From Two to Five Dimensions: Development and Validation of the Instrument for Measuring Teacher Performance

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ABSTRACT

The Organization for Economic Cooperation and Development emphasizes that teachers serve as agents with an important role in creating high-quality human capital. Like other nations, Malaysia needs to transform its education system to enhance the quality of educators, as assessing teacher performance is crucial to improving the effectiveness of teaching and learning. This research was conducted to validate teacher job-performance instruments through a questionnaire validation procedure. The questionnaire, which consists of 33 items across two dimensions, task performance and contextual performance, was administered to primary school teachers. The data were collected from 200 primary school teachers for an Exploratory Factor Analysis (EFA) and from 377 respondents for a confirmatory Factor Analysis (CFA) in Kelantan, Malaysia. The data were analyzed using SPSS 29 for EFA and AMOS 29.0 for CFA. Six items have been deleted, and five dimensions have been extracted: Volunteerism (VOLU), Preferred Task (PTSK), Productivity (PROD), Compliance (COMP), and Specific Task (STSK) to measure teacher performance constructs in the current context. The findings of this research have led to a more comprehensive and practical teacher performance assessment, enhancing teacher effectiveness and improving the quality of education.
Keywords: Teacher performance, dimensions, instrument validation

INTRODUCTION

Nowadays, a teacher's job is not limited only to the classroom. Teachers need to be flexible and prepared to take on a variety of roles, including mentor, administrator, and role model for students (Cheung, 2020). Aligned with the advancements of Industry Revolution 4.0 (IR4.0), which emphasizes digital knowledge and technological skills, teachers need to strengthen their digital skills as teaching and learning tasks have become more advanced and technological. Artificial Intelligence and digital systems have influenced most aspects of life, including how teachers prepare lesson plans, create teaching aids, and communicate. Chakravarti (2020) stated that IR 4.0 in the United Arab Emirates has brought positive developments for teachers, particularly in enhancing skills and improving the teaching and learning process. With the increasing presence of technology, the systems within the teacher's role will undergo significant changes, thereby influencing teachers' lives. For instance, due to technological advancements, teachers must attend courses to enhance their skills and knowledge and to align with new aspects of the syllabus or the systems they use in carrying out their duties. Therefore, teachers need to address their skill weaknesses and strengthen them; this situation has led teachers to ensure that they deliver high-quality instruction and achieve high performance.

The Malaysian Education Development Plan (PPPM) 2023 report, in the National Performance Dialog Number 2, indicates an increase in achievement compared with the previous year. This outcome stems from interventions implemented through the excellence of organizations that empower teacher performance (Kementerian Pendidikan Malaysia, 2024). This explains why teachers need to perform well, to enhance student academic achievement, and elevate the standard of education. In any field in which an individual is involved, measuring performance is necessary to confirm that the employee is at an appropriate level to maintain the profession's reputation (Vuong & Nguyen, 2022). Therefore, teachers' performance should be taken seriously, as they are the backbone of the education system, play a crucial role in implementing policies, and serve as leaders in delivering all content during the teaching and learning process (Rostini et al., 2022).

Studies on teacher performance remain a topic of research. For example, research by Khan et al. (2022) in Pakistan and by Ishak et al. (2022) in Malaysia has been conducted. Each of these studies presents different values and performance levels: high, medium, and low. This is because these studies assess performance using various indicators, such as leadership (Saleem et al., 2020), competencies (Tosuntaş et al., 2021), and efficacy (Taul et al., 2021). The research instruments used by these researchers varied, including the Teachers' Job Performance Self-Rating Questionnaire (Amin et al., 2013), the Individual Work Performance (IWP) (Koopmans, 2014), and the Framework for Teaching (Danielson, 2013). One of the most commonly used instruments to assess performance was developed by Motowidlo & Van Scotter (1994), which had previously been used in the military. However, many researchers in the West have modified this instrument to evaluate employee performance across fields such as education (Meshari et al., 2021), business (Sari et al., 2024), and banking (Asutay & Ubaidillah, 2024).

Note that existing instruments must be adapted to evaluate teacher performance, as this field may vary across countries. For example, teachers must carry out teaching tasks, manage co-curricular activities, and perform other administrative tasks, such as curriculum and student affairs (Hamami & Yassin, 2022). Some teachers also serve as asset officers responsible for managing school facilities and infrastructure and for various duties, such as managing textbooks, supplementary materials, and clerical tasks (Mohammad @ Basiron et al., 2024). All of these jobs are different from teaching tasks and have no direct relationship to teaching and learning activities with students. This may give the impression that teachers hold different perspectives on evaluating their performance, depending on their tasks and responsibilities.

In addition, a teacher's job is dynamic and constantly evolves in response to current requirements and goals (Musanna & Basiran, 2023). Previously, the teacher marked the attendance in the arrival book. They must now update it in the digital presence system and record the daily lesson plan digitally. Continuing the transition from the manual system to the digital system requires teachers to comply with current changes and requirements (Ratten, 2023), as these changes can affect their work. Therefore, teachers also need to equip themselves with the appropriate skills to perform their assignments and keep pace with the constant advancements in the education system. This article proposes a model for measuring teacher performance and describes the development and validation of a 30-item adaptation, using three new instruments and a measurement model for teacher performance. Specifically, the objectives of the study are:
(1) To generate items for measuring teacher performance based on theory and relevant literature
(2) To explore the factor structure of the instrument and then test its reliability and validity
(3) To confirm the dimensions in the measurement model of teacher performance and then finalize the operational definition and items for each dimension.

Theory and Concept of Job Performance

Borman and Motowidlo (1997) play a significant role in the development of work performance theory, specifically the Theory of Individual Differences in Work Performance. This figure introduces four assumptions for the theory: (1) performance is a behavioral construct, (2) behavior performed is episodic, (3) performance in terms of behavior can be evaluated, and (4) job performance is a multidimensional variable.

The first assumption states that performance is a behavioral construct. It holds that every activity an employee performs should be under the administrator's control. In the case of a teacher's behavior, they must have control over their tasks, including planning and selecting

teaching methods, using appropriate resources, and determining the activities to be conducted with students. In other words, teachers are responsible for deciding how they fulfill their responsibilities (Ismail & Surat, 2024). Teachers must find their own ways to complete the task, provided that the mission of the teaching and learning process is achieved; otherwise, they may complete their assignments within their scope of work.

The second assumption is that the behavior performed is episodic. Every behavior a person shows while completing the task is specific. For example, helping friends who are having problems, having empathy, and trying to understand other friends' areas of work, even if they do not support the achievement of the organization's objectives. In the school context, most teachers' work primarily focuses on achieving the set goals. However, there are also teachers' activities that are not directed towards that. Therefore, performance behavior should exclude actions that do not align with school goals. However, if teachers engage in job-related discussions, such as sharing the latest teaching strategies and student information, these behaviors may be considered when evaluating their performance.

For the third assumption, performance with respect to behavior can be evaluated. In other words, a person's job performance can be observed and measured. It can be implemented with the consent of all parties, for example, between teachers and administrators, and with an appropriate benchmark and measurement tool. Moreover, teachers can assess their performance in both teaching and non-teaching aspects.

The last assumption is that job performance is a multidimensional variable. Borman and Motowidlo (1997) proposed two dimensions. In contrast to Rotundo & Sackett (2002), who state that job performance has three dimensions, some define it as a five-dimensional variable (Campbell, 1990). Several other researchers examined aspects such as task performance, citizenship behavior, and productive performance (Rotundo & Sackett, 2002); task performance and contextual performance(Van Scotter, 2000); and in-role and out-of-role behavior (Lynch et al., 1999). Several researchers argue that both contextual and task performance should be considered when a manager or leader evaluates their employees' performance (Borman et al., 1995).

Previous studies have offered various definitions of job performance. Ntisa (2015) states that job performance is an assignment that must be performed by an employee and must be remunerated. In contrast to the definitions given by Motowidlo et al. (1997) and Sowden et al. (2018), performance refers to the organization's value over a specific period; it is the individual's contribution to producing those results. In general, performance is a combination of good deeds and employees' efforts within an organization that help achieve the goals set.

Teachers' Job Performance

Teacher job performance is a crucial aspect of the learning process in schools (Suharsaputra, 2018). This is because a teacher's performance is a duty in fulfilling their responsibilities in school (Kurniawan & Hasanah, 2021). Maryani et al. (2020) also stated that teacher performance is the result produced by teachers when carrying out the tasks entrusted to them. In other words, teacher performance is a teacher's ability to fulfill their duties in educating students and helping the school achieve its set goals.

The concept of teacher job performance is a progressive process across multiple stages, enabling teachers to attain higher levels of learning and enhance their skill development (Elger, 2017). Performance improvement enhances a teacher's professionalism and expands their skills, knowledge, and teaching methods (Wan Yaacob, 2019). High-performing teachers have undergone various phases. These teachers must have extensive experience, enabling them to achieve an excellent level (Alzoraiki et al., 2023). Lawler and Porter (1999) argue that job performance refers to teachers' ability to improve skills and develop the capacity to produce high-quality work processes. In this study, the effectiveness of teacher duties refers to the level of responsibility teachers assume in accordance with the school's rules and requirements to achieve their goals. It is also a behavior that contributes to the school. In other words, teacher performance is a very important variable so that the figure of the teacher is always consistent and committed while serving in the field of teaching (Mohammad Yulan, 2019), and this is in line with the opinion of Sieng and Azman M. (2021) performance appraisal becomes an effective system to ensure that the performance of employees moves in line with the goals set by the organization in which they serve. Teacher job performance for this study refers to two dimensions, task performance and contextual performance.

Teacher Task Performance

A teacher's task performance is a behavior that involves the teacher's actual duties, such as producing a product, providing services, or working in the technical department. Teachers should complete all of these assignments because they are part of their professional responsibilities, as stated by Coleman and Borman (2000). Mohammad Yulan (2019) states that a teacher's performance is the implementation of a technical process, including maintenance, planning, and successful task performance. According to Demerouti et al. (2014), task performance is applicable across all fields of employment and is essential for fulfilling job requirements. In the education sector, task performance refers to a teacher's responsibilities, including teaching, lesson planning, providing supplementary materials, and guiding students through the curriculum. For this study, task performance is defined as a voluntary attitude or action that requires performing well and achieving all set goals.

In this study, task performance is defined as the implementation of technical processes, such as teaching in schools and maintaining technical requirements, through planning, attending courses, and scheduling tasks, thereby making the process more efficient and effective. The task performance dimension refers to teachers' ability to perform both teaching and non-teaching tasks entrusted to them by administrators, thereby helping fulfill school functions.

Teacher Contextual Performance

Contextual performance refers to the attitudes of teachers who adhere to all rules, collaborate with colleagues, work with enthusiasm, and consistently provide full support aligned with the organization's objectives, as proposed by Borman and Motowidlo (1993). In contrast to Rotundo & Sackett's (2002) view, contextual performance refers to behaviors that facilitate the social and psychological aspects of appropriate action. These conditions can foster an environment conducive to activities that enable the organization to achieve its objectives (Schmidt & Hunter, 1998).

Therefore, it can be concluded that contextual performance involves the teacher's behavior more than the proper field of work, thereby enabling the smooth implementation of assignments. Contextual performance in education refers to a teacher's non-teaching aspects. However, it can help the teacher work more effectively by assisting students with problems, managing emotions, preparing to take on complex tasks, and collaborating with colleagues.

However, for this study, contextual performance refers to activities that create an organizational, social, and psychological environment that supports task performance. Behaviors that refer to contextual performance include assisting and collaborating with colleagues, following the organization's rules and procedures, acting in accordance with organizational objectives, and being proactive and voluntary in carrying out the tasks entrusted. In this study, the contextual performance dimension is the action or behavior of teachers who voluntarily performed outside their field of duty. This action can be helped and supported by the social, psychological, and organizational aspects of the school.

The Diversity of Teacher Performance Instrument

Many instruments have been adapted to measure teacher performance, such as the Measuring Individual Work Performance (IWP) instrument developed by Koopmans (2014), the Teachers' Job Performance Self-Rating Questionnaire (TJPSQ) built by Amin et al. (2013), the instrument of the Framework for Teaching (Danielson, 2013), and the instrument by Borman and Motowidlo (1993). The IWP instrument has proposed job performance based on four key dimensions: task performance, contextual performance, adaptive performance, and counterproductive behavior. This instrument has been adapted to measure teacher performance by Alamrani et al. (2018), who conducted the study in Saudi Arabia, and by Bani Amin et al. (2019), who measured teacher performance in Malaysia.

The Teachers' Job Performance Self-Rating Questionnaire, developed by Amin et al. (2013), also evaluates teacher performance across four dimensions: teacher skills, management skills, discipline and order, and interpersonal interaction. Pervez et al. (2021) used this tool to assess the performance of secondary school teachers in Pakistan. Studies among Malaysian teachers who have used this instrument have been conducted by Che Ahmad et al. (2021).

In addition, the Framework for Teaching by Danielson (2013) measures job performance across four dimensions: planning and preparation, classroom environment, professional responsibility, and teaching. Among the researchers who have used this instrument is Wan Yaacob (2019), who found that the performance of Gen Y teachers in Malaysia ranks high across the dimensions mentioned above. Meanwhile, Iriani and Lelatobur (2024) used this instrument to assess teacher performance in Indonesia, with a focus on gender differences. These three instruments measure performance across four dimensions, in contrast to Borman & Motowidlo (1993) and Motowidlo & Van Scotter (1994), who assess teacher job performance using only two dimensions: task performance and contextual performance.

The diversity in the measurement of job performance, both in general and specifically in teacher performance, has drawn researchers' attention, who continue to seek unique approaches and improvements. One improvement needed is to consider the latest field of teacher work, which involves the use of digital technology. Therefore, in this study, the researcher uses the work performance assessment instrument by Motowidlo and Van Scotter (1994) and the adapted version by Tengku Ariffin (2010), and proposes three new items to measure teachers' digital technology usage skills. Hopefully, these three new suggestion items can enhance and help measure teacher performance.

METHOD

Design of The Study

To obtain data and study a variable, a good instrument and the ability to evaluate the construct well are required. Therefore, a preliminary study of all the items to be used is necessary, even if other researchers have already used the instrument or item and achieved high validity. This is because an item may be perceived differently by respondents due to demographic, cultural, and other factors. Bichi et al. (2019) found that most instrument construction studies did not report construct validity and reliability in detail, including a lack of evidence of test-retest reliability and the use of inaccurate psychometric techniques.

This research is a quantitative study employing a cross-sectional survey design, focusing on instrument validation. It involves the validity phase of the instrument, including obtaining the Content Validity Ratio (CVR) and the Content Validity Index (CVI), as well as assessing the validity of the Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) for the construct. The final step is to evaluate the instrument's reliability by calculating Cronbach's α. This study approached instrument development through three phases as recommended by Boateng et al. (2018) and Kılıçoğlu et al. (2019). All of these procedures can be used to test the adopted teacher performance instruments. Consequently, improvements can be made to ensure that teacher performance is appropriately assessed and that the dimensions of each item in this instrument accurately reflect it. Instrument development is a very critical process.

Sampling

Each phase of this study requires a different sample. The procedure for obtaining content validity for this instrument has considered the ratings and opinions of the five experts for each variable. All of these experts have at least 10 years of experience, according to Rubio et al. (2003). This instrument's panel comprises experts from the academic sector, including university lecturers, teacher-training centre experts, and field experts from selected schools that practice these variables. The field experts were the school's principals. They have also been entrusted with evaluating teachers' performance in schools using the instruments provided by the authorities.

To assess the instrument's reliability, 30 participants were recruited to complete the online questionnaires via Google Forms, which is well-suited for research (Lestari & Putra, 2020) because it is flexible and allows respondents to complete the questionnaires at any time, from any location, using internet-enabled devices. To ensure construct validity, this study included 200 participants. The selected participants were primary school teachers. Staggered sampling was used to select respondents.

CFA procedures involved a sample of 377 primary school teachers. Multi-stage sampling was used to select samples for this study as suggested by Salkind (2012). The first step is stratified random sampling, in which samples are grouped into strata. Subsequently, a proportionate random sampling was used to determine the percentage of teachers assigned to each stratum. This allows each stratum to have a representative selected for study. Subsequently, schools are selected via systematic random sampling. The list of schools is specified using a well-defined interval. This technique is also used to select the required sample. The sampling technique employed is random sampling, which ensures that a teacher is chosen as a representative of the study population (Ary et al., 2018; Salkind, 2012).

Instrumentations (Teacher Performance Survey)

Researchers have adapted the Motowidlo and Van Scotter (1994) questionnaire, which contains 21 items assessing contextual performance dimensions. Meanwhile, nine items on task performance dimensions were adapted from Tengku Ariffin (2010), and three new items were developed by the researcher based on recent teacher tasks, such as online data entry and readiness to use e-learning applications, to address current needs in the field of teacher tasks. The instrument for this study was translated from its original language into Bahasa Malaysia. For this study, researchers used a five-point Likert scale (1 = Strongly disagree to 5 = Strongly agree), customized to the operational definitions of each dimension. The instruments for this study were further improved through a back-to-back translation process. According to Son (2018), in a study using the original or foreign version, the questionnaire should be translated twice from the first language into the second and then back to the first. Items in the translated first language must match the meaning of the original first-language item. Correspondingly, pre-testing was conducted to assess the quality of each item with respect to meaning, language, and the technical structure of sentences, including the use of commas, full stops, and correct spelling. Pre-testing is conducted to ensure the cognitive validity of each questionnaire item, thereby helping to address deficiencies before the instrument is distributed for the actual pilot test (Hair et al., 2014).

Data Analysis

Content Validity of Item

Creswell (2012) states that the validity of a measurement's content can be derived from empirical evidence and field panel statements. With this method, evaluation can be implemented more easily and systematically to add or remove items based on CVR calculations. This method has advantages as it is more transparent, directed, and user-friendly (Effendi et al., 2017). This content validity evaluation process involves asking the panel to rate all 33 items. The researcher uses a four-point scale to assess the interests of each item: (1) not important,

(2) slightly important, (3) moderately significant, (4) important. As a result of the CVR calculation of all items, the CVI value will be calculated.

Exploratory Factor Analysis (EFA)

The study also conducted a construct validity process using an EFA with the Principal Axis Factor method and Direct Oblimin rotation. Note that EFA is used to identify and organize items according to factors or dimensions derived from the study sample data (Hair et al., 2019). The researcher can also identify the factors that are formed, determine which items are not correlated, and decide which items need to be dropped. In this study, a factor loading of 0.3 is considered significant, given a sufficient sample size of 200. This value is acceptable for exploratory studies (Gie Yong & Pearce, 2013). Awang (2015) states that a load value of 0.30 or above is still sufficient in the EFA during the initial confirmation phase. This is supported by Hair et al. (2019), who state that a value of 0.3 can still be considered in preliminary studies prior to the next stage.

Confirmatory Factor Analysis (CFA)

CFA is a process for testing the measurement and structural models for each study variable. CFA not only estimates construct loadings but also assesses the instrument's composite reliability, discriminant reliability, and convergent validity. Construct validity is assessed using model-fit indices. The required criteria are like Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Chi-Square/Degrees of Freedom (Chisq/df). If these criteria are met, then the measured model has reached a level of model equivalence (Kline, 2023). For convergent validity, the average variance extracted (AVE) is 0.50. Therefore, Zainuddin Awang et al. (2018) proposed that items with factor loadings below 0.5 should be eliminated first.

Item Reliability

A pilot test should be conducted to determine Cronbach's α, a measure of internal consistency that assesses the instrument's reliability

FINDINGS AND DISCUSSION

Findings

Content Validity

All of these items have been validated by five experts with a value (CVI = 0.98). As stated by Polit et al. (2007), the minimum threshold for CVI was 0.78, which is slightly lower than Davis's (1992) proposal that a CVI of 0.80 was required for a good item. In this study, five experts were involved. For item VOLU1 in the example, all five experts rated it important, so the total approval is 5. The CVR will be 1.00 because each expert contributes 20% (0.20), with contributions weighted by the item. Because the value of the CVR obtained by the item is 1. In that case, it means all evaluators agreed that the item is very important and must have high content validity. Consequently, this item will be maintained. Therefore, all items for this instrument have been maintained and may undergo a subsequent validity test. Table 1 presents all the items included in the specified dimension.

Instrument Reliability

Cronbach's α values were assessed by a pilot test, and the value for the teacher performance instrument α = 0.95. All values for the five dimensions range from 0.82 to 0.91, indicating that the model is better. Cronbach α values for the factors involved are acceptable

Table 1. Reliability of the Teacher Performance Instrument by Dimensions

Dimension	Value of Cronbach Alpha (α)	Number of items
Volunteerism	0.91	8
Compliance	0.85	5
Productivity	0.82	3
Prefered Task	0.86	3
Specific Task	0.88	8
Total Value of Cronbach Alpha (α)	0.95	27

Exploratory Factor Analysis (EFA)

The loading factor for all 33 items in this study was set to 0.40; values of 0.3 or higher indicate that the items remain acceptable and can be included in the survey (Comrey, 1973; Hair et al., 2019). The KMO value was 0.947, exceeding the minimum value of 0.60. The Bartlett's Test value was significant (p-value < 0.05). The total variance explained was 65.652%, which was acceptable because it exceeded the minimum requirement (Bahkia et al., 2020). In the original theory, teachers' performance had only two dimensions: task performance and contextual performance. However, in the EFA analysis, only 32 items were included across five dimensions, which is a new finding. Teachers have answered these items, and the responses have been interpreted in the context of teachers in Malaysia. Table 2 presents the value of each extracted factor. Note that only 27 out of 30 items were retained because the payload of each factor was significant for that factor, with a value of 0.34 to 0.843.

Table 2. Items were extracted into five factors for the teacher performance construct (n = 200)

Item	Statement of Item	Extraction		Status
VOLU1	I take the initiative to solve work problems (discussion with beneficiaries).	.730		Proceed
VOLU2	I give support to my colleagues if they have trouble.	.649		Proceed
VOLU3	I provide help to students with problems.	.618		Proceed
VOLU4	I make sure students can learn effectively (Example: Provide comfort in the classroom).	.462		Proceed
VOLU5	I pay attention to the important things.	.461		Proceed
VOLU6	I can control myself under any circumstances.	.423		Proceed
VOLU7	I practice the attitude of respect for students while in teaching.	.414		Proceed
VOLU8	I am willing to help colleagues in completing their assignments.	.404	.333	Proceed
PTSK1	I am able to apply the use of modern technology in teaching (example: Padlet, Kahoot, and Quizzes).		.884	Proceed
PTSK2	I use different materials as a source of teaching and learning.		.827	Proceed
PTSK3	I am good at using a variety of face-to-face teaching techniques or online.		.729	Proceed
PTSK4	I make a continuous assessment of student achievement.	.405	.418	Deleted

Item	Statement of Item	Extraction					Status
PROD1	I am ready to participate in the innovation competition as an added value.		.716				Proceed
PROD2	I conducted an action study to improve teaching and learning.		.691				Proceed
PROD3	I try to get merit for school through participation in competitions.		.603				Proceed
PROD4	I am willing to make more than needed to help a colleague or student.	.442	.482				Deleted
PROD5	I handle hard tasks with enthusiasm.	.306	.415				Deleted
PROD6	I'm ready to accept complicated tasks.						Deleted
COMP1	I was able to work with other colleagues.			.807			Proceed
COMP2	I obey the instructions even in the absence of administrators.			.740			Proceed
COMP3	I'm ready to perform additional tasks. (Example: State Teacher's Day Celebration, become a committee for PPD/JPN during National Sports Championship).			.576	.305		Proceed
COMP4	I work hard to overcome obstacles in completing assignments.			.542			Proceed
COMP5	I work based on the prescribed procedure.			.501	.328		Deleted
COMP6	I display a suitable appearance as a teacher based on a situation.			.492			Proceed
STSK1	I have the ability to perform the tasks assigned to me well.					.700	Proceed
STSK2	I am able to perform special tasks other than teaching tasks effectively.					.641	Proceed
STSK3	I am capable of increasing success by level.					.631	Proceed
STSK4	I provide additional modules or teaching aids according to the level of comprehension.					.533	Proceed
STSK5	I am skilled in managing co-curricular activities.					.479	Proceed
STSK6	I fill out the data online as directed by the ministry in a timely manner (Example: APDM, My portfolio, SSDM IDME, e-RPI, e-RPH).					.427	Proceed
STSK7	I always support every decision made by the administrator.					.405	Proceed
STSK8	I'm skilled in teaching.					.403	Proceed
STSK9	I am knowledgeable in the field of the subject taught.					.349	Deleted
Kaiser-Meyer-Olkin Measure of Sampling Adequacy				0.947			
Bartlett's Test				4731.411			
Percentage of Variance Explained				65.652%			

Five factors were extracted for this study; the newly identified factor requires relabeling. Its operational definition was redefined based on its EFA analysis, as suggested by Hair et al. (2019). The first factor is re-labelled as a dimension of volunteerism (VOLU), the second factor is the dimension of preferred tasks (PTSK), the third factor is branded as a productivity dimension (PROD), factor four is converted to compliance dimensions (COMP), and the last factor is the specific task dimension (STSK).

Items COMP5, PROD16, PROD17, and TP6 were dropped because they were completed in two different factors. Item TP1 has less than 0.4 loading factor, so this item also needs to be excluded. The PROD6 item is not included in any factor; therefore, it is automatically excluded. Although the COMP3 and VOLU8 include two factors, these items were still maintained because their' load values showed significant differences and can be considered to be sustained in a higher factor value. These two items have significant descriptions for measuring teacher performance, so they will be forwarded for testing in the CFA procedure. This has reduced the total number of items used to assess teacher performance from 33 to 27.

The number of items for each dimension has changed from the previous dimension. Number of items by dimension as follows: volunteerism dimension, eight items; compliance dimension, five items; productivity dimension, three items; preferred task dimension, three items; and specific task dimension, eight items. Although some dimensions have only three items, it is still possible to evaluate and measure the indicated dimensions, as the minimum number of items per dimension is three (Hair et al., 2019).

Confirmatory Factor Analysis (CFA)

This study used the Root Mean Square Error of Approximation (RMSEA); values below 0.8 indicated a good fit (Brownell et al., 2006). In the second category of Incremental Fit, it is intended to compare specific models with the model of all indicators that are not correlated with one another. Brownell et al. (2006) argue that if a model has CFI and TLI values greater than 0.90, it is simple and good. The Chisq/df is used to represent the third category of parsimonious fit, intended to compare complex models with simple ones, and its value should be less than 0.05. The test results indicate an acceptable fit, with CFI = 0.92, TLI = 0.91, RMSEA = 0.067, and chisq/df = 2.67.

The overall measurement model is then tested to assess convergent and discriminant validity by examining the disattenuated correlations among the five variables. All 27 items to be tested were arranged according to predetermined dimensions. The study's results showed that all five teacher performance dimensions correlated significantly (r values ranging from 0.46 to 0.85), establishing convergent validity, and none correlated above 0.85 (r ≤ 0.85), providing discriminant validity for the instrument (Kline, 2011). Correlations between dimensions are shown in Figure 1.
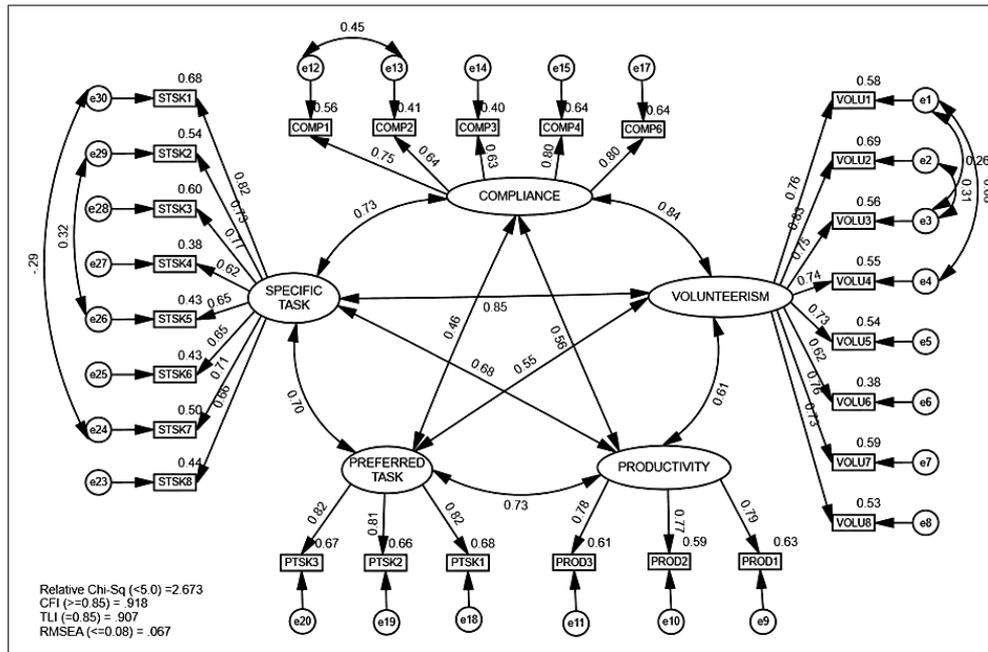
Figure 1. Correlation between the five dimensions in teacher performance

Second-order Measurement Model

A subsequent second-order factor test was conducted to evaluate the new five constructs related to teacher performance variables. The CFA findings indicate that the model is matched, as shown in Figure 2. The test results indicate an acceptable fit, with suitability index values within acceptable ranges: CFI = 0.90, TLI = 0.89, RMSEA = 0.072, and chisq/df = 2.94.
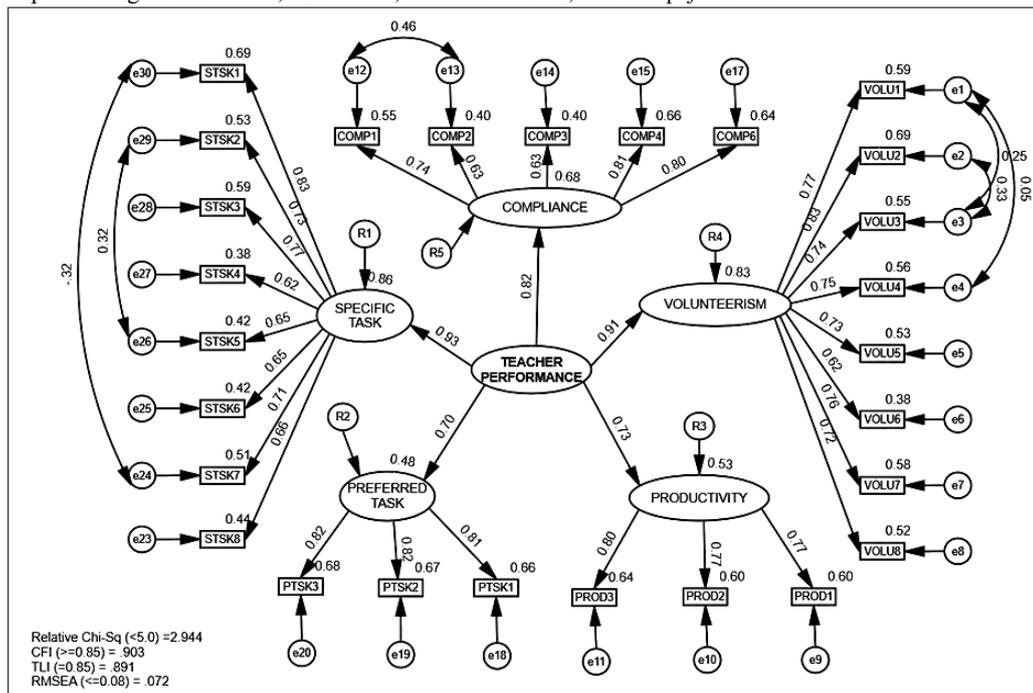

Figure 2. Second-order measurement model of teacher performance

Table 3 shows the correlation, CR, and AVE values for all constructs. All items in this study have load factors between 0.63 and 0.83. The highest CR value is for the construct of volunteerism (CR = 0.92), whereas the lowest is for productivity (CR = 0.81). Each construct has a value greater than 0.80, indicating that each construct is consistent in measuring the concept it represents (Hair, Hult, Ringle & Sarstedt, 2019). The AVE value for each construct can describe at least 50% of the items' set of items represented and thus support the validity of the convergent. The correlation values between the five factors are also within the still acceptable range of 0.46 to 0.86. The correlation value does not exceed 0.90, so multicollinearity issues can be avoided (Kline, 2023).

Table 3. Correlation values, AVE values, and CR values

	STSK	PSTK	PROD	VOLU	COMP
Specific task	1.00				
Preferred task	0.70	1.00			
Productivity	0.68	0.73	1.00		
Volunteerism	0.85	0.55	0.61	1.00	
compliance	0.73	0.46	0.56	0.84	1.00
Average variance extracted (AVE)	0.50	0.67	0.61	0.55	0.53
Composite reliability (CR)	0.89	0.86	0.82	0.91	0.85

Discussion

The findings of this study differ slightly from those of previous studies that use the theory of work performance, as proposed by Borman and Motowidlo (1993). Initially, Borman and Motowidlo (1993) proposed two dimensions: task performance and contextual performance. In this study, five dimensions were formed: task performance, separated into two dimensions, and contextual performance, divided into three dimensions. These two new task performances are based on specific task dimensions (such as teaching, managing co-curricular activities, performing special tasks, and others) and the preferred task dimensions (such as diversifying teaching techniques, utilizing the latest technologies, and providing teaching aids).

Contextual performance is divided into three dimensions that can be labeled as 1) Volunteerism dimension (such as supporting and helping friends and student); 2) Productivity dimension (such as participating in innovation competitions, obtaining merit for schools, and doing enthusiasm); 3) Compliance dimension (such as adhering to administrators, working according to procedures and resolving assigments no matter what the problems arise). Motowidlo et al. (2014) have interpreted contextual performance as having the three elements outlined earlier. The findings of this study suggest that separating contextual performance into three different dimensions is not unusual. The multidimensional conceptualization of this contextual performance is also supported by previous studies, including Cerit and Ekici (2023) and Johnson (2001).

The findings of this study introduce a fresh perspective on teacher performance, aligning with the international research stream that emphasizes measuring teacher performance across multiple dimensions to provide a more accurate picture of professional effectiveness (Kim et al., 2017). For example, studies in Finland and South Korea have demonstrated that school support behaviors, such as volunteerism and policy compliance, positively affect classroom climate and student achievement.

From the perspective of primary teachers, five dimensions reflect the division of tasks and responsibilities with which they are expected to be involved. In other words, teachers see their functions as more complex and diverse. The three new items proposed to improve the instrument, namely those that measure teachers' skills in using technology for teaching or specific applications to fill in the data, are significant skills that need to be measured holistically in teacher performance. The importance of teachers' technological skills in fulfilling teaching and related tasks is also not denied. Research conducted in South Africa by Ajani and Govender (2023) highlighted this, finding that technology skills influence teacher effectiveness. Saidin et al. (2023) state that digital technology offers new opportunities in education and, in turn, can help teachers implement teaching and learning more effectively.

Among these five dimensions of teacher performance, volunteerism plays a significant role. It becomes one of the most important factors for Malaysian teachers in achieving high performance and becoming the best in the teaching profession. This is new because previous researchers didn't test the volunteer aspect of the teacher performance instrument. The volunteer aspect must come from an individual and cannot be trained into them if they don't want to; it must come with a willingness and without any pressure from others, especially the school administrator. It differs from the specific task dimension, in which all the tasks the teacher needs to accomplish have already been planned and have their own procedures for completion. So the teacher needs to follow the way that has been prepared for them. Regarding the dimension of compliance, teachers in Malaysia tend to view themselves as obligated to adhere to the hierarchy. For example, a school in Malaysia is administered by a principal. It is supported by three senior assistant teachers: the senior administrative assistant, the senior student affairs assistant, and the senior co-curricular assistant. This assistant will monitor teachers' work and ensure compliance with the provided instructions.

CONCLUSION

This study has demonstrated the construct's validity for teacher performance instruments in the Malaysian context. Theoretically, this study's contribution is that the items used are more precise and detailed across five dimensions, whereas previously they were limited to two. This study can provide more detailed explanations, and labeling each dimension can stand on its own. Practically, the findings derived from the use of this instrument can help school administrators at the school, district, state, and national levels to identify which aspects have a stronger influence on teacher performance, which, in turn, can assist relevant stakeholders in developing plans to support teachers in enhancing their effectiveness to a higher level. They can plan to conduct a simple course on teachers' teaching skills, such as how to train students in football, or a course about improving teachers' technology skills. So that the teacher can become more effective, help pupils perform well in their studies, and compete in the challenging modern world. A great teacher can produce a great student with all the essential elements to live a fulfilling life after graduation.

The dynamic of the national education system requires teachers to be prepared for any changes that are and will occur. In addition, teachers need to be skilled at working efficiently and performing more creative tasks to achieve the goals set by the school and other institutions. It is essential to evaluate teacher performance. This assessment is crucial for determining the effectiveness of education and for keeping pace with curriculum development, changes in student needs, and technological advances. Therefore, a measuring tool that suits teachers in Malaysia and may be suitable in other countries is necessary to measure teacher performance constructs. Hence, existing instruments must be modified to meet the proper specifications.

These aspects are crucial for creating positive learning environments that align with national and global educational aspirations and goals. In IR4.0, significant changes have occurred in how things should be done and how the responsible person performs their duties. To support IR4.0, national education goals have been aligned with policies and practices to develop individuals' potential across behavioral, knowledge, and emotional, spiritual, and physical domains.

Although this model has shown strong validity and reliability, it still has potential for further development through advanced research. Assessments in different contexts, longitudinal testing, and new dimensions such as innovation or collaboration can help ensure this model remains relevant and responsive to the changing education landscape. Thus, this study not only strengthens the existing literature but also provides a strong foundation for future research and practice in assessing and improving overall teacher performance.

REFERENCES

Ajani, O. A., & Govender, S. (2023). Impact of ICT-Driven teacher professional development for the enhancement of classroom practices in South Africa: A systematic review of literature. *Journal of Educational and Social Research*, *13*(5), 116–128. https://doi.org/10.36941/jesr-2023-0125

Alamrani, M. H., Alammar, K. A., Alqahtani, S. S., & Salem, O. A. (2018). Comparing the effects of simulation-based and traditional teaching methods on the critical thinking abilities and self-confidence of nursing students. *Journal of Nursing Research*, *26*(3), 152–157. https://doi.org/10.1097/jnr.0000000000000231

Amin, M., Shah, R. U., Ayaz, M., & Atta, M. A. (2013). Teachers' job performance at secondary level in Khyber Pakhyunkhwa, Pakistan. *Gomal University Journal of Research*, *29*(2), 100–104.

Ary, D., Jacobs, L. C., Irvine, C. K. S., & Walker, D. (2018). *Introduction to Research in Education*. Cengage Learning.

Awang, Z. (2015). *A Handbook on SEM: Structural Equation Modelling Using Amos Graphics*. UiTM Press.

Awang, Z., Hui, L. S., & Zainudin, N. F. S. (2018). *Pendekatan Mudah SEM Structural Equation Modelling*. MPWS Rich Resources Sdn. Bhd.

Bahkia, A. S., Awang, Z., Rahlin, N. A., & Abdul Rahim, M. Z. (2020). The importance of supportive leadership in the sewerage operation industry in Malaysia: A case of Indah Water Konsortium Private Limited (IWK). *Humanities & Social Sciences Reviews*, *8*(3), 149–162. https://doi.org/10.18510/hssr.2020.8317

Bani Amin, N., Mohd Amir, A., & Ismail, S. F. (2019). Key performance indicators tugas, ganjaran dan prestasi kerja guru sekolah kerajaan. *Jurnal Kepimpinan Pendidikan*, *4*, 38–60. https://jupidi.um.edu.my/index.php/JUPIDI/article/view/20235

Bichi, A. A., Talib, R., Atan, N. A., Halijah, I., & Mohd Yusof, S. (2019). Validation of a developed university placement test using classical test theory and Rasch measurement approach. *International Journal of Advanced and Applied Sciences*, *6*(6), 22–29. https://doi.org/10.21833/ijaas.2019.06.004

Boateng, G. O., Neilands, T. B., Frongillo, E. A., Melgar-Quiñonez, H. R., & Young, S. L. (2018). Best practices for developing and validating scales for health, social, and behavioral research: A primer. In *Frontiers in Public Health* (Vol. 6). Frontiers Media S.A. https://doi.org/10.3389/fpubh.2018.00149

Borman, W. C., & Motowidlo, S. J. (1997). Task performance and contextual performance: The meaning for personnel selection research. *Human Performance*, *10*(2), 99–109. https://doi.org/10.1207/s15327043hup1002_3

Borman, W. C., & Motowidlo, S. M. (1993). *Expanding the criterion domain to include elements of contextual performance. Personnel selection in organizations*. Jossey-Bass.

Brownell, M. T., Adams, A., Sindelar, P., Waldron, N., & Vanhover, S. (2006). Learning from collaboration: The role of teacher qualities. *Exceptional Children*, *72*(2), 169–185. https://doi.org/10.1177/001440290607200203

Campbell, J. P. (1990). Modelling the job prediction problem in industrial and organization psychology. In *Handbook of industrial organizational psychology* (2nd ed., Vol. 1, pp. 687–732). Consulting Psychologists Press.

Cerit, K., & Ekici, D. (2023). Development and psychometric testing of task and contextual performance scales for clinical nurses. *Journal of Nursing Measurement, 31*(4), 556-568. https://doi.org/10.1891/JNM-2021-0080

Chakravarti, S. (2020). Role of teachers in IR 4.0, #GBL and beyond in UAE. *International Journal of Management, 11*(9), 1711–1723. https://doi.org/10.34218/IJM.11.09.2020.164

Che Ahmad, N., Don, Y., & Ismail, S. N. (2021). Pengaruh guru besar dalam penghayatan kewarganegaraan terhadap prestasi kerja guru. *Online Journal of Language, Communication, and Humanities,* 27–40. https://103.101.244.124/journal/index.php/insaniah/article/view/213

Cheung, P. (2020). Teachers as role models for physical activity: Are preschool children more active when their teachers are active? *European Physical Education Review*, *26*(1), 101–110. https://doi.org/10.1177/1356336X19835240

Coleman, V. I., & Borman, W. C. (2000). Investigating the underlying structure of the citizenship performance domain. *Human Resource Management Review, 10*(1), 25–4. https://doi.org/10.1016/S1053-4822(99)00037-6

Comrey, A. L. (1973). *a first course in factor analysis*. Academic Press.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson Education.

Davis, L. L. (1992). Instrument review: Getting the most from a panel of experts. *4*(5), 194–197. https://doi.org/https://doi.org/10.1016/S0897-

Demerouti, E., Xanthopoulou, D., Tsaousis, I., & Bakker, A. B. (2014).Disentangling task and contextual performance. *Journal of Personnel Psychology*, *13*(2), 59–69. https://doi.org/10.1027/1866-5888/a000104

Effendi, M. M., Idris, H., Abdul Rahman, N., & Khairani, A. Z. (2017). Kesahan Kandungan Pakar Ikbar Bagi Pengukuran AQ Menggunakan Nisbah Kesahan kandungan. 979–997.

Elger, D. (2017). *Theory of performance*. University Of Idaho.

Gie Yong, A., & Pearce, S. (2013). A beginner's guide to factor analysis: Focusing on exploratory factor analysis. *Tutorials in Quantitative Methods for Psychology*, *9*(2), 79–94. https://doi.org/10.20982/tqmp.09_2.p079

Hair, J. F., Babin, B. J., Anderson, R. E., & Black, W. C. (2019). *Multivariate data analysis* (8th ed.). Cengage.

Hamami, H., & Yassin, M. A.-M.-Z. (2022). Beban tugas sampingan guru di sekolah rendah di negeri Johor. *Jurnal Kepimpinan Pendidikan*, *1*, 1–20. https://ejournal.um.edu.my/index.php/JUPIDI/article/view/35155

Iriani, A., & Lelatobur, L. E. (2024). Evaluating teacher performance based on gender using the Charlotte Danielson evaluation Model. *Journal of Education, Teaching, and Learning*, *9*(1), 11–20. https://www.learntechlib.org/p/224750/

Ishak, M. A. H., Abdullah Thani, A. K., Nik Min, N. M. F., & Sakarji, S. R. (2022). The influence of work from home on job performance among academicians in Kelantan, Malaysia: Mediating role of employee work motivation. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, *12*(3), 104-115. https://doi.org/10.6007/ijarafms/v12-i3/14306

Ismail, A. W., Ab Hamid, K., & Badlishah, S. (2021). Relationship between job satisfaction and teacher work performance. *International Journal of Modern Education*, *3*(10), 111–119. https://doi.org/10.35631/ijmoe.310009

Ismail, K., & Surat, S. (2024). Kompetensi guru dan kemahiran metakognitif dalam pengajaran. *Jurnal Dunia Pendidikan*, *6*(1), 222–236. https://doi.org/10.55057/jdpd.2024.6.1.17

Kementerian Pendidikan Malaysia. (2024). *Laporan Tahunan 2023*. Kementerian Pendidikan Malaysia

Khan, A. Y., Muhammad Tareen, D., Kiazai, A. N., Ul, Z., & Kakar, H. (2022). Impacts of motivational factors on teacher's performance at secondary school level in Quetta. *Bi-Annual Research Journal 49*(1), 151-166.

Kim, K., Watkins, K. E., & Lu, Z. (Laura). (2017). The impact of a learning organization on performance: Focusing on knowledge performance and financial performance. *European Journal of Training and Development*, *41*(2), 177–193. https://doi.org/10.1108/EJTD-01-2016-0003

Kline, R. B. (2011). *Principles and practice of structural equation modelling* (3rd ed.). The Guildford Press.

Kline, R. B. (2023). *Principles and practice of structural equation modeling*. Guilford Publications.

Koopmans, L. (2014). *Measuring individual work performance*. Body@Work

Kurniawan, H., & Hasanah, E. (2021). Peran kepala sekolah dalam meningkatkan inovasi dan kreativitas guru pada masa pandemi di SD Muhammadiyah Bantul Kota. *Jurnal Studi Guru Dan Pembelajaran*, *4*(1). https://doi.org/10.30605/jsgp.4.1.2021.476

Lestari, W. I., & Putra, E. D. (2020). Efektivitas pembelajaran matematika menggunakan media pemberian tugas google form di masa pandemi Covid-19 terhadap hasil belajar Siswa. *Laplace: Jurnal Pendidikan Matematika*, *3*(2), 129–141. https://doi.org/10.31537/laplace.v3i2.379

Lynch, P. D., Eisenberger, R., & Armeli, S. (1999). Perceived organizational support: Inferior versus superior performance by wary employees. *Journal of Applied Psychology*, *84*(4), 467–483. https://doi.org/https://psycnet.apa.org/doi/10.1037/0021-9010.84.4.467

Maryani, A., Lian, B., Wardarita, R., & Negeri Pembina Pemulutan Barat, T. (2020). Pengaruh gaya kepemimpinan kepala sekolah dan budaya organisasi sekolah terhadap kinerja guru. *Journal of Innovation in Teaching and Instructional Media*, *1*(1), 17–24. https://doi.org/https://doi.org/10.52690/jitim.v1i1.832

Meshari, A. Z., Othayman, M. Bin, Boy, F., & Doneddu, D. (2021). The impact of learning organizations dimensions on the organisational performance: An exploring study of Saudi Universities. *International Business Research*, *14*(2), 54. https://doi.org/10.5539/ibr.v14n2p54

Mohammad @ Basiron, H., Razali, F. N., & Mahamod, Z. (2024). Faktor-faktor guru bersara awal: satu kajian kes dalam kalangan guru bahasa melayu di tiga jenis sekolah di zon Gemencheh. *Jurnal Pendidikan Bahasa Melayu*, *14*(1), 76–88. https://spaj.ukm.my/jpbm/index.php/jpbm/article/view/372/251

Mohammad Yulan, A. F. (2019). *kajian longitudinal terhadap prestasi guru baharu: pengaruh kesediaan guru praperkhidmatan, program letihan guru dan sosialisasi organisasi*. Universiti Utara Malaysia

Musanna, A., & Basiran, B. (2023). Tugas, peran, dan fungsi guru dalam pendidikan. *Jurnal Review Pendidikan dan Pengajaran (JRPP)*, *6*(4), 683-690. https://doi.org/https://doi.org/10.31004/jrpp.v6i4.20286

Ntisa, A. A. (2015). *Job satisfaction, organisational commitment, turnover intention, absenteeism, and work performance amongst academics within South African Universities of Technology*. Vaal University of Technology.

Pallant, J. (2020). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS*. Routledge.

Pervez, Z., Noshaba, A., Arshad, T., & Noureen, G. (2021). Relationship of teachers' job performance with role conflict, role ambiguity and burnout in public schools of Lahore. *International Journal of Computational Intelligence in Control, 13*, 301-305.

Polit, D. F., Beck, C. T., & Owen, S. V. (2007). Focus on research methods is the CVI an acceptable indicator of content validity? Appraisal and recommendations. *Research in Nursing & Health*, *30*, 459–467. https://doi.org/10.1002/nur

Porter, & Lawler, P. L. (1999). *The effect of performance on job satisfaction: Studies in personal and industrial psychology* (3rd ed.).

Ratten, V. (2023). The post COVID-19 pandemic era: Changes in teaching and learning methods for management educators. *International Journal of Management Education*, *21*(2). https://doi.org/10.1016/j.ijme.2023.100777

Rostini, D., Zaeni, R., Syam, A., & Achmad, W. (2022). The significance of principal management on teacher performance and quality of learning. *Jurnal Pendidikan*, *14*(2), 2513–2520. https://doi.org/10.35445/alishlah.v14i1.1721

Rotundo, M., & Sackett, P. R. (2002). The relative importance of task, citizenship, and counterproductive performance to global ratings of job performance: a policy-capturing approach. *The Journal of Applied Psychology*, *87*(1), 66–80. https://doi.org/10.1037/0021-9010.87.1.66

Rubio, D. M. G., Berg-Weger, M., Tebb, S. S., Lee, E. S., & Rauch, S. (2003). Objectifying content validity: Conducting a content validity study in social work research. *Social Work Research*, *27*(2), 94–104. https://doi.org/10.1093/swr/27.2.94

Saidin, N. F., Mohd Bukhari, N. A., & Wong, S. Y. (2023). Penggunaan teknologi multimedia terhadap keberkesanan pengajaran dan pembelajran dalam sistem pendidikan di Malaysia. *Isu Dalam Pendidikan*, *46*, 44-57. https://ejournal.um.edu.my/index.php/JIIE/article/view/50226/16739

Saleem, A., Aslam, S., Yin, H. B., & Rao, C. (2020). Principal leadership styles and teacher job performance: Viewpoint of middle management. *Sustainability*, *12*(8). 1-15. https://doi.org/10.3390/SU12083390

Salkind, N. J. (2012). *Exploring research* (8th ed.). Pearson Education, Inc.

Sari, J., Rustandi, T., & Suadma, U. (2024). The role of self-confidence in mediating the effect of work discipline and reward to employee performance in private companies in Serang District. *LINGUA: Jurnal Bahasa*, *21*(01), 142–157. https://doi.org/10.30957/lingua.v21i1.972

Schmidt, F. L., & Hunter, J. E. (1998). The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 85 years of research findings. *Psychological Bulletin*, *124*(2), 262–274. https://doi.org/10.1037/0033-2909.124.2.262

Sieng, L. W., & Azman, M. (2021). Faktor-faktor yang menpengaruhi prestasi pekerja mengikut perspektif pekerja. *Journal of Business Management and Accounting*, *11*(1), 87–107. https://doi.org/10.32890/jbma2021.11.1.5

Son, J. (2018). Back Translation as a Documentation Tool. *Translation and Interpreting*, *10*(2), 89–100. https://doi.org/10.12807/ti.110202.2018.a07

Suharsaputra, U. (2018). *Supervisi pendidikan pendekatan sistem berbasis kinerja*. Refika Aditama.

Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, *48*(6), 1273–1296. https://doi.org/10.1007/s11165-016-9602-2

Taul, Z. A., Abdullah, M. K., & Mohamed Nawi, M. M. R. Bin. (2021). Hubungan antara efikasi kendiri guru dengan prestasi kerja dalam kalangan guru-guru kawasan pedalaman Sabah. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, *6*(8), 352–362. https://doi.org/10.47405/mjssh.v6i8.952

Tengku Ariffin, T. F. (2010). *A structural model of the relationships between personality factors, perceptions of the school as a learning organization, workplace learning and job performance of teachers*. Universiti Utara Malaysia.

Tosuntaş, Ş. B., Cubukcu, Z., & Beauchamp, G. (2021). Teacher performance in terms of technopedagogical content knowledge competencies. *Kastamonu Eğitim Dergisi*, *29*(1), 63–83. https://doi.org/10.24106/kefdergi.726886

Van Scotter, J. R. (2000). Relationships of task performance and contextual performance with turnover, job satisfaction, and affective commitment. *Human Resource Management Review*, *10*(1), 79–95. https://doi.org/https://doi.org/10.1016/S1053-4822(99)00040-6

Vuong, T. D. N., & Nguyen, L. T. (2022). The key strategies for measuring employee performance in companies: A systematic review. *Sustainability*, *14*(21), 14017. https://doi.org/10.3390/su142114017

Wan Yaacob, W. S. (2019). *The role of professional development as a mediator in the relationship between teacher leadership and teacher performance among generation Y teachers in MRSM*. Universiti Utara Malaysia.