Medina, Lan, Wu, Percival, Byrd, Delislie, Schoenfelder, and Mann (2018), Hamilton, Boman, Rubin, and Sahota (2019), and Yüksel and Yılmaz (2019), advocate that mentors competency to properly implement comfortable communication (e.g. interpersonal communication and information delivery via face to face and electronic media) and provide adequate support (e.g. moral support and new learning techniques), had increased mentees' psychosocial development.

Relationship between Mentor-Mentee Interactions, Mentees' Self-Efficacy, and Mentees' Psychosocial Development

The mediating effect of mentees' self-efficacy in the relationship between mentor-mentee interactions and mentees' psychosocial development is consistent with Bandura's (1994) Social Cognitive Theory. It states that self-efficacy refers to "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994, p. 2). When individuals believe in their abilities, this will regulate their effort, resilience, and perseverance in performing daily tasks. For instance, individuals with high self-efficacy would trigger positive emotions (e.g. relaxed and comfortable) in handling difficult tasks resulting in increased effort, persistence, and resilience. Conversely, individuals with low self-efficacy would trigger negative emotions (e.g. stress, depression, and narrow vision) when faced with difficult tasks, decreasing effort and persistence (Bandura, 1986, 1997; Pajares & Schunk, 2005). Numerous past studies have only employed a direct effects model to assess the effect of mentor-mentee interactions on specific features of

mentees’ self-efficacy (e.g. self-confidence and perceived ability to perform tasks) (Nor’ Ain et al., 2015; Lejonberg et al., 2018); effect of formal and informal mentoring programs on specific dimensions of mentees’ psychosocial development (e.g. life experiences, personal growth, social adjustment, and prepare mentees to work in the industry) (Brodeur, Larose, Tarabulsy & Feng, 2017; Fonts, 2018; Kreider et al. 2018); and the effect of peer mentoring on specific forms of mentees’ psychosocial skills (e.g. improve communication and relationship difficulties, reduce stress and help achieve professional goals) (Hillier, Goldstein, Tornatore, Byrne, Ryan & Johnson, 2018; Kubberød, Fosstenlökken & Erstad, 2018).

Conversely, the latest limited studies have used an indirect effects model to measure the mediating effect of mentees’ self-efficacy between mentor-mentee interactions (i.e. mentors’ communication and mentors’ support) and mentees’ psychosocial development. For instance, DuBois and Neville (1997), Campbell-Whately (2001), Santos and Reigadas (2005), Flood (2012), and Henry (2016) identified that the capability of mentors to implement comfortable communication (e.g. deliver accurate and honest information via social media and face to face interaction, good contact and information sharing) had invoked mentees’ self-efficacy. Accordingly, this situation could increase mentees’ psychosocial development. In contrast, findings by Santos and Reigadas (2005), and Azman, Mohd Nor, Michael Kho, and Norashikin (2012) supported that the capability of mentors to provide adequate support (e.g. encouragement, moral support, career counselling and psychological aids, and material aids) had strongly evoked mentees’ self-efficacy. Consequently, this condition might increase mentees’ psychosocial development.

The literature has been used as a basis to develop a theoretical framework, as exhibited in Figure 1 below.

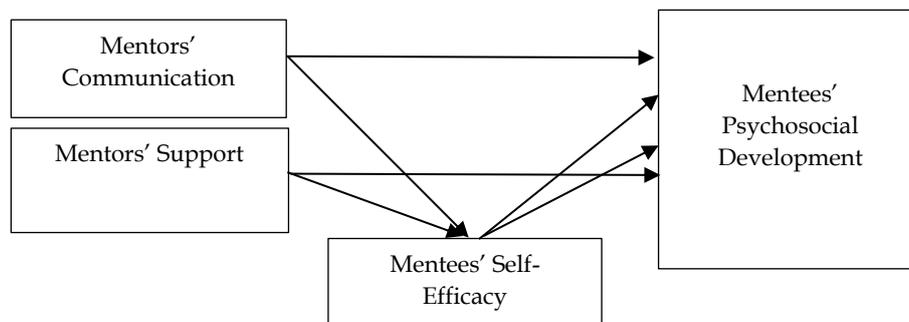


Figure 1. *Conceptual Framework*

Based on the framework above, formulated hypotheses are as follows:

H1: There is a positive relationship between mentors’ communication and mentees’ self-efficacy

H2: There is a positive relationship between mentors' support and mentees' self-efficacy

H3: There is a positive relationship between mentors' communication and mentees' psychosocial development

H4: There is a positive relationship between mentors' support and mentees' psychosocial development

H5: Mentees' self-efficacy mediates the effect of mentors' communication on mentees' psychosocial development

H6: Mentees' self-efficacy mediates the effect of mentors' support on mentees' psychosocial development

Method

Research Design

This study was conducted at two public institutions of higher learning in Sarawak, Malaysia. The names of the institutions are kept anonymous for confidentiality reasons. These institutions' leadership has planned various coping strategies to ensure that its student development programs quality is at par with developed countries. One of the current issues in higher learning institutions is the gap between student development outcomes and the competencies required by society and industry. In responding to the issue, mentoring programs have been set up as an effective instrument to upgrade student success in campuses and prepare them to meet future industry needs and expectations.

Within this study's context, responsible centres, such as faculties, are given autonomous to plan and administer formal and informal interactions between mentors and mentees to support their institutions' vision, missions, and goals. Mentor-mentee interactions take various forms and are distinguished by their duration, function, and source (s) of mentoring. For example, formal interactions between mentors and mentees are usually conducted based on formal procedures and policies, whereas informal interactions are implemented spontaneously and naturally. These mentoring types affect the mode of interaction between students and mentors and the amount of contact provided to students in terms of teaching, sharing information, providing advice and feedback, academic goal-setting and tracking, and creating a positive personal bond.

Present studies in Malaysian federal government-owned institutions of higher learning (e.g. Azman, Najihah, & Khaidzir, 2014; Nor' Ain, Nor Shaffika Izzaty, Asmuni & Najihah, 2015) showed that formal and informal mentoring interactions are equally important and will upgrade undergraduate students' self-efficacy (e.g. self-confidence and perceived ability to perform a task). This situation may increase mentees ability to overcome academic difficulties, cope with the campus environment, and prepare them for the job market upon graduation. Although this relationship is interesting, many studies prefer to highlight the internal features of mentor-mentee interactions. Conversely, the mediating effect of mentees' self-efficacy between

mentor-mentee interactions and mentees' psychosocial development has not been adequately emphasised in higher learning institutions' mentoring models (Azman, Najihah, & Khaidzir, 2014). Therefore, with the lack of empirical evidence, there is an urgent need to explore this issue further.

This study used a survey method (as research strategy) and cross-sectional research design to help the researchers collect accurate data, decrease bias, and increase the quality of collected data, as suggested by Sekaran and Bougie (2016). At the initial stage of data collection, the survey questionnaire was drafted based on the literature on higher learning institutions mentoring. Furthermore, a back-to-back translation technique was utilised to translate the survey questionnaire into English and Malay languages to enhance the quality of research results (Lomand, 2016).

Research Sample

This study applied a purposive sampling method to distribute 1000 survey questionnaires to students at higher learning institutions in Sarawak, Malaysia. For this study's aim, this sampling technique was chosen because higher learning institutions' management did not provide detailed information about students for confidentiality reasons. This limitation did not permit the researchers to use a random sampling technique in selecting participants for this study. The academic evaluator conducts the distribution of questionnaire forms to all respondents (students) at each faculty. Academic evaluators' assistance is significant to help researchers obtain the data accurately and immediately as the evaluators are aware of the respondents' situation and development. Furthermore, students answered the survey questionnaire anonymously and voluntarily, based on their consent. Out of the total, 679 (68%) usable questionnaires were returned to the researchers.

The majority of the participants in this study were females (71.7%). All participants were aged between 22 and 24 years old (41.4%), 40.9% were STPM holders, the majority were third-year students (38.1%), 38.1% were CGPA holders from 2.51 to 3.00, 68.8 were bachelor program students, and mentors mainly were men (37.6%). Harman's single factor test was conducted as suggested by Podsakoff et al. (2003) to discover biases caused by the survey method. Results showed that the variance percentage was 41.778 and that this value was lower than 50 per cent of the variance (Podsakoff et al. 2003), which concluded that bias is not present in the survey method.

Research Instruments and Procedures

This study's survey questionnaire comprises three major parts: Firstly, mentors' communication (COCT) used a 5-item adapted from mentoring communication literature (Azman et al., 2012; Sullivan, 2000). This construct was evaluated using two elements: communication from mentors to mentees and communication from mentees to mentors. Secondly, mentors' support (SUPT) used a 9-item adapted from mentoring support literature (Azman et al., 2012; Levesque, O'Neill, Nelson & Dumas, 2005; Langhout, Rhodes & Osborne, 2014). This construct was evaluated using two elements: emotional and instrumental aids. Thirdly, mentees' self-efficacy (SFCY) was a 10-item

adapted from mentees' self-efficacy literature (Azman et al., 2012; Bandura, 1993, 1997; Nor' Ain et al., 2015; Santiago & Einarson, 1998). This construct was evaluated using two elements: helping and confidence. Finally, mentees' psychosocial development (PSYS) was a 7-item adapted from mentees' psychosocial development literature (Allen et al. 2006; Azman et al., 2015a; Nor' Ain et al., 2015; Santos & Reigadas, 2005). This construct was evaluated using three elements: interaction, adaptation, and good example. A 7-point Likert scale ranging from (1) "strongly disagree/dissatisfied" to (7) "strongly agree/satisfied" were used to assess the items. Demographic variables such as gender, age, education, years of study, academic achievement, program, and mentors gender were controlled because this study assesses undergraduate students attitudes.

Data Analysis

The survey questionnaire data were analysed using the SmartPLS because it delivered latent variable scores, handled small sample sizes, had less normal data, and evaluated complex research frameworks (Hair, Hult, Ringle & Sarstedt, 2016; Henseler, Ringle and Sinkovics, 2009). Data analysis procedures are: First, confirmatory factor analysis was employed to assess the measurement scale's reliability and validity. Second, the direct effects model was tested, and the significant hypotheses were identified if the value of the t-statistic is more than 1.65 (one-tail testing) (Henseler et al., 2009). Third, the indirect effects model was tested, and the significant hypotheses were recognised if the value of the t-statistic is more than 1.96 (two-tail testing) (Henseler et al., 2009). Fourth, the R2 value was utilised as a criterion for the overall predictive strength of the model based on the following baselines: 0.19 (weak), 0.33 (moderate), and 0.67 (substantial) (Hair et al., 2017; Henseler et al., 2009). Fifth, the f2 value was used as a guide to decide the effect size of the predicting variable in the model based on the following rules: 0.02 (weak), 0.15 (medium), and 0.35 (large) (Hair et al., 2017). Sixth, the Q2 value was employed as a measure of predictive relevance based on the following criteria: 0.020 (weak), 0.15 (medium), and 0.35 (large). Lastly, the standardised root mean square residual (SRMR) value was lower than 0.1 and was applied as a model fit criterion (Hair, Hult, Ringle & Sarstedt, 2016).

Results

Table 1 below displays that the loadings for all constructs are greater than 0.70. The values of average variance extracted (AVE) for all constructs higher than 0.50 show that they have satisfied the convergent validity analysis criteria. Meanwhile, all constructs' composite reliability values were higher than 0.80, indicating that the measurement scale has high internal consistency.

Table 1

The Outcomes of Convergent Validity Analysis

Construct	No. of Item	Factor Loadings	AVE	Composite Reliability
COCT	5	0.756 to 0.833	0.636	0.897
SUPT	9	0.729 to 0.808	0.586	0.927
SFCY	10	0.730 to 0.863	0.647	0.948
PSYS	7	0.749 to 0.837	0.622	0.920

Table 2 below displays that the values of Heterotrait-monotrait (HTMT) ratio of correlation for all constructs were less than 0.90. The values of confidential interval for all constructs shown in the parenthesis were less than 1, proving that the constructs have satisfied the criteria of discriminant validity analysis.

Table 2

The Outcomes of Discriminant Validity Analyses

Construct	HTMT
	SFCY PSYS
COCT	0.359 (0.277, 0.425)
SUPT	0.451 (0.368, 0.527)
SFCY	0.550 (0.467, 0.609)

Note: The values in the parenthesis are the values of confidential interval at 5% and 95%

Table 3 below displays that the means for all constructs are between 5.4042 and 5.6666 showing that most participants view levels of COCT, SUPT, SFCY, and PSYS range from high (4) to the highest level (7). The values of variance inflation factor for the relationships: a) between COCT, SUPT, and SFCY and b) between SFCY and PSYS were lower than 5.0, showing that the collinearity problem is not present in such relationships.

Table 3

The Outcomes of Variance Inflation Factor and Descriptive Statistics

Construct	Mean	Standard Deviation	Variance Inflation Factor	
			SFCY	PSYS
COCT	5.6666	0.78303	1.285	
SUPT	5.4042	0.87723	1.285	
SFCY	5.4848	0.84413		1.000
PSYS	5.6556	0.71648		

Table 4 below displays that 48.5 per cent of the variance in SFCY is contributed by COCT and SUPT, showing that it has large support for the model. The outcomes of testing the research hypotheses produced two essential findings: First, COCT was positively and significantly correlated with SFCY ($\beta=0.359$; $t=9.605$); therefore, H1 is supported. Second, SUPT was positively and significantly correlated with SFCY ($\beta=0.452$; $t=11.680$); therefore, H2 is supported. This outcome confirms that communication and support are important determinants of mentees' self-efficacy.

Table 4

Outcomes of Testing Hypotheses 1 and 2

Hypothesis	Beta Value	T Statistics	R ²	Decision
H1: COCT -----> SFCY	.359	9.605	0.485	Large Support
H2: SUPT -----> SFCY	.452	11.680		

*Note: Significant at *t value > 1.65 (one-tail test)*

Moreover, effect size (f^2), predictive relevance (Q^2), and model fit were evaluated. COCT had an f^2 value of 0.194, and SUPT had an f^2 value of 0.308, which were bigger than 0.15, showing that these constructs have a medium effect on SFCY. SFCY had a Q^2 value of 0.296, signifying that it has predictive relevance. Further, the standardised root mean square residual (SRMR) value is 0.061, which is lower than 0.1 (Hair et al., 2017) or 0.08; this result demonstrates that this model has a good fit.

Table 5 below displays that 37.4 per cent of the variance in PSYS is contributed by COCT and SUPT, indicating that it has large support for the model. The outcomes of testing the research hypotheses produced two important results: First, COCT was positively and significantly correlated with PSYS ($\beta=0.415$; $t=10.970$); therefore, H3 is supported. Second, SUPT was positively and significantly correlated with PSYS ($\beta=0.293$; $t=7.151$); therefore, H4 is supported. This outcome confirms that

communication and support are essential determinants of mentees' psychosocial development.

Table 5

Outcomes of Testing Hypotheses 3 and 4

Hypothesis	Beta Value	T Statistics	R ²	Decision
H3: COCT -----> PSYS	.415	10.970	0.374	Large Support
H4: SUPT -----> PSYS	.293	7.151		

Note: Significant at *t value > 1.65 (one-tail test)

Moreover, effect size (f^2), predictive relevance (Q^2), and model fit were evaluated. COCT had an f^2 value of 0.216, which was higher than 0.15, showing that this construct has a medium effect on PSYS. While, SUPT had an f^2 value of 0.107, which was lower than 0.15, signifying that this construct has a weak effect on PSYS. PSYS had a Q^2 value of 0.212, indicating that it has predictive relevance. Further, the standardised root mean square residual (SRMR) value is 0.059, which is lower than 0.1; this result displays that this model has a good fit.

Table 6 below displays that 30.3 per cent of the variance in SFCY is explained by COCT, showing that it has large support for the model. The relationship between COCT and SFCY was significantly associated with PSYS ($\beta=0.551$; $t=0.16.271$); therefore, H5 is supported. This outcome confirms that mentees' self-efficacy mediates the effect of mentees' communication on mentees' psychosocial development.

Table 6

Outcomes of Testing Hypothesis 5

Hypothesis	Beta Value	T Statistics	R ²	Decision
H5: COCT ----> SFCY----> PSYS	.551	16.271	.303	Large Support

Note: Significant at t value > 1.96 (two-tail test)

Further, mediating effect type, effect size (f^2), predictive relevance (Q^2), and model fit were assessed. The mediating effect for SFCY had partial mediation. This is due to the direct effects model (relationship between COCT and SFCY). The indirect effects model (relationship between COCT, SFCY, and PSYS) is significant and point in the same direction. SFCY had an f^2 value of 0.435, which was bigger than 0.35, showing that it has a large effect on PSYS. PSYS had a Q^2 value of 0.172, showing that it has predictive relevance. Furthermore, the standardised root mean square residual (SRMR) value is 0.0774, which is lower than 0.1; this result demonstrates that this model has a good fit.

Table 7 below displays that 30.3 per cent of the variance in SFCY is explained by SUPT, showing that it has large support for the model. The relationship between SUPT and SFCY was significantly associated with PSYS ($\beta=0.550$; $t=0.16.520$); therefore, H6 is supported. This outcome confirms that mentees’ self-efficacy mediates the effect of mentees’ support on mentees’ psychosocial development.

Table 7

Outcomes of Testing Hypothesis 6

Hypothesis	Beta Value	T Statistics	R ²	Decision
H6: SUPT ----> SFCY----> PSYS	.550	16.520	.303	Large Support

Note: Significant at t value > 1.96 (two-tail test)

Further, mediating effect type, effect size (f^2), predictive relevance (Q^2), and model fit were assessed. The mediating effect for SFCY has partial mediation. This is due to the direct effects model (relationship between mentoring relationships (i.e. SUPT and SFCY). The indirect effects model (relationship between SUPT, SFCY, and PSYS) are significant and point in the same direction. SFCY had an f^2 value of 0.436, which was bigger than 0.35, showing that it has a large effect on PSYS. PSYS had a Q^2 value of 0.171, showing that it has predictive relevance. Furthermore, the standardised root mean square residual (SRMR) value is 0.068, which is lower than 0.1; this result demonstrates that this model has a good fit.

Discussion, Conclusion, Recommendations

Numerous past studies have extensively used a direct effects model to investigate two major types of relationships: between mentor-mentee interactions and mentees’ self-efficacy (Henry, 2016; Azman et al., 2015; Nor’ Ain, Nor Shaffika Izzaty, Asmuni & Najihah, 2015; Lejonberg et al., 2018), and between mentees’ self-efficacy and mentees’ psychosocial development (Kreider et al., 2018; Yüksel & Yılmaz, 2019; Hamilton, Boman, Rubin & Sahota, 2019). Outcomes of testing such models have only determined the strength of association between such variables of interest. Still, they are unable to quantify the effect size and nature of mentees’ self-efficacy as a significant mediating variable between mentor-mentee interactions and mentees’ psychosocial development (Hamilton et al., 2019; Henry, 2016; Azman, Mohd Nor, Michael Kho & Norashikin, 2012; Lejonberg et al., 2018). This situation inspires researchers to extend the literature by evaluating the mediating effect of mentees’ self-efficacy in the relationship between mentor-mentee interactions and mentees; psychosocial development.

This study established a conceptual framework based on higher learning institutions mentoring literature. The structural model has shown that mentees’ self-

efficacy acts as a significant mediating variable in the relationship between mentor-mentee interactions and mentees' psychosocial development. This finding demonstrates that mentors' capabilities to apply comfortable communication and offer sufficient support in formal and/or informal mentoring activities may strongly invoke mentees' self-efficacy. Consequently, this condition may increase mentees' psychosocial development.

In this study context, broad mentoring policies have been established by the Ministry of Higher Education Malaysia, based on the grand national agenda (e.g. Vision 2020, new economic models and organisational transformational objectives) and global challenges (e.g. globalisation, borderless world, industrial revolution 4.0, international cooperation, and economic crisis). Then, the ministry has given autonomy to public higher learning institutions' leadership to implement mentoring objectives, types, learning content and methods, and procedures to achieve their strategic vision and missions. In higher learning institutions, responsible centres, particularly faculties, are empowered to appoint mentors to teach and facilitate the assigned mentees (undergraduate students), provide facilities, and determine evaluation methods. Interactions between mentors and mentees are vital because they may determine the achievement of faculty mentoring objectives. The majority of participants showed that the levels of mentors' communication, mentors' support, mentees' self-efficacy, and mentees' psychosocial development are high. This situation explains that mentors' ability to implement comfortable communication and provide adequate support in mentoring activities will strongly enhance mentees' self-efficacy. Consequently, this self-efficacy could increase mentees' psychosocial development.

This study provides two important impacts: theoretical contribution and practical contribution. Concerning theoretical contribution, this study's outcomes confirm that mentees' self-efficacy has mediated the effect of mentors' communication and support on mentees' psychological development. This outcome is consistent with the notion of (Bandura 1993; 2000). Social Cognitive Theory suggests that mentors' capability to practice comfortable communication properly (e.g. open, honest, and accurate information) and provide adequate support (e.g. encouragement and tangible aids) will enhance mentees' self-efficacy. Consequently, this self-efficacy may increase mentees' psychosocial development in organisations. This result has also supported the survey findings of Campbell-Whatley (2001), Henry (2016), Azman, Mohd Nor, Michael Kho, & Norashikin (2012), DuBois & Neville (1997), Flood (2012) and Santos & Reigadas (2005), which revealed that the capability of mentors to practice good interaction (i.e. mentors' communication and support) with diverse mentee personalities, needs, and expectations in formal and informal mentoring activities have increased mentees' self-efficacy. Thus, this self-efficacy may increase mentees' psychosocial development in the respective organisations.

Furthermore, in terms of practical contribution, the outcomes of this study can be used by practitioners to improve the effectiveness of mentoring management in higher learning institutions. To achieve this purpose, management should be concerned about the following aspects: Firstly, creative training programs should be appropriately planned to assist mentors in using standardised content and methods in teaching and

facilitating and evaluating diverse mentee backgrounds who have different needs and expectations. This practice may ease mentors to measure their mentee capabilities in achieving mentoring targets. Secondly, responsible centres in colleges and universities, such as faculties, should plan formal gathering sessions at least two times a year. This session is essential to increase understanding of mentoring benefits and goals, decrease barriers and build a good rapport between mentors and mentees, and enhance commitment with mentoring goals. This practice may improve mentees' personalities, moral, and confidence to perform tasks. Thirdly, peer mentoring programs should be initiated by highlighting high performing mentees to become group leaders. They may directly share successful stories, motivate and guide group members to support their mentoring objectives. Fourthly, a special mentoring program for low performing students should be arranged to reinforce positive cognitive and affective behaviours (e.g. nurture students' positive beliefs and expectations about realising academic goals, create a strong link that grows between the mentor and the mentee, and upgrade students' inner motivation to make personal and academic choices). This socio-motivational aspect may increase mentees adaptation, upgrade success, and maintain higher institution environments. Finally, mentoring programs should diversify their focus from academic matters to uncover other important aspects such as mentees' soft skills, ethics, thinking skills, career, and personality development. Improvement in such aspects helps prepare mentees in upgrading their careers after graduating. The above suggestions are essential to encourage mentees to support their higher learning mentoring objectives.

Extant research and practice of higher learning teaching and learning systems need to view mentees' self-efficacy as an essential aspect of the mentoring program domain. This research further suggests that mentors' capability to appropriately practice kind relationship with diverse mentee backgrounds in formal and/or informal mentoring activities will strongly stimulate positive mentee attitudes and behaviours (e.g. academic achievement, leadership skills, and career search). Therefore, this positive outcome may lead to maintaining and upgrading higher learning institutions' competitiveness and performance in globalisation and difficult times.

Another recommendation is related to improving the methodological and conceptual constraints that are present in this study. Firstly, several important characteristics of higher learning institutions (e.g. types and ownership) and undergraduate students (e.g. gender, age, academic performance, program type, and race) should be explored in future studies. This may increase our understanding of how different mentee characteristics influence mentoring programs' performances within different higher learning institutions (Etzkorn & Braddock, 2020; Freeman & Kochan, 2019). Secondly, longitudinal studies should be considered because they can show patterns of a variable over a long time, provide useful data about individual changes, and assess the strength and nature of causal relationships among the variables. Thirdly, to enhance understandings of the mediating effect of mentees' self-efficacy in mentoring programs, higher learning institutions in other states in Malaysia also need to be studied in future research. Fourthly, other specific theoretical terms of mentees' self-efficacy (e.g. perceived confidence to complete tasks) and perceived

abilities to search for jobs should be considered because they have been extensively recognised as important links between mentoring relationships and mentee outcomes (Hamilton et al., 2019; Okolie et al., 2020). Fifthly, other constructs of mentee outcomes, such as academic performances and career development, need to be given priority because their roles are often acknowledged in many pieces of literature in higher learning mentoring (Laurie, Kim, Jose & Rob, 2020; Lejonberg et al., 2018). Finally, probability sampling plans, especially stratified random sampling, should be considered because it will collect data randomly, therefore reducing common method biases. The importance of the suggestions mentioned above needs to be further advanced in future studies.

This research has identified some methodological and conceptual limitations. Firstly, this research has used a cross-sectional research design, which prevents making inferences of causality among interest variables. Secondly, this research neglects to test the relationship between the independent variable's specific dimensions, the mediating variable, and the dependent variable. Thirdly, this research only used mentees' perceptions as a measure to evaluate the relationship between variables of interest in the hypothesised model. Fourthly, this research is conducted at public institutions of higher learning in East Malaysia. Lastly, a purposive sampling plan is not able to skip response bias. The above limitations may decrease the ability to generalise this study's results to other higher learning institutions.

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