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A Study in Developing A Mindful Meditation Model to Enhance Growth Mindset for School Administrators

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Abstract

This study aimed to explore the components and indicators of mindful meditation in enhancing school administrators' growth mindset. The researchers conceptualized the components and indicators of mindful meditation practice by examining associated documents and previous studies, then cross-examining with five experts to confirm them. Then, a survey was employed of 408 school administrators and teachers using a multi-stage sampling technique with the purpose of testing the goodness-of-fit of the identified components and indicators with the empirical data. The initial findings revealed that an entire of 34 indicators were recognized from five and six components of mindful meditation practice and growth mindset respectively. A mindful meditation model to enhance a growth mindset was complied with the empirical data, $\chi 2$ =425.465, df = 286, p-value = 0.0603, CFI = 0.991, TLI = 0.982, RMSEA = 0.035, and SRMR = 0.030. In conclusion, the results have successfully proposed a measurement model for being guidelines.

Keywords: *Components and Indicators; Growth Mindset; Measurement Model; Mindful Meditation Practice*

Introduction

Mindful meditation practice has been associated with various mental and physical health benefits (Uopasai et al., 2022). Uopasai et al. found that mindful meditation can assist in reducing stress, anxiety and depression, improve focus and concentration, enhance emotional regulation, and promote overall well-being. Additionally, the practice of mindfulness can support the development of a mindful that can support the development of a growth mindset, as it encourages openness, curiosity, and self-awareness. All these essential components are derived from a growth-oriented mindset perspective (Uopasai et al., 2022). According to Peter and Zoltan (2019), mindful meditation is a form of meditation that involves bringing focused attention and awareness to the present moment without judgment. Peter and Zoltan explained that the primary goal of mindful meditation is to cultivate mindfulness, which is the quality of being fully present and aware of one's thoughts, emotions, bodily sensations, and the surrounding environment. Therefore, this state of mindfulness assists individuals observe their experiences as they unfold, without getting caught up

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in judgments, reactivity, or rumination (Knyti & Opitz, 2019).

Hence, it is an ancient practice that originates from Buddhist traditions but has been adapted and integrated into various secular settings and therapeutic approaches (Uopasai et al., 2022).

Carol Dweck is a psychologist who developed the psychological concept of a growth mindset. According to Dweck (2006), a growth mindset refers to the belief that our abilities, intelligence, and talents can be developed and improved through effort, learning, and perseverance. In contrast, a fixed mindset is the belief that our qualities and abilities are inherent and unchangeable traits. Masalee et al. (2021) explained the core idea behind a growth mindset is that our potential is not predetermined. Therefore, a growth mindset can be cultivated and expanded over time through dedication and hard work. Masalee et al. further clarified that individuals with a growth mindset tend to embrace challenges, view failures as opportunities to learn, and are motivated to continuously develop their skills and knowledge. Based on the literature review, a growth mindset can significantly impact various aspects of life, including academics, careers, relationships, and personal development. Masalee et al. (2021) justified that individuals are more likely to take on new challenges with confidence, stay resilient in the face of obstacles, and continuously strive for self-improvement.

Mindful meditation and a growth mindset share several interconnected qualities and benefits (Klussman et al., 2020). Klussman et al. stated that mindful meditation and a growth mindset can reinforce each other and lead to positive outcomes in personal development and well-being. Klussman et al. (2020) highlighted some of the key relationships between mindful meditation and a growth mindset in terms of increased self-awareness, non-judgmental attitude, resilience and coping, acceptance and self-compassion, openness and curiosity, reduced stress and anxiety, and focus and concentration. Uopasai et al. (2022) mentioned that mindful meditation can cultivate self-awareness by encouraging individuals to observe their thoughts, emotions, and sensations without judgment. This heightened self-awareness allows individuals to recognize fixed mindset tendencies, such as limiting beliefs or fear of failure. The researchers justified that individuals can consciously choose to adopt a growth mindset and challenge their fixed mindset beliefs with increased self-awareness. Following this line of reasoning, individuals can develop a strong foundation for personal growth, self-improvement, and well-being by combining mindful meditation with a growth mindset. The self-awareness, non-judgmental attitude, resilience, and focus cultivated through meditation can support the development of a growth mindset, leading to a positive cycle of continuous learning and progress.

The above discussions reflected that there is relatively limited previous research exploring the direct relationship between mindful meditation and the development of a growth mindset. The researchers found that there is still a broad need for more research that specifically examines the impact of meditation on fostering a growth mindset. While both mindful meditation and a growth mindset are widely promoted in various contexts, more research is needed to identify practical

strategies and techniques that effectively foster a growth mindset through mindful meditation practices. Thus, a mindful meditation model is urgently needed to address these research gaps not only to provide a clearer understanding of the relationship between mindful meditation and a growth mindset but could also offer valuable insights for developing evidence-based interventions and strategies to promote a growth-oriented perspective through mindfulness practices.

Background and Research Aims

The introduction above indicated that school administrators with a growth mindset tend to embrace challenges, see failures as opportunities to learn, and believe that their potential is not fixed but can be expanded over time. According to Settles (2021), school administrators with a growth mindset always believe that their skills and intelligence can be developed and improved with practice and dedication. This belief drives them to embrace challenges and put in effort to achieve their goals. Settles (2021) suggested to future researchers design comprehensive studies to investigate the components and indicators that contribute in the development and sustainability of a growth mindset. Therefore, the researchers would like to investigate whether the regular practice of mindful meditation can influence the adoption and strengthening of a growth mindset, and if so, what are the specific mechanisms and cognitive processes involved in this transformation.

School administrators in Thailand need to address issues related to curriculum development, teacher training, and student learning to ensure and maintain the quality of education as a significant concern. Besides, they often have to navigate complex bureaucratic structures and adhere to government policies, which can sometimes hinder their ability to implement innovative and responsive strategies. Moreover, Wongkhong et al. (2023) found that school administrators in Thailand conscientiously deal with the day-to-day challenges occurring from their professional roles in academic and professional contexts. Following this line of reasoning, exploring how mindful meditation can enhance school administrators' ability to bounce back from setbacks, embrace challenges, and maintain a positive attitude toward learning and personal growth is important to pay substantial attention in the field of educational administrators. Specifically, the aim of this study was to identify the essential components and their indicators of mindful meditation practice with regard to the growth mindset of school administrators and test the goodness-of-fits of the mindful meditation components and indicators with the empirical data. Finally, a mindful meditation model to enhance a growth mindset was developed to address those gaps and contribute to the growing body of knowledge in the educational administration.

Materials and Methods

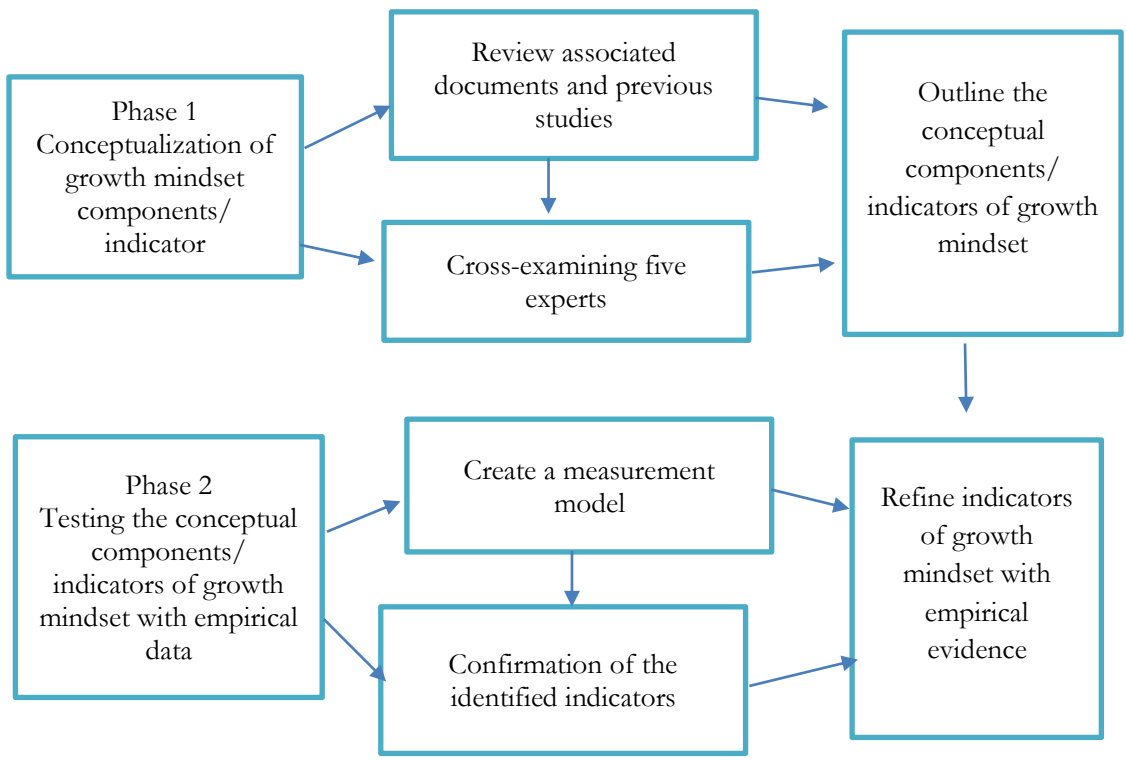
Research design and research process

The researchers employed a mixed-mode research design to combine qualitative and quantitative methods. This research design is particularly useful when the research aim is complex and requires a more holistic understanding (Creswell & Plano Clark, 2011). In the first phase, the researchers

carried out a thorough document analysis to analyze relevant previous literature, reports, and public policies to identify the essential components and indicators related to mindful meditation practice. Then, the researchers conceptualized the essential components and indicators of mindful meditation practice to develop a measurement model after cross-examining with the five experts (Morgan, 2022). In the final phase, the researchers employed a survey research design using an online questionnaire for collecting data from a large and diverse group of respondents consisting of school administrators and teachers. The survey involved systematically collecting information to investigate respondents' perceptions toward mindful meditation and growth mindset (Gay et al., 2009). By doing so, the researchers could gain a more comprehensive and well-rounded view of the research focus, leading to more robust conclusions and recommendations.

The purpose of constructing a survey is to test the structural construction between experimental examination and the hypothetical theory of quantitative relationships regarding experimental data. The relationships are represented by path coefficients or deterioration between the growth mindset and components and their indicators of mindful meditation practice. Figure 1 illustrates the research process as follows:

Figure 1. Research process



Population and sampling

In the first phase, the researchers selected five participants who are considered experts and have knowledge of the research interest utilizing a purposive sampling technique. Purposive sampling is valuable in this situation where the researchers seek in-depth insights from the five experts so that they could cross-examine the identified components and indicators with their particular knowledge, experiences, or attributes relevant to the mindful meditation practice to enhance the growth mindset.

In the final phase, a multi-stage sampling technique encompassing stratified sampling and simple random sampling was employed. The total population of 2,229 school administrators and teachers who are working at all Phrapariyattidhamma Schools, in the northeastern region of Thailand. A multi-stage sampling provides flexibility in selecting different types of samples at each stage, allowing the researchers to adapt their sampling strategy to the unique characteristics of the population (Hair et al., 2013). The multi-stage sampling involves dividing the population into smaller clusters, selecting a sample from each cluster, and then selecting a sample from within each selected cluster using Yamane's (1970) formula at a 95% confidence interval.

Firstly, the researchers divided the population into five districts, typically based on geographical and administrative boundaries. Secondly, a subset of clusters was stratified randomly selected from the population, that was a province. The number of clusters selected depended on the desired sample size and the sampling method chosen was a simple random sampling technique. Thirdly, systematic sampling was employed within each selected cluster depending on the school size within each selected cluster. The number of samples within each cluster was proportional to the cluster size, depending on the school size. The research population at the final stage was comprised of school administrators and teachers from 21 provinces, as elucidated in Table 1. All the Phrapariyattidhamma Schools are located in the 21 provinces under the supervision of the Basic Education Commission in Thailand. The researchers employed Becker and Ismail's (2016) rule of thumb to formulate an adequate sample size (N). A total of 450 samples were selected and participated in the survey. Table 1 demonstrates the distribution of samples using a multi-stage sampling technique as follows:

Table 1. Distribution of population and samples

Dis.	Province	No. of School	Population		Samples		Total
			Adminis-trators	Teachers	Adminis-trators	Teachers	
1.	Nong Bua Lamphu	6	6	43	6	7	13
	Loei	15	15	137	15	17	32
	Khon Kaen	25	25	247	25	29	54
2.	Udon Thani	20	20	173	20	23	43
	Nong Khai	11	11	117	11	13	24

	Sakon Nakhon	8	8	63	8	9	17
	Bueng Kan	3	3	28	3	4	7
3.	Ubon Ratchathani	26	26	291	26	31	57
	Amnat Charoen	5	5	45	5	6	11
	Yasothon	3	3	29	3	4	7
	Mukdahan	1	1	9	1	1	2
4.	Maha-Sarakham	9	9	83	9	10	19
	Kalasin	10	10	91	10	12	22
	Roi Et	14	14	130	14	16	30
	Nakhon Phanom	10	10	88	10	12	22
5.	Nakhon Ratchasima	11	11	140	11	13	24
	Chaiyaphum	6	6	55	6	7	13
	Buriram	6	6	64	6	7	13
	Surin	10	10	103	10	12	22
	Sisaket	8	8	86	8	10	18
	Total	207	207	2022	207	243	450

Research Instrument

The researchers engaged in two kinds of questionnaires, namely open questions and closed questions as two sources of data collection. The five experts in the first phase were requested to respond to the 32 open questions which allowed them to express their opinions regarding the identified components and indicators. The researchers aimed to accumulate substantial comments from the five experts by using open questions which seemed to be worked better in permitting them to intricate their comments in detail.

In the final phase, the researchers utilized an online survey questionnaire consisting of 100 closed questions as a method to collect quantitative data. The closed question structure was employed by limiting responses that fit into pre-determined sets of components and indicators from the results of the first phase. A continuous five-point Likert scale was used to evaluate the strength of perception. This questionnaire was comprised of 12 sections and was intended to collect information pertaining to respondents' perceptions of mindful meditation practice and growth mindset. Section A collects respondents' demographic backgrounds, namely gender, age, working experience, highest academic degree, position, and school size. Section B to F was specifically designed to gauge data about mindful meditation practice with a total of 40 questions. Section G to L consists of six sections of growth mindset components with a total of 60 questions.

Data Analysis

The researchers employed Bartlett's test as one of the initial statistical tests to check whether the correlation matrix is spherical or not. Thus, the researchers performed Bartlett's test to check whether the variables subject to factor analysis have a correlation matrix or not (Bartlett, 1954).

Bartlett's test calculates a chi-square statistic based on the determinant of the correlation matrix and the sample size. Then, it compares this statistic to the chi-square distribution with degrees of freedom equal to the number of variables in our dataset. If the *p*-value associated with the test statistic is less than a significance level, then the researchers can reject the null hypothesis, indicating that the correlation matrix is not spherical and that factor analysis may be appropriate. Bartlett's test is just an initial check before proceeding with factor analysis but it is sensitive to sample size, so with larger sample sizes, it becomes more likely to reject the null hypothesis even with weak correlations among variables (Bartlett, 1954). According to Jöreskog and Sörbom (1993), large samples are useful because it is almost impossible for us to reject the null hypothesis even though the chi-square (χ^2) is recognized as a standard statistic to evaluate the general fit of the measurement model with the empirical data.

The Kaiser-Meyer-Olkin (KMO) measure was another statistical test used by researchers in the context of factor analysis to assess the suitability of data for factor analysis. Specifically, the KMO evaluates the sampling adequacy of the variables in the dataset, indicating whether they are appropriate for performing factor analysis. Factor analysis was employed to identify underlying identified components and their indicators that explain the patterns of interrelationships or correlations among a set of observed variables (Hair et al., 2013). The KMO measure is essential to ensure that the dataset is suitable for this purpose before conducting factor analysis in this regard. The KMO measure ranges from 0 to 1, with values closer to 1 indicating that the data are well-suited for factor analysis. The interpretation of KMO values is generally following Hutcheson and Sofroniou's (1999) rule of thumb to decide the acceptable KMO value as illustrated in Table 2.

Table 2. KMO value and its interpretation

KMO Values	Interpretation
<0.5	The data are considered unsuitable for factor analysis.
0.5≤KMO<0.6	The data may be marginally suitable for factor analysis.
0.6≤KMO<0.7	The data are considered mediocre and may be suitable for factor analysis with some caution.
0.7≤KMO<0.8	The data are considered good and are suitable for factor analysis.
KMO≥0.8	The data are considered excellent and highly suitable for factor analysis.

The researchers need to have the correlation matrix of the variables to calculate the KMO measure. This is because the KMO measure is based on the partial correlations between variables, namely mindful meditation practice and growth mindset, and it quantifies the proportion of variance that might be caused by underlying factors relative to the proportion of variance caused by measurement error or uniqueness (Kaiser, 1974). Kaiser (1974) explained that a higher KMO value indicates that there is a higher degree of shared variance among the variables, suggesting that the variables are more likely to be influenced by common underlying factors (components), making factor analysis more appropriate.

In summary, the KMO measure is an essential step in factor analysis because it helps researchers determine whether their dataset is suitable for extracting meaningful factors (Field, 2000). If the KMO value is below the recommended threshold, it might be necessary for the researchers to reconsider the variables included in the analysis hence the researchers would explore other data reduction techniques. If the KMO value is satisfactory, it provides the researchers to be more confidence in the subsequent factor analysis results. In short, the researchers would apply Bartlett's test and KMO measure as statistical tests in the context of factor analysis to determine the correlation matrix of mindful meditation practice and growth mindset was significantly different from the identity matrix.

The researchers employed Tolerance and Variance Inflation Factor (VIF) as two concepts used in the context of multiple regression analysis to assess multicollinearity among the independent variables (predictors) in a regression model. Tolerance is a measure of how well one independent variable can be predicted by the other independent variables in the model. It is calculated as the reciprocal of the VIF for each independent variable. The tolerance value ranges between 0 and 1, where 1 indicates no multicollinearity (no correlation with other variables), and values closer to 0 indicate high multicollinearity (strong correlation with other variables). Tolerance is calculated as follows: Tolerance = 1 / VIF

VIF is a statistical measure that quantifies the extent of multicollinearity between each independent variable and the other independent variables in the regression model. Multicollinearity occurs when two or more independent variables are highly correlated, making it difficult to distinguish their individual effects on the dependent variable. High VIF values indicate strong multicollinearity. VIF is calculated for each independent variable as follows: $VIF = 1 / (1-R^2)$ where R^2 is the coefficient of determination of the regression model with the particular independent variable as the outcome variable and all other independent variables as predictors.

Table 3. VIF value and its interpretation

VIF Values	Interpretation
= 1	No multicollinearity (perfectly uncorrelated with other variables).
1<VIF<5	Low to moderate multicollinearity.
VIF>5	High multicollinearity (potentially problematic).

After the researchers determined the correlation matrix of mindful meditation practice and growth mindset, Confirmatory Factor Analysis (CFA) to test a hypothesized factor structure of a set of observed variables. In CFA, the researchers proposed a specific mindful meditation practice in enhancing the growth mindset measurement model with predetermined relationships (factor loadings) between the latent variables (components) and the observed variables (indicators). Therefore, the purpose of using CFA was to confirm whether the proposed model fits the data well and to assess how well the model's structure represents the relationships between the variables (Gay et al., 2009).

Structural Equation Modeling (SEM) was used to analyze the relationships between multiple variables in a complex system. The SEM was chosen because it combines indicators of both factor analysis and regression analysis to create a comprehensive model that not only captures the direct relationships between variables but also includes latent variables (unobserved variables that are inferred from observed variables) and measurement error (Hair et al., 2013). Furthermore, several goodness-of-fit indices commonly used in SEM were used by the researchers such as the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR) (Hair et al., 2013). The CFI, TLI, RMSEA, and SRMR are commonly used in SEM and CFA to assess the fit of this specified model of mindful meditation practice to enhance the growth mindset model to the observed data.

The CFI compares the fit of this specified model to a baseline model. The baseline model is typically the null model, which assumes no relationships among variables, for example, all variables are uncorrelated. The CFI ranges from 0 to 1, with higher values indicating better model fit. A CFI value closer to 1 indicates a better fit, with values above 0.90 generally considered acceptable and values above 0.95 indicating a very good fit. The CFI is a goodness-of-fit index that assesses how well a proposed model fits the data, taking into account the improvement in fit compared to a baseline model. The TLI is another goodness-of-fit index. The TLI like the CFI, compares the fit of the specified model to a baseline model. It provides a measure of incremental fit improvement over the baseline model. The TLI ranges from 0 to 1, with values closer to 1 indicating a better model fit. Generally, TLI values above 0.90 are considered acceptable, and values above 0.95 indicate a very good fit.

The RMSEA is another widely used to evaluate how well a specified model fits the observed data. RMSEA measures the discrepancy between the implied model and the observed covariance matrix, taking into account the complexity of the model. It provides an estimate of the average discrepancy between the model-implied covariance matrix and the observed covariance matrix per degree of freedom. The RMSEA values range from 0 to 1, where lower values indicate a better model fit. The interpretation of RMSEA values is displayed in Table 4.

Table 4. RMSEA value and its interpretation

RMSEA Values	**Interpretation**
≤0.05	Excellent fit.
0.05<RMSEA≤0.08	Good fit.
0.08<RMSEA≤0.10	Fair fit
RMSEA>0.10	Poor fit

The SRMR measures the discrepancy between the observed covariance matrix and the model-implied covariance matrix. It is a measure of the discrepancy in the model's implied covariances or correlations compared to the observed covariances or correlations. The SRMR is computed by

taking the square root of the mean square of the differences between the observed and predicted covariances, standardized by average observed covariance. The SRMR values range from 0 to ∞, with lower values indicating better model fit. Generally, SRMR values below 0.08 are considered acceptable, and values below 0.05 are indicative of a very good model fit.

The SRMR is particularly useful in situations where the focus is on the absolute discrepancy between the model and the data, rather than comparing the model to a baseline model. Unlike the CFI, and TLI, which are comparative fit indices, the SRMR provides an absolute measure of fit. The researchers decided to use SRMR in combination with other fit indices such as CFI, TLI, and RMSEA to get a more comprehensive assessment of the model fit. Like other fit indices, SRMR helps the researchers to determine how well our hypothesized model approximates the observed data and whether the model is a good representation of the underlying relationships among variables.

Results and Discussion

The results of this study are reported according to the research aim mentioned above. The initial results are the essential components and indicators of mindful meditation practice conceptualization of a growth mindset for school administrators. Then, the researchers continued to evaluate the validity of the observable variables using factor loading to examine the goodness-of-fit of the mindful mediation components and indicators in enhancing the growth mindset with the empirical data.

Identification of mindful meditation practice components and indicators in enhancing growth mindset

The results of document analysis and cross-examined by the five experts identified that there are six essential components of a growth mindset: (i) Innovative and systematic thinking skills; (ii) focus on learning goals; (iii) acknowledgment of success; (iv) open-minded on change; (v) being a resourceful and ambitious leader, and (vi) commitment to personal development. Based on these six components, a total of 17 growth mindset indicators were identified after cross-examination. On the other hand, there are five essential components of mindful meditation practice: (i) present moment awareness; (ii) cultivation of curiosity; (iii) increased attention and focus; (iv) detachment from negative thoughts, and (v) development of resilience. On top of that, the five experts recommended 17 indicators derived from the five essential components. All identified indicators from both variables were found with regard to fitting the Thai context. In addition, all five experts agreed to determine a cut-off point as a mean score of more than 3.00, and less than 20 percent as the coefficient of scattering (CV), to identify those indicators on the foundation of initial studies related to the formation of mindful meditation practice to enhance growth mindset model. The results of the first phase are presented in Table 5 below.

Table 5. Identification of mindful meditation practice components and their indicators to enhance growth mindset

Variables	Components	Indicators
Mindful meditation practice	Present moment awareness (PMA)	Intention (PMA1)
		Focus (PMA2)
		Distraction (PMA3)
	Cultivation of curiosity (CFC)	Memorization (CFC1)
		Unforgettable memories (CFC2)
		Control (CFC3)
	Increased attention and focus (IAF)	Problem determination and identification (IAF1)
		Finding ideas for solving problems (IAF2)
		Using intelligence to synthesize useful things (IAF3)
		Using intelligence to apply and evaluate (IAF4)
	Detachment from negative thoughts (DNT)	Open-minded thinking (DNT1)
		Optimism (DNT2)
		Unjudgmental thinking and observation (DNT3)
		Confidence in ideas (DNT4)
		Courage (DNT5)
	Development of resilience. (DOR)	Understanding the current situation (DOR1)
		Indifference or detachment (DOR2)
Growth mindset	Innovative and systematic thinking skills (IST)	Systematic thinking (IST1)
		Learning new things constantly (IST2)
		Creating innovations (IST3)
	Focus on learning goals (FLG)	Aiming active learning (FLG1)
		Dare to face challenges (FLG2)
		Learning and development (FLG3)
	Acknowledgment of success (ACS)	Self-efficacy (ACS1)
		Inspiration (ACS2)
		Learning for success (ACS3)
	Open-minded on change (OMC)	Openness to accept criticism (OMC1)
		Capability in problem-solving (OMC2)
	Being a resourceful and ambitious leader (RAL)	Managing challenges (RAL1)
		Having strategies to keep up with change (RAL2)
		Building collaborative trust (RAL3)
	Commitment to personal development (CPD)	Realize the importance of competency development (CPD1)
		Positive communicative skills (CPD2)
		Performance evaluation (CPD3)

Demographic data of respondents in the second phase

A total of 408 out of 450 distributed questionnaires have been successfully collected from 207 research schools, giving a response rate of 90.6 percent. The majority of respondents are males

(82.4%), their age between 40 to 49 years old (38.2%), have working experience between 11 to 15 years (28.7%), possess a bachelor degree as the highest academic level (54.4%), and their positions are teachers (52.45%). Table 6 shows the demographic data of the respondents.

Table 6. Demographic data of respondents (N = 408)

Gender	**Male**		**Percentage**		**Female**		**Percentage**	
	336		82.4		72		17.6	
Age (years old)	**<30**	**%**	**30-39**	**%**	**40-49**	**%**	**50-60**	**%**
	18	4.4	108	26.5	156	38.2	126	30.9

Working experience (year)	**<5**	**%**	**5-10**	**%**	**11-15**	**%**	**16-20**	**%**	**>21**	**%**
	48	11.8	93	22.8	117	28.7	108	26.5	42	10.3

Highest academic level	**Bachelor**	**%**	**Master**	**%**	**Ph.D**	**%**
	222	54.4	150	36.8	36	8.8

Position	**Administrator**	**%**	**Teacher**	**%**
	194	47.55	214	52.45

Initial statistical testing of Bartlett's test of sphericity in the context of factor analysis

The result of Bartlett's test of sphericity showed that a p-value equal to 0.00 showed that the observed correlation matrix is an identity matrix. This implies that all identified components were found uncorrelated. Therefore, the result of Bartlett's test has determined the correlation structure between variables was appropriate for performing factor analysis. In principle, the result of Bartlett's test for this study confirmed that there is enough correlation in the data to justify performing a subsequent factor analysis. The results of the KMO value was 0.962 (KMO≥0.8) indicating that the data were considered excellent and highly suitable for factor analysis. Based on Hutcheson and Sofroniou's (1999) rule of thumb, the KMO measure implies that the sampling size is adequate for factor analysis.

Initial results of multicollinearity

The results of tolerance and VIF values of components and their indicators for both variables mindful meditation practice and growth mindset are presented. The tolerance values were between 0.120 to 0.470 for all components while the VIF values were between 2.129 to 8.324. Since the tolerance values closer to 0 indicate high multicollinearity, this means that each component or independent variable can be predicted by the other components in the measurement model. The VIF values were found less than 10 indicating that the data has a linear relationship.

The Goodness of Fit of the mindful meditation factors and indicators to enhance growth mindset with empirical data

The measurement model whether is acceptable or not in SEM depends on the fit indices,

emphasized by Ullman (2001). The results of goodness-of-fit showed that the mindful meditation practice in enhancing the growth mindset model fits between the obtained values of collected data and the expected values as follows, χ^2 =425.465, df = 286, p-value = 0.0603, CFI = 0.991, TLI = 0.982, RMSEA = 0.035, and SRMR = 0.030. After referring to the following experts' rules of thumb and their recommended cut-off values, the researchers concluded that the associated real values are fitting to the expected values in the mindful meditation practice in enhancing the growth mindset model. Table 7 shows the details of goodness-of-fit indexes and their interpretations.

Table 7. Interpretation of goodness-of-fit results

Goodness-of-fit Indexes	Real Values	Rules of Thumb or Cut-off Values	Experts	Interpretation
χ^2 /df	1.488	<2	Ullman (2001)	Pass
CFI	0.991	≥ 0.95	Hu and Bentler (1999)	Pass
TLI	0.982	≥ 0.95	Hu and Bentler (1999)	Pass
RMSEA	0.035	<0.06	Hu and Bentler (1999)	Pass
SRMR	0.030	<0.05	Diamantopoulos and Siguaw (2000)	Pass

Conclusion

The results of this study showed that school administrators can develop their growth mindset by incorporating the five components and their indicators into mindful meditation practices that support their personal and professional growth, enhance learning experiences, and foster resilience in the face of challenges. The results are reinforced by the past research results (Settles, 2021; Uopasai et al., 2022). As a result, the creation of incorporating mindful meditation practices to enhance the growth mindset model using SEM can provide a powerful tool for understanding complex relationships among variables, allowing researchers to test and refine their theories in a more comprehensive and nuanced manner. Following this line of reasoning, this measurement model in school administration can lead to a more resilient, adaptable, and collaborative educational environment that supports the holistic development of students and administrators alike.

The results of this study contribute to educational administration by combining these mindful meditation practices and growth mindset in terms of stress reduction, emotional regulation, cultivating patience and perseverance, openness to learning, enhanced decision-making, reduced fear of failure, enhanced problem-solving skills, positive school culture, and long-term personal development. This implies that mindful meditation helps reduce stress and anxiety among school administrators and students (Uopasai et al., 2022). Besides, mindfulness practices can improve emotional regulation, allowing school administrators to respond thoughtfully rather than react impulsively to challenges (Klussman et al., 2020). School administrators who practice mindfulness

are found more likely to model and encourage perseverance, a key component of the growth mindset (Dweck, 2006). Moreover, openness to learning aligns with the growth mindset's emphasis on embracing challenges and valuing the learning process, fostering a culture of continuous improvement in the school (Peter & Zoltan, 2019). In conclusion, mindful meditation practices which involve focusing one's attention on the present moment, school administrators can complement and amplify the principles of a growth mindset.

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