

## Impact of Employee Performance in Context of Sustainable Growth in Education Sector: A Prospective of Mentorship's Effect

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### Abstract

*The purpose of the study aims to investigate the impact of mentoring on employee performance in the education sector in Malaysia. Specifically, the researcher examines the role of e-mentoring, personal attributes of mentors, and mentor modeling in enhancing employee performance. The study emphasizes the importance of mentors' personal attributes, such as trustworthiness, expertise, and empathy, in fostering effective mentoring relationships. Mentor modeling, which involves providing a positive role model for mentees, is also found to be crucial in enhancing employee performance. The research employs a quantitative approach, using a simple random sample of 200 participants from the education sector in Malaysia. The study highlights the need for organizations to pay attention to the personal attributes of mentors and provide regular feedback to mentees to maximize the benefits of mentoring. It also suggests that mentorship programs should implement a strategy to overcome the absence of feedback, guidance, and advice. The study emphasizes the importance of e-mentoring, especially in the current digital age, and the need for flexibility and adaptability in education and mentorship to deal with future crises or epidemics. It is identifying several limitations and suggests directions for future research. For instance, future research could explore alternative theoretical perspectives, examine mediator and moderator variables, and incorporate normality and pilot testing in evaluating employee performance. Moreover, future research could use longitudinal data to analyze the impact of mentoring over time. The findings of the study indicate that mentoring has a significant impact on employee performance in the education sector in Malaysia. E-mentoring, personal attributes of mentors, and mentor modeling are found to have a positive influence on employee performance on sustainable growth. Overall, this study provides valuable insights into the impact of mentoring on employee performance in the education sector in Malaysia. The findings suggest that mentoring is a crucial component for educators, and organizations should focus on developing effective mentoring programs to enhance employee performance and competitiveness.*

**Keywords:** Mentoring, Employee Performance, Attributes, Quantitative Approach, Education, Sustainable Growth

## INTRODUCTION

Several firms understand the value of mentoring and have initiatives in place to help people find and improve their abilities, as well as interact and improve their performance, as described in the report (Al et al., 2021). When mentoring becomes successful in a profit oriented as well as intense competition context, then it should be successful in academic, experience, and understanding contexts such as schools and universities, according to the general public understanding of the value of mentoring in professions (Francis et al., 2023). Several types of mentoring are available, including traditional mentorship, co-mentoring, target mentoring, distance mentoring, mentoring groups, peer-to-peer mentoring, and e-mentoring, including interpersonal mentoring, which may be casual or formalized, one-to-one, or maybe in groups of two or more. Initiate a theoretical foundation to facilitate the development of a model that might investigate the mentor-mentee relationship using a digital mentoring technique to provide a new, expert perspective on educational mentoring (Haque et al., 2024). It should be the socializing aspect, which is the mentoring regarding employee performance, that would be the core of this study. To create better understanding, those with expertise should be inclined to exchange whatever they have learned with each other (Al et al., 2021). Since both employer and employee do not realize how big the advantage is or will not understand how the technique and underpinning achievement element is

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related to knowledge maintenance throughout the significant result, mentoring failures were typically criticized for lack of technique. When new teachers attend Technical and Vocational Education and Training organizations (TVET), often face tremendous frustration and confusion (Al et al., 2021). Whenever a fresh educator was not given adequate support and guidance, they could decide to leave the field because of the exhaustion and pressure created by the sudden career opportunity. Researchers claim that almost all fresh academics require help throughout their first few years on the job (Al et al., 2021). Newcomer educators feel alone or ignored, which might lead to dissatisfaction with their work (Haibin et al., 2022).

A recent study demonstrates that educators benefited from the commitment and guidance they receive from mentors throughout their work placement years. Educators' levels of confidence dropped as a result of their anxiety. As a result of this, they seemed unsupported and unappreciated, as well as unable to verify their ideas since they lacked a mentor. Goh and Abdullah, (2020) observed that educators had concerns involving mentors who cannot make available for employees, mentors whose expertise was outdated and also who didn't establish goals for colleagues, a shortage of evaluation and suggestions for improvement, and a lack of advice and encouragement. According to Goh and Abdullah, (2020), several educators wished they had handled the situation better alongside the advisors, which would have caused controversy. Muslim et al., (2021) have shown that to be a good mentor, an individual requires to acquire certain personal qualities. This is since most previous research has focused on the personality variables of mentorship, rather than its influence, as seen by the results of this study (Muslim et al., 2021). Thus, prior research has not provided enough material for educators to use as commandments to create stronger initiatives to boost mentor modeling and the employment of mentoring in education. As a result of this event, the research project delved deeper into the topic of mentoring in the Malaysian educational system.

## **PROBLEM STATEMENT**

Since both employer and employee do not realize how big the advantage is or will not understand how the technique and underpinning achievement element is related to knowledge maintenance throughout the significant result, mentoring failures were typically criticized for lack of technique. When new teachers attend Technical and Vocational Education and Training organizations (TVET), often face tremendous frustration and confusion (Al et al., 2021). Whenever a fresh educator was not given adequate support and guidance, they could decide to leave the field because of the exhaustion and pressure created by the sudden career opportunity. Researchers claim that almost all fresh academics require help throughout their first few years on the job (Al et al., 2021; Ahmed et al., 2024). Newcomer educators feel alone or ignored, which might lead to dissatisfaction with their work.

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## **Objectives of Study**

- To analyze the effect of mentoring system on employee performance in education sector at Malaysia.
- To analyze the relationship between e-mentoring and employee performance in education sector.

- To analyze the relationship between personal attribute and employee performance in education sector.
- To analyze the relationship between mentor modelling and employee performance in education sector.

### **Research Question**

Is there any relationship between e-mentoring and employee performance throughout education sector at Malaysia?

Is there any relationship between personal attribute and employee performance throughout education sector at Malaysia?

Is there any relationship between mentor modelling and employee performance throughout education sector at Malaysia?

### **Significance of Study**

Considering mentoring enhancement is crucial for the advancement and long-term engagement of educators, this research will contribute consequences. When you are an educational leadership employee, you're likely to advise a newer co-worker. If you're a beginner educational employee, you are likely to be mentored. When a mentor sets excessive standards or inappropriate requirements on a learner, this might lead to labor exploitation, as mentioned by (Al et al., 2021; Chisala et al., 2018). A joint mentorship program involving Malaysian educators is also highlighted in this article. In light of these findings, mentors throughout education might well be able to better grasp the relevance of mentoring of entrants, the educational sector's strengths and applicability of various mentoring programs, and how these factors are related to each other. It also provides knowledge on the role of mentoring as a collaboration involving experienced and new educators, which may be employed to enhance employee performance assessments as analyzed by Goh and Abdullah, (2020). Studies involving mentoring in Malaysia have examined a wide range of topics, involving entrance further into the workforce, practical, multicultural activities, learners' personality, subject-specific mentorship, and project mentoring. In addition to the more traditional forms of mentoring, including the e-portfolio, e-mentoring, podcasts, and other digital communication technologies, evidence has already shown by Goh and Abdullah, (2020). Learners' perceptions of mentor effectiveness, educator conflicts while educating, and educator concerns throughout practical were all examined in the majority of Malaysian research on mentorship and mentored approaches for education systems. However, none of this research looked at how mentorship affects educational sector employee performance. As a result, this project would add to the body of information by examining the role of mentoring inside the education sector in Malaysia.

### **LITERATURE REVIEW**

#### **Mentoring**

Mentoring, according to Kram's Theory, is all about giving the trainees psychological and professional assistance throughout the workforce. The previous research has focused on the mentees' emotional and psychological well-being, while the latter prioritizes their professional development in the workforce. There was a glaring lack of attention paid to other aspects of everyday life. "The unequal nevertheless cooperative connection, that allows communication and the development of ideas, or might affect the outcomes and improvements in the present scenario," researchers said in their study. As a result of these characteristics, mentoring might be defined as mentors giving required assistance and cooperating with their mentees to help them develop in their respective careers. It is not uncommon to use the term "mentoring" to define the relationship between a professional in their field and someone who wishes to benefit from their knowledge and expertise. That both the mentor and also the mentee benefits from the relationship since it is seen as a powerful vehicle for development on both sides. Mentors could well be assigned to mentees to answer questions and provide support and encouragement, or mentors and mentees might engage in an even more in-depth "counselor" to overcome difficult situations. A system to assist and encourage individuals in managing overall education to achieve success, gain experience, increase performance, and then become the individual those who should be as underlined through mentoring does have its flexible adjustments to meet specific personal and professional demands, as highlighted by (Mentoring Bluebook, 2021). According to research, the most effective mentoring relationships were ones where both the mentors as well as the learner were involved throughout the mentoring program (Mentoring Bluebook, 2021). Several guidelines might assist to sustain the organizational structure's core, no matter what form of mentorship is being offered to such individuals (Pathmanathan et al.,

2022). Figure 1 illustrates Eric Parsloe's concept of mentorship, and below seem to be some important terms that are vital to mentorship. Accordingly, a mentorship system provides a solution for addressing the current gaps in a much more distributed system (Mentoring Bluebook, 2021). The lack of a network for cross-learning as well as the inability to engage with people from comparable backgrounds are all examples of such barriers. Mentorship enables people to participate in the educational process through the guidance of a professional expert (Khalil *et al.*, 2022a; Rana *et al.*, 2023). A variety of mentor-mentee contacts may help educators, educational leaders, and other workers improve their abilities and capacities. Networking opportunities with experts, participation in forums for exchanging knowledge, practice guidelines, and the discussion of the results in a variety of areas including educational management, academic standards, evaluations, coursework, pedagogical and education systems are all part of the package here. For large-scale mentoring operations, the researchers (Mentoring Bluebook, 2021) say that although the responsibilities of mentor and mentee may be sufficient, the mission requires a third option to support and maintain mentorship institutions. The level and regularity of all contacts involving mentoring relationships seem to be the responsibility of managers either personal or group (Khalil *et al.*, 2022b). As a result, they help to guarantee that the mentorship mechanism continues to grow and is established throughout the ecology. There is indeed a huge possibility for some other network collaborators to build technologies and digital platforms that allow mentorship a smooth integration including all participants inside the educational sector. National Education Policy (NEP) issued throughout 2020 proposes reforming all parts of the education system in accordance well with the fourth sustainable development target (SDG4) of excellent education. The mentorship was suggested as a way to raise the efficiency of results at multiple stages, as cited by (Mentoring Bluebook, 2021). Following the NEP 2020, every procedure of becoming an educator requires "multiple disciplines views and experience, creation of mindsets and ideas, and growth of performance on under greatest mentors." Because of this, it suggested that mentoring should be a part of all teachers' training programs (Ahmed, *et al.*, 2022b; Chowdhury *et al.*, 2022a; Chowdhury *et al.*, 2022b). A mix of professional education, mentorship methods, and career mapping might be employed in a relatively long approach for developing competent and skilled Early learning instructors (Chowdhury & Haque, 2022). Educators in education, as well as those in the field, who want to improve their credentials, will have access to a thorough mentoring program. a resource of excellent elderly or senior professors would be formed to give long-term technical counseling to educators, as indicated by the National Mentoring Mission (Mentoring Bluebook, 2021).

The NEP underlined the importance of appropriate educational involvement in mentorship throughout educational establishments. For universities and colleges, the NEP 2020's principal goal is to support them restructure and consolidate to improve existing leadership and professional goals. Institutions would be mentored through a tiered system of licensing, which will also help to foster an environment of self-determination and creativity at academic institutions. Every university's associated institution will be mentored by the universities to assist them to acquire capacities in "educational and curriculum concerns, formative assessment; leadership changes; fiscal resilience; and effectiveness," as outlined by the researchers (Mentoring Bluebook, 2021). Mentors and mentees have many of the same qualities, which shows that mentor-mentee engagement is greatly agreeable and not driven by the tutor alone. Furthermore, the research found that because being acknowledged as expertise or an accomplished specialist, a mentor's role is to facilitate the meeting, which includes preparedness and pragmatic considerations (Haibin *et al.*, 2022). Questions are asked and answers are given throughout the conversation. Comparable to the responsibility of a mentor, a learner was acknowledged as a team member to exchange experiences and information without honorifics as shown (Mentoring Bluebook, 2021).

## **Underpinning Theory**

### **Self Determination Theory**

Self-determination theory (SDT) offers a persuasive conceptual framework for researching how well the desirability of such connections might influence important job achievements through the mentorship of employees. There has been a lot of emphases devoted to working satisfaction as a predictor of effective employee performance, however, desire in the perspective of another's mentoring program has attracted little consideration thus far in academic theory. As a result, motivating elements relating to both employment and mentorship should play a unique role in a person's ability to perform and achieve their goals in the workplace

(Ahmed et al., 2022b). In contrast, numerous undergraduate students work even while attending classes, and also the expertise of far more professional workers seems to be beneficial for the overall employees in many aspects. Even though many individuals would not engage in an area that seems to be highly applicable to their studies, individuals are still getting significant experience and information that will help them in their prospective careers and jobs (Firzly et al., 2021). Learners' experiences in the workplace are just as significant to examine as academic implications of the job. Regardless of gender, religion, or environment, every human may feel inspiration thus according to SDT theory. The majority of outcome research, on the other hand, concentrates on the working population rather than the 21st-century workplace, mainly students, who are just as capable of being motivated, dissatisfied, engaged, and even enjoying their job as anybody else (Ahmed et al. 2022b). This research, based on the SDT framework, sought to explore the impact of a mentor's personality characteristics on a population of academic (mentees)' desire for mentoring and employment, along with existing desire to quit their jobs, involvement in their jobs, and overall well-being at employment (Osman, et al., 2022). When correctly implemented in mentoring professional relationships, self-determination theory has the potential to supply key insight that contributes to a better explanation of basic desire. Individuals, including this concept, desire expertise, flexibility, and social connection. In other words, liberty involves the desire to believe that everyone's decisions and results are entirely in one's hands, rather than the consequence of environmental stimuli. a variety of levels of complexity according to the statement by (Firzly et al., 2021). Furthermore, according to analysis by (Firzly et al., 2021), the term "relatedness" indicates a person's desire to experience a sense of belonging, encouragement, and concern from others. Various cognitive requirements have been found to have a great impact on the development of one's desire, well-being both emotional and pattern, and employee engagement, but instead aspirations to remain throughout the business (Rajendran & Haque, 2022). Whenever an employee's requirements are not met in a way that meets their expectations, they are less engaged, motivated, and happy at work. Consequently, it is believed that requirement provides the required fuel for a lot of enthusiasm and performance outcomes inside the employment. According to SDT, the desire may occur in two ways: autonomously and regulated, each resulting from fulfillment or dissatisfaction of a separate psychological demand (Ahmed et al. 2024).

Motivational autonomy, which includes both inner and outer control, is described as participating in an activity with enjoyment, decision, and congruence with one's objectives (Senathirajah et al., 2022). Self-motivation is boosted in the workplace when employees feel knowledgeable, in control, and connected to their co-workers (Rajendran & Haque, 2022). Even though it is associated with better job attention, effort, perseverance, and pleasure, as well as fewer intentions to leave and exhaustion, autonomous motivation also was regarded as optimum (Osman et al., 2022). An alternative definition of emotion regulation, also including self-determined and external management, is conduct performed for purposes other than one's satisfaction or the acceptance of many others. According to, psychological empowerment becomes less effective than self-driven desire since it causes more weariness and tiredness, which in turn reduces both perseverance and performance as described by (Firzly et al., 2021).

## **Dependent Variable**

### **Employee Performance**

Employees' performance is very often defined as the amount to which one person can accomplish the job objectives as anticipated and intended throughout the first event (Omar et al., 2022). Employee performance is a key factor in the connection between employers and employees (Haque & Joshi, 2011). Employees' performance would be a good indicator of a worker's level of achievement. The success or failure of a company's goals will be determined by its ability to formulate and implement initiatives (Ahmed et al., 2022a).

Leaders must ensure that the individuals they supervise are performing to a high quality of job performance, and they must ensure that all staff, whether they work in a group or independently, are aware of their specific tasks and functions (Khalil et al., 2023). An outstanding job is one in which a single individual contributes to the production of high-quality goods and services (Ying et al., 2023). The performance of employees contributes to the reduction of company issues such as low output and general inefficiencies (Bin et al., 2022). It is possible to construct three methods for evaluating the performance of employees: those were allocating positions

intending to support current professional accomplishments and evaluate their efficiency with certain feedback offered afterward, as previously described by (Omar et al., 2022).

In contrast, a different group of experts (Lau et al., 2020) defined performance as the consequence of an individual career or just the effectiveness of an individual's job in performing out their role and duties. Employee performance measures how successfully personnel conform to both formal and informal norms, goals, and interests. This is the method wherein the workers execute their given tasks and fulfill their duties that would be regarded as employee performance in the workplace. It also relates to the industrial system' efficacy, reliability, and productivity (Ahmed et al., 2022b). The performance of the company also depends on the effectiveness of its employees. To achieve the industry's objectives and strategy, every worker must put in the time and effort to do their best.

Globally, workers' lives have been severely disrupted by this epidemic. Changes brought on by the epidemic, on the other hand, are having an unequal impact (Chawdhury & Haque, 2022). The adjustments will have a greater effect on female workers than on male workers. Individuals under the age of 35 and those with lesser incomes are more concerned about their job security. Company owners and decision-makers are under huge pressure when it comes to making the right judgments. Two-thirds of Malaysians profess to be working at home because as country enters a new MCO. The insufficiency of one's household setting and a sense of extreme loneliness or isolation persist though after nine months spent working remotely for the large majority of people in the United States and Canada. Employees in Malaysia have reported higher levels of stress and anxiety compared to other colleagues throughout the world because of issues such as job insecurity, regular disruption, and family obligations. According to a report by the Centers for Disease Control and Prevention, the effects of pandemic-related workplace changes would be long-lasting (Ipsos Malaysia, 2021).

More individuals in Malaysia work remotely than the worldwide average, according to (Ipsos Malaysia, 2021). Many Malaysians have been forced to reduce or increase their working hours as a result of the disease epidemic. In addition, employees in Malaysia have reported lower productivity as a result of greater fear over their employment. Malaysians, out of the 28 nations studied for the research, had the greatest degree of anxiety (Khalil & Haque, 2022). Other issues to consider are the strain of a new schedule and the demands of a large family. According to a statement, women, those under 35 years old, and low-income workers are the most affected (Ipsos Malaysia, 2021). Finally, approximately two-thirds of Malaysian workers said that achieving a healthy work-life balance had been a difficult task (Ipsos Malaysia, 2021). There are no tools in the house to accomplish the job. In Malaysia, more than 50% of workers working at home regularly feel depressed and alienated, which impact on employee performance.

## Conceptual Framework & Hypothesis Development

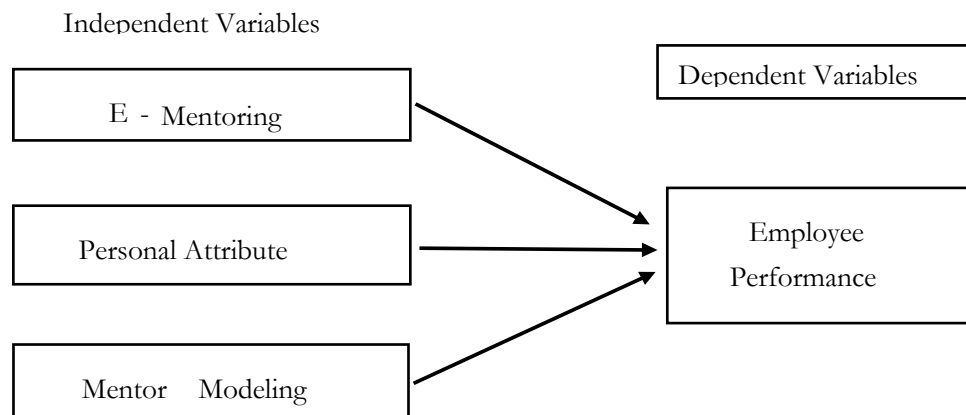


Figure 1. Conceptual model

## Hypothesis Development

*H<sub>1</sub>: There is significance relationship between E-mentoring and employee performance.*

*H<sub>2</sub>: There is significance relationship between Personal attribute and employee performance.*

*H<sub>3</sub>: There is significance relationship between Mentor modeling and employee performance.*

## **Independent Variable**

### **E-Mentoring**

A unique setting called “e-mentoring” allows the instructor and mentee’s mentorship engagement to be done completely digital. E e-mentoring distinguishes itself from traditional mentoring in that it uses a different medium for communication, the online internet ([Annathurai et al., 2023](#)). When people think of mentoring in the traditional sense, we think of one-on-one sessions when instructors and learners interact in contact. E-mentoring, on the other hand, utilizes electronic means of communication. That is crucial to differentiate both mixed and online e-mentoring while discussing e-mentoring. In stating how well asynchronous including synchronous contact is possible, instructors and students use a combination of face-to-face interactions and digital elements ([Goh and Abdullah, 2020](#)).

According to ([Goh and Abdullah, 2020](#)), e-mentoring might well be alternatively merged or mixed with digital e-mentoring, as well as completely electronic. Virtual e-mentoring would be the focus of this essay, whereby technologies act as a mediator between educators and learners. E-mentoring may take place whenever and wherever instructors and learners choose because of the online aspect of the interaction, giving instructors and mentees additional opportunities to interact. E-mentoring has the potential to save mentors money while also increasing the amount of time they spend with their trainees ([Lee et al., 2023](#)).

Furthermore, it allows mentors and mentees to interact together in a boundary-free environment, unlike traditional face-to-face mentorship. Mentorship effectiveness may be boosted by more engagement. Researchers found a strong link between the success of e-mentoring initiatives as well as the frequency with which instructors and learners engage. In consequence, e-mentoring may increase the number of mentors and mentees available. Traditional mentoring programs might just have a lower percentage of external support than e-mentoring because face-to-face contacts were constrained by distances. E-mentoring provides greater flexibility, while both instructors and learners can consult anywhere at the moment of each day, as indicated by the author ([Goh and Abdullah, 2020](#)).

### **Personal Attribute**

When communicating alongside prospective trainees, great advisors use their psychological and interpersonal abilities. Whenever the tutor appears “supporting, and eager to engage,” he or she is more likely to sustain a good and trustworthy connection well with the learner, hence why personal attributes are so important in mentoring relationships. As a means of communication between educators and learners, the mentors could also provide practical support and encouragement. As part of mentorship assistance, the learner is encouraged to focus on educational practices to establish a professional personality. As a “giving and receiving” connection, the expert argued instructors’ and learners’ concerns regarding one another on an individual basis along with professionally. Mentee’s performance could well be restricted without this type of helpful connection. Competence throughout education displays excellent mentorship ([Bird and Peter, 2021](#)).

Furthermore, following the findings of ([Kenayathulla et al., 2019](#)), the most sought-after characteristics by employers are those that focus on success, including self-motivation and pro-activeness along with honesty and dependability. According to manufacturing educational organizations, academic graduates have enough skills and expertise, but they have been lacking in other areas like desire, interpersonal skills, critical analysis, conflict abilities, and entrepreneurial spirit. Learners within Malaysia’s educational program need to be able to communicate effectively and think critically, according to previous studies. Relatively high intelligence is essential for successful mentors, but newbie educators often lack these abilities. The education industry, on the other hand, has not seen a lot of quantitative studies done on it. The goal of this study is to determine the gaps between educators’ perceived significance and their actual competency in the area of job performance. This research offers legislators and curricular programmers’ valuable information on how to best train the next generation of educators.

## **Mentor Modeling**

According to the statement by (Bird and Peter, 2021), this same mentor's modeling of pedagogical approach is tremendously significant to the mentee's growth. Professional mentors were seen as instructional coaches as well as mentor models of great teaching styles. Even while certain institutions have more severe mentor selection methods than others, the majority of mentors are generally accomplished specialists who are considered outstanding educators among their respective peers (Josephine et al., 2018). Mentors who are good role models for their mentees provide them with real-world examples of what succeeds and what doesn't inside the classrooms. Throughout past research, it was shown that good mentoring happens once the mentor demonstrates excellent teaching techniques (Senathirajah et al. 2024). Trainees' right to stream and participate in pedagogical techniques is a vital component of effective educational growth and may help mentees implement that learning independently (Osman et al., 2022). Their thoughts and comprehension are the emphases of the author's mentorship, which encourages students to develop a culture of questioning.

As a result of mentor modeling, educators can put their theoretical knowledge into practice in actual teaching scenarios. Mentors play an essential part in assisting academics to apply the educational philosophy individuals learned in class to real-world situations with trainees, put the concepts into practice in effective teaching, as well as to apply knowledge and skills so that they would adapt easily to the real-world educational process in institutions of higher learning (Haque et al., 2024). Educators believe that mentoring that allows learners to observe the mentors' teaching methods in action is an essential component of their academic experience (Ling et al., 2023). As a result, teachers see mentors as significant figures who may inspire overall pedagogical practices. While the writer's analysis shows a significant influence on teachers' academic abilities, findings also support educators' ability to transmit information from mentoring to learners during their education journey as illustrated by (Jafar et al., 2021).

## **RESEARCH METHODOLOGY**

### **Research Design**

Quantitative research methods use statistics and analysis to conclude the correlations between variables that have been measured or evaluated and the results. Although quantitative approaches can handle data from numerous samples, they were useful in research. The online questionnaire should be used to collect the bulk of the information from a certain Malaysian population. In order to complete this study, the researcher selected a quantitative data collection method commonly used in many studies (Wider, 2023; Jiang et al., 2023).

### **Population**

According to Institution of teacher education Malaysia, MOE dated as 31<sup>st</sup> January, 2021 the number of workers in the education sector is expected to reach 52,536 by the year 2021. As many as 300 Malaysian education sector personnel were surveyed as part of this study. 214 people took the time to answer the survey. It includes both genders, with participants ranging in age from 18 to 60 years old.

### **Sample**

This approach was developed in 1970 by Krejcie and Morgan and has been widely used today. Krejcie and Morgan charts might well be employed if the total population was determined, as noted by Krejcie and Morgan (Abdul, S., et.al, 2021). Predictive performance and coefficient of determination are not taken into consideration in the estimations throughout this table. Table Size Assessment of Krejcie and Morgan Samples (Figure 14) may be used to calculate the authors of the study size of the sample. This determining the sample size chart is utilized by scholars and researchers which allows the investigator to estimate the representative sample for study purposes.

Probability sampling strategies employed in this study include a simple random sample as well as a random selection of a community. Each element of the population seems to have the precise same probability of getting picked when using this sampling procedure. This approach is perhaps the most fundamental of most the



probability sampling methods because that only comprises a solitary random sample and needs minimal prior information about the community. Studies upon that sample might as well have excellent reliability and validity along with its randomized.

*Formula for determining sample size*

$$s = X^2NP(1 - P) + d^2(N - 1) + X^2P(1 - P)$$

*s* = required sample size.

$X^2$  = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841).

*N* = the population size.

*P* = the population proportion (assumed to be .50 since this would provide the maximum sample size).

*d* = the degree of accuracy expressed as a proportion (.05).

*Source: Krejcie & Morgan, 1970*

Figure 2. Formula of sample size (Abdul, S., et. al. 2021).

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size.  
*S* is sample size.

Figure 3. Table for Krejcie and Morgan Sample (Abdul, S., et. al. 2021).

### Measurement and Measures

IBM SPSS has been used to examine the data. These are facts that may be arranged numerically. The participants were then given an online survey to fill up, and then they will pick the proper responses depending on personal experiences and values. When asked about their feelings about effect and work engagement, participants were asked to rate their level according to (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, and (5) strongly agree on a five-point Likert scale. There was even a nominal scale that included the values of yes and no. 29 questions were included in the questionnaire's seven subconstructs. The information was gathered through the use of the questionnaires listed below.

**Table 1. Demographic Information questionnaire**

Gender	Male
	Female
Age	Below 20 years old
	21-30 years old
	31-40 years old
	41 years old and above
Marital Status	Single
	Married
	Divorce/Separated
	High School / SPM
Education Level	Diploma/STPM/Certificate
	Degree Master
	PhD
	Below than RM2,000
Monthly Income	RM2,001 - RM4,000
	RM4,001-RM6,000
	RM6,001 and above
	Public Institutions
Working Sector	Private Institutions

**Table 2. Variable Testing**

Mentoring	Is there already running of mentoring program at your organization?
E-Mentoring	Did your organization encourage the employee to participate in the mentoring program?
	Did you think mentoring helps to increase teamwork and developed leadership skill?
	E-mentoring is more flexible and convenient compared to the traditional mentoring.
	E-mentoring allow both mentor and mentee to learn and exchange new knowledge and skills among each other.
Personal Attributes	Having the e-mentoring program as an official mentorship program would help the employee towards better performance.
	You have a positive influence on employees' attitudes and habits through e-mentoring program.
	How would you rate your overall experienced with e-mentoring in your organization?
	Your mentor empowers the employee with knowledge gained from their experiences skill, employability skill and leadership
Mentor Modeling	Your mentor put effort to improve his/her personal attribute including interpersonal
	Your mentor arranged adequate resources for employee mentoring and improvement.
	Your mentor handle well to resolve any conflicts among the employee.
	Your mentor approach on the risk-taking.
E-Mentoring	Is there already running of mentoring program at your organization?
	Did your organization encourage the employee to participate in the mentoring program?
	Did you think mentoring helps to increase teamwork and developed leadership skill?
	E-mentoring is more flexible and convenient compared to the traditional mentoring.
Personal Attributes	E-mentoring allow both mentor and mentee to learn and exchange new knowledge and skills among each other.
	Having the e-mentoring program as an official mentorship program would help the employee towards better performance.
	You have a positive influence on employees' attitudes and habits through e-mentoring program.
	How would you rate your overall experienced with e-mentoring in your organization?
Mentor Modeling	Your mentor empowers the employee with knowledge gained from their experiences.
	Your mentor put effort to improve his/her personal attribute including interpersonal skill, employability skill and leadership.
	Your mentor arranged adequate resources for employee mentoring and improvement.
	Your mentor handle well to resolve any conflicts among the employee.
Employee Performance	Your mentor approach on the risk-taking.
	How satisfied is you with your mentor encouragement and guidelines toward employee?
	Mentors need clear understanding of their roles in mentoring.
	Your mentor provides on-going performance feedback about task given.
Employee Performance	Your mentor participates in good quality improvement as mentor model.
	Your mentor inspired you in the way of role modeling
	Your organization ensure every employee to develop new skills toward positive outcome on employee performance.
	Your employee performance did not effects with new environment or circumstances.
Employee Performance	Covid-19 pandemic had increased your employee performance in your organization.
	How would you rate the growth opportunities that helps to increase employee performance in your organization?
	How would you rate your overall employee performance over the past two years?

## **Data Collection & Data Analysis Method**

Using a questionnaire being one of the key sources of evidence, a responder is supplied with a set of questions that they are supposed to answer in either a Google form. Answers are supplied in the form of a range of online questionnaires, and each responder must check the box next to the issue that best describes their response. Appendix 2 displays the Google form from Mahsa University that the researcher was using to develop the questionnaire for this study.

### **Descriptive Statistics**

Results of this study are compiled using descriptive statistics by demonstrating the connection between underlying variables and relationships as well as population. Before performing any hypothesis testing analyses, researchers would often do a preliminary calculation of descriptive statistics (Kaur et al., 2022). Nominal, continuous, period, and proportion variables, along with indicators of frequencies, descriptive statistics, scatter, and placement are all included in descriptive statistics. For the period of this study, descriptive information such as participants' ages, genders, marital situations, educational levels, monthly income, and occupations was investigated (Wangyanwen et al., 2023).

The degree to whereby a measure of phenomena generates a strong and sustainable result is what researchers mean by reliability (Jye et al., 2022). Considering consistency in mind, they should discuss reliability. For instance, if scales or testing can consistently provide the same results when used together under the circumstances, it must be considered trustworthy (Haque et al., 2022). The constancy of a testing device's components, as measured through reliability analysis, seems critical. When the sample's components are "hanging along" and evaluate the same thing, it is reported to have good acceptable reliability dependability (Osman et al., 2024). This same Cronbach Alpha coefficient seems to be the most often used-acceptable reliability indicator. According to, it would be the most acceptable way to assess trustworthiness when using Likert scales (Bonett, et.al, 2018). Even though there are no strict guidelines regarding internal consistency, the overall opinion is that it should be set at a minimum of 0.70. There seem to be a variety of ways to calculate Cronbach's alpha, however, it is often used to represent the dependability of sums or averages of data. The following list displays the alpha value.

Validity is a measure of how far the dataset obtained corresponds to the research question as stated (Taherdoost, 2018). Evaluate everything they plan to analyze, in other words, validity. When deciding on a test, its most critical consideration is its validity (Rajendran & Haque, 2022). Validity is concerned with the test's ability to accurately reflect the attribute it is designed to assess. Whether or not a study's results are in line with a company's criteria is determined mostly by the study's validity. Both Kaiser-Meyer-Olkin (KMO) testing, as well as Bartlett's test, were mostly used. Every underlying cause explains a certain amount of the variation in the variables, as measured by KMO. The following are the KMO valuation criteria. As opposed to Bartlett, which is a quantitative method used to measure not if the variations throughout several categories are comparable (Umesh et al., 2023). Each ANOVA and another reliability test imply that variances were similar throughout the samples. It is possible to test this hypothesis using Bartlett's test. Below is an example of an identity matrix used to determine correlation (Barman et al., 2023). Using a modeling approach is incorrect since this demonstrates that perhaps the elements are entirely unrelated to one another. Whereas if the p-value of both analyses will be less than 0.005, the Identification matrices might well be considered out (Yu et al., 2023).

## **FINDINGS AND ANALYSIS**

### **Descriptive Analysis**

The Table 3 demonstrated the frequency and percentage of respondent of demographic information of the survey. As illustrated from the Table 3 the percentage and the frequency of gender with a total of 214 respondents that consists of male, female and prefer not to say respondents was recorded throughout the online questionnaire survey. There was resulted 72 of male respondent, 139 female respondent and 3 respondent that

prefer not to say. The percentage of male, female and prefer not to say respondents were as followed 33.6%, 65.0% and 1.4%.

**Table 3. Demographic Information Respondent**

Variables	Frequency	Percentage (%)
<b>Gender</b>		
<b>Male</b>	72	33.6
<b>Female</b>	139	65.0
<b>Prefer not to say</b>	3	3.0
<b>Age</b>		
<b>Below than 20 years old</b>	4	1.9
<b>21 – 30 years</b>	143	66.8
<b>31 – 40 years</b>	44	20.6
<b>41 years and above</b>	24	24.0
<b>Marital Status</b>		
<b>Single</b>	121	56.5
<b>Married</b>	92	43.0
<b>Divorce / Separated</b>	3	1.4
<b>Educational Level</b>		
<b>High School / SPM</b>	6	2.8
<b>Diploma / STPM / Certificate</b>	17	7.9
<b>Degree</b>	101	47.2
<b>Master</b>	84	39.3
<b>Phd</b>	9	4.2
<b>Monthly Income</b>		
<b>Below than RM2,000</b>	28	13.1
<b>RM2,001 - RM4,000</b>	78	36.4
<b>RM4,001 - RM6,000</b>	72	33.6
<b>RM6,001 and above</b>	36	16.8
<b>Working Sector</b>		
<b>Public Institutions</b>	32	15.0
<b>Private Institutions</b>	182	55.0

The percentage and the frequency of age with a total of 214 respondents that consists of below than 20 years old, 21-30 years old, 31-40 years old as well as 41 years and above respondents was recorded throughout the online questionnaire survey. There was resulted only four respondents that are below than 20 years old with a 1.9%, 142 respondents of 21-30 years old with a 66.4%. While there were 44 respondents with 20.6% of 31-40 years old and 24 of respondents with 11.2% that is 41 years and above (MyGovernment, 2022).

The percentage and the frequency of marital status with a total of 214 respondents that consists of single, married and divorce/separated was recorded throughout the online questionnaire survey. There was resulted 119 of single respondent, 92 of married respondent and 3 respondent that was divorce/separated. The percentage of single, married and divorce/separated respondents were as followed 55.6%, 43.0% and 1.4%. The educational level with a total of 214 respondents that consists of high school/SPM, diploma/STPM/certificate, degree, master and PhD was recorded throughout the online questionnaire survey. There was resulted only four respondents that are holding high school/SPM with a 1.9%, 16 respondents with diploma/STPM/certificate holder with a 7.5%. While there were 101 respondents with 47.2% of degree level and 84 of respondents with 39.3% of master level. Lastly, nine of the respondents were PhD holder with 4.2% (MyGovernment, 2022).

The percentage and the frequency of monthly income with a total of 214 respondents that recorded salary below than RM2,000, RM2,001-RM4,000, RM4,001-RM6,000, as well as RM6,001 and above was recorded throughout the online questionnaire survey. There was resulted 28 respondents that are receiving salary below than RM2,000 with a 13.1%, 78 respondents received salary that range of RM2,001-RM4,000 with a 36.4%. While there were 72 respondents with 33.6% of monthly salary that range of RM4,001-RM6,000 and 36 of respondents with 16.8% that are receiving salary of RM6,001 and above. The frequency of marital status with a total of 214 respondents that consists of public institutions and private institutions were recorded throughout the online questionnaire survey. There was resulted 32 of respondent who is working at public institutions and

182 of the respondents worked at private institutions. The percentage of those working at public sector was 15% and private sector recorded the highest of working sector with 85% (MyGovernment, 2022).

### Reliabilities Analysis

The reliability of questionnaire survey was analyzed using Cronbach’s Alpha reliability analysis. As illustrated from the Table 4.29 above, the coefficient alpha value for e-mentoring is 0.879 and it resulted as the highest coefficient alpha and considered very good reliability. The personal attribute resulted 0.855 of coefficient alpha and it shows very good reliable. Next, mentor modeling also indicated as very good reliability as the coefficient alpha value is 0.833. Lastly, the employee performance was recorded 0.790 of coefficient alpha value and it shows a moderate reliability (Ling et al., 2023). Thus, the overall reliability had resulted that the questionnaires were suitable for this research and achieved the accurate reliability (Yu et al., 2023).

**Table 3. Cronbach’s Alpha Reliability Analysis**

Constructs	Cronbach's Alpha	No of Item
E-Mentoring	0.879	5
Personal Attribute	0.855	5
Mentor Modeling	0.833	5
Employee Performance	0.790	5

### Validity Analysis

As we can see table above, KMO value is 0.820 It resulted as excellent as it had exceeded the value of 0.5. It shows that a factor analysis could be conducted from the study. Besides, the Bartlett’s test of sphericity shows 0.000 which resulted less than 0.0005. It tells that the variable is satisfactory. There is no high correlation or coefficient among the items.

**Table 4. KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.820
Bricityett's Test of	Approx. Chi-Square	4392.966
	df	190
	Sig.	0.000

Table below demonstrated the total variance explained. It is the percentage of total variance among the variable that can be explained by single factors. The collection of data was decided by using eigenvalues.

**Table 5. Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.041	45.203	45.203	9.041	45.203	45.203
2	2.349	11.745	56.948	2.349	11.745	56.948
3	1.414	7.069	64.017	1.414	7.069	64.017
4	1.229	6.147	70.164	1.229	6.147	70.164
5	.959	4.797	74.961			
6	.875	4.373	79.334			
7	.796	3.982	83.316			
8	.693	3.464	86.780			
9	.520	2.600	89.381			
10	.449	2.244	91.625			
11	.379	1.897	93.522			
12	.363	1.817	95.340			
13	.303	1.513	96.853			
14	.212	1.062	97.915			
15	.192	.962	98.876			
16	.105	.524	99.400			
17	.041	.204	99.604			
18	.030	.149	99.754			
19	.028	.138	99.892			
20	.022	.108	100.000			

Extraction Method: Principal Component Analysis.

From the Table above, the total variance explained is 70.164% where the first factor determines the 45.203% of the variance. While the second factor resulted 11.745% of the total variance. The third determine accordingly 7.069%. The last variance as resulted as 6.147%.

### Regression Analysis

According to Table 7, the significant of p-value is 0.001. It shows that the p-value is less than usual significance level which the value known as 0.005. H1 for this research is supported as the data value of coefficient of beta

is 0.320. Therefore, there is a significant relationship between e-mentoring and employee performance (Chowdhury et al., 2023).

*H1: E-mentoring positively relates to employee performance.*

**Table 6. Coefficient of e-mentoring and employee performance**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.843	.190		14.924	<.001
	AVG_E_Mentoring	.320	.044	.450	7.337	<.001

a. Dependent Variable: AVG\_Employee\_Performance

According to Table 8, the significant of p-value is 0.001. It shows that the p-value is less than usual significance level which the value known as 0.005. H1 for this research is supported as the data value of coefficient of beta is 0.669. Therefore, there is a significant relationship between personal attribute and employee performance.

*H2: Personal attribute positively relates to employee performance.*

**Table 7. Coefficient of personal attribute and employee performance**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.494	.155		9.658	<.001
	AVG_Personal_Attribute	.669	.038	.774	17.797	<.001

a. Dependent Variable: AVG\_Employee\_Performance

According to Table 9, the significant of p-value is 0.001. It shows that the p-value is less than usual significance level which the value known as 0.005. H1 for this research is supported as the data value of coefficient of beta is 0.904. Therefore, there is a significant relationship between mentor modeling and employee performance.

*H3: Mentor modeling positively relates to employee performance.*

**Table 8. Coefficient of mentor modeling and employee performance.**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.438	.072		6.055	<.001
	AVG_Mentor_Modeling	.904	.017	.964	52.739	<.001

a. Dependent Variable: AVG\_Employee\_Performance

**Correlation**

According to Table 10 above, there is a significant level of correlation of 0.001. Mentoring and mentoring shows the value scores of 1. While for the personal attribute and employee performance also having a positive correlation with 0.478 value and resulted as moderate correlation. Besides, there is also positive significant and moderate correlation between mentor modeling and employee performance with the value of 0.497. Lastly, there is a positive significant between e-mentoring and employee performance that shows value of 0.450 and it indicated as moderate correlation. Additionally, e-mentoring, personal attribute and mentor modeling is moderately effect towards the employee performance (Jing et al., 2023).

Table 10. Correlation of variables

		AVG_E_Mentoring	AVG_Personal_Attribute	AVG_Mentor_Modeling	AVG_Employee_Performance
AVG_E_Mentoring	Pearson Correlation	1	.478**	.497**	.450**
	Sig. (2-tailed)		<.001	<.001	<.001
	N	214	214	214	214
AVG_Personal_Attribute	Pearson Correlation	.478**	1	.800**	.774**
	Sig. (2-tailed)	<.001		<.001	<.001
	N	214	214	214	214
AVG_Mentor_Modeling	Pearson Correlation	.497**	.800**	1	.964**
	Sig. (2-tailed)	<.001	<.001		<.001
	N	214	214	214	214
AVG_Employee_Performance	Pearson Correlation	.450**	.774**	.964**	1
	Sig. (2-tailed)	<.001	<.001	<.001	
	N	214	214	214	214

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### Hypotheses Results

As demonstrated from Table 11, there is a significant relationship between e-mentoring and employee performance. This is because  $p \leq \beta$  was recognized and it is significant. Besides H1 is accepted and the null hypothesis is true as the coefficient beta is 0.450. Thus, it showed that there is an impact of e-mentoring towards employee performance. Moreover, there is a significant relationship between personal attribute and employee performance. This is because  $p \leq \beta$  had been recognized and it is significant. Thus, H2 is accepted and the null hypothesis is true as the coefficient beta is 0.774. Thus, it showed that there is an impact of personal attribute towards employee performance (Senathirajah et al., 2023).

Table 11. Hypotheses Results

No	Hypothesis	P-Value	Results	Standardized Coefficients Beta	Results
1	E-Mentoring positively relates to employee performance	0.001	Effect	0.450	Supported
2	Personal attribute positively relates to employee performance	0.001	Effect	0.774	Supported
3	Mentor modeling positively relates to employee performance	0.001	Effect	0.964	Supported

Lastly, mentor modeling and employee performance had a significant relationship. This is because  $p \leq \beta$  had been recognized and it is significant. Thus, H3 is accepted and the null hypothesis is true as the coefficient beta is 0.964. Thus, it showed that there is strong relationship between mentor modeling towards employee performance (Wan et al., 2023).

## RECOMMENDATION AND CONCLUSION

### Implications of the Study

People and organizations might benefit from this study in a variety of ways. Just at the beginning, mentors and organizations alike must be aware of what effects mentoring has on the Malaysian education sector in terms of enhancing employee performance and fostering competitiveness (Ahmed et al., 2024). On the other contrary, organizations ought to connect the possible consequences of mentoring and reimburse attention to the personal attributes of mentors even during the execution of mentorship; on the other contrary, mentors ought to create complete utilization engagement with one 's mentees, initiating the knowledge base and providing regular

feedback as a mentor model, which might improve and increase employee performance all across the education sector (Ifedi et al., 2024).

Second, e-mentoring, personal attributes, and mentor modeling all had a significant impact on Malaysian employees' performance. According to this study, mentors play a significant role in establishing the positive impact of e-mentoring, hence personal attributes of mentors must be acknowledged to attain high levels of efficacy (Ramalingam et al., 2024). In the case of mentors in the latter phases of growth, the organization could focus on meeting actual relationship goals whereas those in the beginning stages of their mentoring roles must have a clearer understanding of acknowledgment for outstanding work in the Malaysian education sector (Wickneswary et al., 2024).

## CONCLUSION

Mentoring has a significant impact on how well an organization's individuals, regulations, and goals were aligned (Fei et al., 2024). Throughout Malaysia, mentoring seems to be a great component for educators. A shortage of mentoring programs may lead to a significant decline in personal attributes, employee performance, and possibilities for career advancement in an organization (Osman et al., 2024). In an attempt to overcome the absence of feedback, guidance, and advice as well as the adoption of mentorship that is used to boost employee performance, educators in mentorship programs should implement a strategy (Senathirajah et al., 2024). The above quantitative solitary research aimed to investigate the effects of mentoring on the educational sector's employee performance in Malaysia (Wai et al., 2024). All participants learned from and encourage each other in the most effective mentorships, which regularly turn into relationships throughout the long run. Thus, e-mentoring, personal attribute and mentor modeling give a positive effect towards employee performance in Malaysia (Khalil et al., 2023).

Mentors may benefit from mentoring, however, there are significant limitations in the study which must give guidance for future research (Francis et al., 2023). To begin, the researcher uses a simple random sample to examine the outcomes of mentors. A further cross-sectional study might contribute to limitations upon that mediator analysis and identify mentorship phase variations, therefore future researchers should consider doing so. The longitudinal data may be used in future studies to analyze the effect of mentoring throughout the education sector (Blueprint, 2021). There might be some alternative theoretical viewpoints lurking in the effect process, despite the researcher's adoption of self-determination theory. For instance, the future study may examine supervisor-subordinate social ties within China, which was never investigated in Malaysia before. There seem to be present just independent and dependent variables throughout the present study on employee performance in Malaysia's education sector. Future researchers may thus undertake mediator and moderator variables again for the conceptual framework (Karpinska, 2021).

Next, when it comes to evaluating employee performance, this study employed just a descriptive, reliability and validity, and regression as well as correlation test. A normality testing and even a pilot testing should be used in future research to examine the technique by which various aspects of mentoring affect the results of educators and therefore assist to enhance mentoring studies (Kato, 2019). There was also a chance that future research into the establishment of information technology mentorship guidelines might draw on the experiences of numerous mentors and mentees inside the field of information technology. As digital training, as well as virtual mentoring, become increasingly prevalent in today's digital age, it seems worthwhile to explore broader views regarding e-mentoring, such as how efficient the implementation of e-mentoring is inside smaller firms (Kaur et al., 2019).

And last but not least, ensure that educational lecturers and learners as well as education and training administrators have the flexibility and adaptability they need to deal with any future crisis or epidemic, such as the Covid-19 outbreak (Rahim et al., 2023). This necessitates the implementation of mentorship and educational progress with the use of teaching methods, which combine faceto-face and distant mentorship, online as well as offline guidance, as well as high-tech, minimal, and thus no alternatives, based on regional and national circumstances as well as the evolving expertise requires of industry sectors (Haibin et al., 2022). Aside from



that, both educators and mentees could benefit from the opportunity to educate on each other's experiences, share best practices for mentorship, as well as provide a spirit of cooperation (OECD, 2021).

### Data available on request due to privacy/ethical restrictions

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

**Ethical Approval:** Formal ethical approval has been waived in state this study adhered to the principles of the strict ethical standards. Participation was anonymous, confidential, and voluntary, with informed consent obtained from all participants. There were no biomarkers or tissue samples collected for analysis. Participants had the freedom to withdraw from the study at any point.

**Conflict of interest:** Authors declare no conflict of interest.

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