

The Mediating Effect of Material Utilization Competencies on the Relationship between Teacher Work Task Motivation and Work Engagement

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ABSTRACT: This study determined the mediating effect of material utilization competencies on the relationship between teacher work task motivation and work engagement in public elementary schools of Island Garden City of Samal. The quantitative research design was utilized bearing a sample of 300 teachers of elementary teachers of Island Garden City of Samal. Three set of adapted survey questionnaires were used in gathering the data from the target respondents. These instruments were subjected for content validity and reliability test. The analysis data was done using the Mean, Pearson r Correlation Coefficient and Path Analysis. The results revealed that the levels of teacher work task motivation, work engagement were high, and material utilization competencies were high. There was significance in the relationship between teacher work task motivation and work engagement, and material utilization competencies. Furthermore, a significant partial mediation of material utilization competencies on the relationship between teacher work task motivation and work engagement was proven in the present study.

KEYWORDS: material utilization competencies, teacher work task motivation, work engagement, educational management, Philippines

I. INTRODUCTION

Teacher's work engagement appears crucial for optimal human functioning in the workplace because teachers who are highly engaged are more motivated in their work and more satisfied (Park & Johnson, 2019). However, in most cases of today, engagement among teachers are poorly observed due to varied reasons of which one is caused by lack of motivation due to financial problems. This problem have called the attention of recent studies which have shown that more than any other professionals, elementary and high school teachers suffer from lack of work motivation (Pelletier, Seguin-Levesque and Legault,2020). Thus, if teachers have poor engagement, it is a problem in the field of teaching. In the Island Garden City of Samal, teachers, especially those who are teaching in far barangays are faced with problems related to their poor engagement towards designing their lessons because of poor availability of materials to be used.

The conduct of this study is essential as this will help address the concern relating to the work engagement of teachers. As emphasized by Pelletier, Seguin-Levesque and Legault (2020), teachers' engagement and motivation are associated with teachers' utilization of materials available in the workstation. Also, added to this are the multiple tasks that teachers have to perform making it difficult to identify with precision the motivational processes underlying each given task and their relative impact on teachers' psychological functioning. Further, a strong claim in the logic that links teacher motivation and engagement with competence in the material utilization among teachers is of the intuition that teachers matter and that the quality of classroom instruction utilizing good teaching materials makes a substantial difference in the performance of students (Tamah, Triwidayati & Utami, 2020). Moreover, the study of Hanson, Gantwerker, Chang and Nagpal (2022) have also emphasized on the importance of considering teachers' motivation for it has proved a crucial factor closely related to a number of variables in education research.

Specifically, they pointed that teachers' motivation is significantly related with teachers' engagement in making initiative towards designing lessons and that teachers' performance and ability in his/her tasks is based on the availability of materials around.

Further, the study of Panisoara, Lazar, Panisoara, Chirca and Ursu (2020) shared the interplay between teacher's motivation and the teacher's utilization of materials in this time of pandemic as challenging. Teachers have various emotional and motivational experiences that can influence their continuance intention towards online-only instruction during the COVID-19 pandemic, as a significant stress factor for their workplace.

II. METHOD

This study was conducted to 300 teachers from the Public Elementary Schools at Babak District, Island Garden City of Samal.

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The common attributes among the respondents include, teachers handling elementary students in the Island Garden City of Samal. Stratified random sampling was used to determine the respondents of the study aided by the Raosoft calculator. For the inclusion criteria, only the teachers who are handling elementary students from Grades 1-6 are invited to participate in the study. The study shall not include those teachers handling the lower levels and teachers handling the junior and senior high school.

This study used a survey questionnaire to gather data. The questionnaire is a structured type of questionnaire and it is divided into three (3) scales which are the Teacher Work Task Motivation (class preparation, teaching, evaluation of students, administrative tasks, complementary tasks, intrinsic motivation, identified regulation, introjected regulation, external regulation, amotivation) adopted from Fernet, Senécal, Guay, Marsch and Dowson (2008); Work Engagement (Vigor, Dedication, Absorption) adopted from Deligero and Laguador (2014); and Material Utilization Competencies from Ololube (2006). Furthermore, the Teacher Work Task Motivation instrument has the following interpretation first, the range 4.21-5.00 means that the items relating to teacher work task motivation are favorable at all times with the description of strongly agree. The range 3.41-4.20 means that the items relating to teacher work task motivation are favorable most of the time with the description of Agree.

The range 2.61-3.40 means the items relating to teacher work task motivation are favorable occasionally with the description of Neither Agree or Disagree. The range 1.81-2.60 means the items relating to teacher work task motivation are not favorable in few instances with the description of disagree, and last item, with the range of 1.00-1.80 means the items relating to teacher work task motivation are not favorable at all times with the description of strongly disagree. For the questionnaire on the level of Work Engagement, the items relating to work engagement are evident at all times has a range of 4.20-5.00 with the description of Very High, another item means that the items relating to work engagement are evident most of the time has a range of 3.40-4.19 with the description of High, another item means that the items relating to work engagement are evident occasionally has a range of 2.60-3.39 with the description of moderate, another item means that the items relating to work engagement are evident in few instances has a range of 1.80-2.59 with the description of low, and the last item, means that the items relating to work engagement are not evident at all times has a range of 1.00-1.79 with the description of very low. On the other hand for the questionnaire on the level of the indicators of Material Utilization Competencies, the range of 4.20-5.00 means that the items relating to material utilization competencies are evident at all times with the description of Very High. The range of 3.40-4.19 means that the items relating to material utilization competencies are evident most of the time with the description of High. The range of 2.60-3.39 means that the items relating to material utilization competencies are evident occasionally with the description of Moderate. Then the range of 1.80-2.59 means that the items relating to material utilization competencies are evident in few instances with the description of Low and for the last item, this means that the items relating to material utilization competencies are not evident at all times has a range of 1.00-1.79 with the description of Very Low. The pre-testing procedure was done through a pilot testing which resulted to a Cronbach alpha result of 0.84 which means that the items in the instrument are reliable. The validators also vouched for the appropriateness of the items in the instruments through the instrument validation.

The researcher utilized the descriptive-correlation research design. According to Wagner (2018), this design involves collecting data in order to determine whether the relationship exists. The study sought to find out the mediating effect of material utilization competencies on the relationship between teacher work task motivation and work engagement of public elementary school in Babak District, Island Garden City of Samal.

In this study, the researcher underwent the following procedures: First, Seeking of approval, the researcher had her paper checked by the adviser. Then the researcher prepared all the needed letters for the conduct of the study. Upon the approval of conduct of the study, the researcher then prepared the instruments for validation. The next step was the Asking of permission from the Division Schools Superintendents and Principals. Letters were sent to the respective superintendents and principals asking their approval for the conduct of this study. When the request was granted, the researcher conducted the study in the chosen Public Elementary Schools. The researcher immediately administered the survey questionnaire to the respondents at a given schedule. It took 8 days to completely administer the questionnaire to the respondents since they are from different schools. Then, a Retrieval of the questionnaire followed. The survey questionnaires were collected after the respondents were done answering. Lastly, when the gathering of data is completed, the scores were subjected to tabulation then these were forwarded to the statistician for treatment.

III. RESULT AND DISCUSSION

A. Level of Teacher Work Task Motivation

Presented in Table 1 is the level of Teacher work task motivation which gained an overall standard deviation of 0.36 and a mean score of 4.09, interpreted as high. This result means that items relating to teacher work task motivation are favorable most of the time. It can also be gleaned from the table that the indicators: Intrinsic motivation and Identified Regulation got the highest mean scores of 4.29 and 4.31 respectively. This means that teachers are self-sustaining and that they see work as fun and that their emotional quality of the experience is most positive, with genuine interest, enjoyment and inherent satisfaction (Reeve, 2018).

Further, in terms of the very high result in identified regulation, this means that the teachers see value in the behavior to be performed, or simply means that they understand how important behavior is in the workplace of which George and Jones (2019)

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and Cerit, Kadioglu Ates and Yilmaz (2019) emphasized as the psychological strength of certain individual which determine his behavior in an organization, level of efforts and persistence in overcoming the problems, as well as self-determination towards the dimensions of their jobs.

Table 1. Level of Teacher Work Task Motivation

Indicators	SD	Mean	Descriptive Level
Class Preparation	0.40	4.13	High
Teaching	0.43	4.13	High
Evaluation of Students	0.49	4.03	High
Administrative Tasks	0.52	3.93	High
Complementary Tasks	0.46	4.01	High
Intrinsic Motivation	0.52	4.29	Very High
Identified Regulation	0.49	4.31	Very High
Introjected Regulation	0.62	4.08	High
External Regulation	0.51	4.18	High
Amotivation	0.78	3.79	High
Overall	0.36	4.09	High

B. Level of Teachers Work Engagement

Presented in Table 2 is the level of Teachers work engagement which gained an overall standard deviation of 0.40 and an overall mean score of 4.20, interpreted as very high. This means that teachers perceived engagement as a passion and commitment of the willingness to devote oneself and expand one's discretionary effort to contribute towards achieving the goals and objectives of the organization as a whole (Cattermole & Johnson, 2018; Chandhok & Bhavet, 2019).

Specifically, the very high level of dedication of teachers as observed in the data, means that teachers are inspired to work. Hence, with this attitude, the very high engagement may hold true to aspects of work engagement that implies high levels of energy and mental resilience while working (Latham & Pinder, 2019).

Table 2. Level of Work Engagement

Indicators	SD	Mean	Descriptive Level
Vigor	0.48	4.09	High
Dedication	0.51	4.52	Very High
Absorption	0.52	3.98	High
Overall	0.40	4.20	Very High

C. Extent of Teachers Material Utilization Competencies

Presented in Table 3 is the level of Teachers Material utilization Competencies which gained an overall standard deviation of 0.49 and an overall mean score of 4.29, interpreted as very high. This means that teachers can bring fruitful learning as they manifest very high sense of material utilization in explaining new concepts clearly. Further, it can be gleaned that all indicators were strongly observed as indicated in the very high result for each. This holds true that indeed teachers have fully accomplished effective teaching as they utilize varied instructional materials resulting in better student understanding of the concepts being taught (Kadzera, 2018; Megbo & Saka, 2018).

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Table 3. Level of Teachers Material Utilization Competencies

Items	SD	Mean	Descriptive Level
Teachers with academic qualifications select appropriate teaching materials.	0.55	4.30	Very High
Teachers with professional qualifications select appropriate teaching materials.	0.58	4.29	Very High
Teachers with academic qualifications prepare and use teaching materials effectively.	0.56	4.35	Very High
Teachers with professional qualifications prepare and use teaching materials effectively.	0.57	4.36	Very High
Teachers with academic qualifications operate projected tools effectively.	0.58	4.22	Very High
Teachers with professional qualifications operate tools effectively.	0.56	4.23	Very High
Overall	0.49	4.29	Very High

D. Significance of interrelationships among the variables associated with Teachers Work Task Motivation

Table 4.1 highlights the significance of the interrelationships between variables associated with teachers' work task motivation and their work engagement, providing insights into the factors that drive and influence teachers' engagement in their work tasks. Overall, the data suggests that various factors related to work task motivation, such as teaching, evaluation of students, administrative tasks, complementary tasks, intrinsic motivation, identified regulation, introjected regulation, external regulation, and amotivation, are significantly related to different dimensions of work engagement among public elementary school teachers.

The overall relationship between work task motivation and work engagement. It shows that there is a strong and significant relationship between these two constructs, with all p-values being less than 0.001. This indicates that teachers' work task motivation as a whole is closely linked to their overall work engagement. Hence, hypothesis is rejected.

Table 4.1

Work Task Motivation	Work Engagement			
	Vigor	Dedication	Absorption	Overall
Class Preparation	.371**	.272**	.217**	.360**
	.000	.000	.000	.000
Teaching	.421**	.387**	.197**	.420**
	.000	.000	.001	.000
Evaluation of Students	.276**	.341**	.294**	.386**
	.000	.000	.000	.000
Administrative Tasks	.327**	.428**	.253**	.423**
	.000	.000	.000	.000
Complementary Tasks	.531**	.487**	.313**	.558**
	.000	.000	.000	.000

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Intrinsic Motivation	.406**	.513**	.360**	.539**
	.000	.000	.000	.000
Identified Regulation	.503**	.544**	.358**	.591**
	.000	.000	.000	.000
Introjected Regulation	.396**	.293**	.236**	.386**
	.000	.000	.000	.000
External Regulation	.511**	.401**	.386**	.544**
	.000	.000	.000	.000
Amotivation	.099	.146*	.306**	.236**
	.087	.011	.000	.000
Overall	.529**	.530**	.423**	.623**
	.000	.000	.000	.000

E. Significance on the Relationship between Work Task Motivation and Work Engagement of Public Elementary School Teachers

Table 4.2

Work Task Motivation	Material Utilization Competencies
Class Preparation	.535**
	.000
Teaching	.424**
	.000
Evaluation of Students	.360**
	.000
Administrative Tasks	.393**
	.000
Complementary Tasks	.462**
	.000
Intrinsic Motivation	.405**
	.000
Identified Regulation	.422**
	.000
Introjected Regulation	.420**
	.000
External Regulation	.442**
	.000
Amotivation	.170**
	.003
Overall	.558**
	.000

F. Significance on the Relationship between Work Task Motivation and Material Utilization Competencies of Public Elementary School Teachers

The Mediating Effect of Material Utilization Competencies on the Relationship between Teacher Work Task Motivation and Work Engagement

Table 4.2 presents the significance of the relationships between work task motivation and material utilization competencies among public elementary school teachers. Material utilization competencies refer to the teachers' ability to effectively use instructional materials and resources in their teaching practices. The table displays the significance levels (p-values) for each relationship between specific work task motivation factors and material utilization competencies. A lower p-value indicates a stronger and more significant relationship between the variables.

Looking at the data, we can observe that all the work task motivation factors listed in the table show significant relationships with material utilization competencies, as evidenced by the p-values of 0.000 for each pair. For instance, Class Preparation has a significant relationship with material utilization competencies, with a p-value of 0.000. This suggests that teachers' motivation regarding class preparation is strongly associated with their ability to effectively utilize instructional materials.

Similarly, the other work task motivation factors, including Teaching, Evaluation of Students, Administrative Tasks, Complementary Tasks, Intrinsic Motivation, Identified Regulation, Introjected Regulation, External Regulation, and Amotivation, all exhibit significant relationships with material utilization competencies, as indicated by their respective p-values of 0.000.

The overall result represents the overall relationship between work task motivation and material utilization competencies. It shows that the overall relationship is highly significant, with a p-value of 0.000. This implies that teachers' overall work task motivation has a strong and significant association with their competencies in utilizing instructional materials.

In summary, the data in Table 4.2 indicates that various aspects of work task motivation significantly influence the material utilization competencies of public elementary school teachers. This highlights the importance of motivating teachers in their work tasks, as it directly impacts their ability to effectively use instructional materials and resources in their teaching practices. Hence H_0 is rejected.

Table 4.3

Material Utilization Competencies	Work Engagement			Overall
	Vigor	Dedication	Absorption	
	.572**	.469**	.267**	.544**
	.000	.000	.000	.000

G. Significance on the Relationship between Material Utilization Competencies and Work Engagement of Public Elementary School Teachers

Table 4.3 presents the significance of the relationships between material utilization competencies and work engagement among public elementary school teachers. Material utilization competencies refer to the teachers' ability to effectively use instructional materials and resources, while work engagement represents their level of involvement, enthusiasm, and absorption in their work. The table displays the significance levels (p-values) for each relationship between material utilization competencies and different dimensions of work engagement. A lower p-value indicates a stronger and more significant relationship between the variables.

The material utilization competencies are significantly related to all dimensions of work engagement: Vigor, Dedication, Absorption, and Overall. All the p-values for these relationships are 0.000, indicating a highly significant association. To mention, material utilization competencies have a significant relationship with Vigor, as indicated by a p-value of 0.000. This suggests that teachers' competencies in effectively utilizing instructional materials are strongly associated with their level of energy, enthusiasm, and resilience in their work. Similarly, material utilization competencies show significant relationships with Dedication, Absorption, and Overall work engagement, with p-values of 0.000 for each dimension. This implies that teachers' abilities to utilize instructional materials have a strong influence on their dedication to their work, their level of absorption in their tasks, and their overall work engagement.

In summary, the data in Table 4.3 indicates that material utilization competencies are significantly related to various dimensions of work engagement among public elementary school teachers. This highlights the importance of teachers' proficiency in utilizing instructional materials in fostering their engagement, enthusiasm, and absorption in their work. Effective material utilization can contribute to higher levels of work engagement among teachers in the elementary school setting. Hence, H_0 is rejected.

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Table 5. Mediation Analysis of the Three Variables

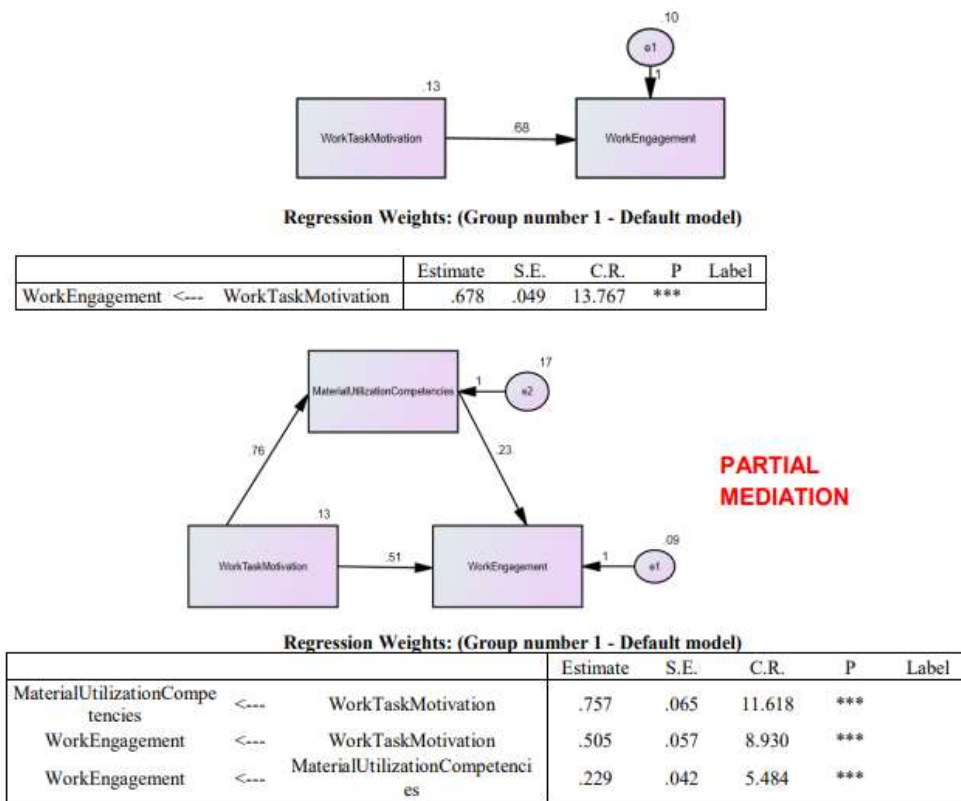


Figure 2. Path Diagram for the Regression

Mediating effect of Material Utilization Competencies in the relationship between teacher work task motivation and work engagement of teachers

On the mediating effects of Teachers Materials Utilization Competencies, results reveal a partial mediation as indicated in Figure 2. This means that only partial mediation was observed in the effect of material utilization competencies on the relationship between teacher work task motivation and work engagement. The presence of a significant indirect effect suggests partial mediation. In other words, while material utilization competencies play a role in mediating the relationship between work task motivation and work engagement, there are likely other factors contributing to this relationship as well (Shahzadi & Parveen, 2023). This could include factors such as organizational culture, leadership support, or personal characteristics of teachers. These findings suggest that while work task motivation directly influences work engagement, part of its effect is channeled through the development and application of material utilization competencies. This underscores the importance of not only fostering motivation among teachers but also providing training and support to enhance their competencies in utilizing materials effectively. Educational institutions and policymakers can use this information to design targeted interventions aimed at improving teacher engagement and effectiveness in the classroom (Zhu et al.,2022).

IV. CONCLUSION AND RECOMMENDATION

The study found that teacher work task motivation and work engagement levels were high among the participating teachers. Additionally, material utilization competencies were also reported to be high. This highlights the importance of motivating teachers in their work tasks, as it directly impacts their ability to effectively use instructional materials in their teaching practices. Teachers' competencies in effectively utilizing instructional materials are strongly associated with their level of vigor, dedication, absorption, and overall work engagement. This suggests that teachers' proficiency in material utilization plays a crucial role in fostering their engagement, enthusiasm, and absorption in their work. Further, the data suggests that work task motivation plays a crucial role in shaping teachers' overall work engagement. Overall, the data from these tables emphasizes the interconnectedness between work task motivation, material utilization competencies, and work engagement among public elementary school teachers. Motivation in work tasks and the ability to effectively utilize instructional materials are both significant factors influencing teachers' overall work engagement.

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The study results supports the theory of Self-Determination by Deci & Ryan (2000) which state that when people are motivated by activities which allow them to form and enjoy good relationships. Thus, people feel motivated by activities which allow them to satisfy those three needs. Those activities are enjoyable and driven by intrinsic motivation. Evidently, in the result of this study, when teachers are highly motivated, it also results to high task engagement.

Based on these findings, several recommendations can be made. To enhance teacher work task motivation and work engagement, schools should implement strategies such as providing professional development opportunities, creating a positive work environment, and fostering meaningful tasks and autonomy. School leaders should focus on developing effective leadership behaviors and promoting collaboration and innovation. Access to adequate resources and training on material utilization are essential. Continual research and evaluation are necessary to explore additional factors and improve teaching practices in public elementary schools.

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