Role of Teaching-Learning Resource Availability as Moderator on Digital Technology Knowledge and Instructional Supervision Skills of Teachers

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Abstract:- The current study was set to evaluate whether teaching etiquette significantly moderates the relationship between intercultural sensitivity and work fulfillment of teachers. In this study, the researcher selected the 212 public elementary school teachers in Maa District, Davao City as the respondents of the study. Stratified random sampling technique was utilized in the selection of the respondents. Non-experimental quantitative research design using descriptive-correlational method was employed. The data collected were subjected on the following statistical tools: Mean, Pearson Moment Product Correlation, and Heirarchical Regression Analysis. Descriptive analysis showed that digital technology knowledge, instructional supervision skills of teachers, and teaching-learning resource availability in Maa District, Davao City. were described as extensive. Further, correlation analysis demonstrated that there is a significant relationship between digital technology knowledge and instructional supervision skills of teachers in Maa District, Davao City when moderated by teaching-learning resource availability. Evidently, heirarchical regression analysis proved that teaching-learning resource availability significantly moderates the interaction between digital technology knowledge and instructional supervision skills of teachers in Maa District, Davao City.

Keywords:- Educational Management, Digital Technology Knowledge, Instructional Supervision Skills, Teaching-Learning Resource Availability, Davao City, Philippines.

I. INTRODUCTION

A. The Problem and Its Scope

Every aspect of our lives is made more convenient by the usage of technology. Teachers use technology to make a substantial contribution to the subject of early childhood education. Smart cellular technologies, especially those involving tablets, have emerged and developed significantly in the second decade of the twenty-first century. As educational tools, these gadgets were introduced into the classroom, and talks centered on the benefits and drawbacks for both teachers and pupils. Understanding instructors' views regarding digital technology is essential to comprehend their abilities to supervise instruction in the classroom.

According to Štemberger and Konrad (2021), digital technology refers to people's opinions—whether favorable or unfavorable—about new technology in any setting. Mahajan (2016) discovered a strong positive relationship between teachers' use of digital technology and their efficacious teaching strategies and ability to facilitate students' learning. The distinction was based on the traits of the teachers, including their confidence and teaching methods. Tasir et al. (2012) observed that students participated in self-paced, self-directed learning experiences and open-ended curricula in schools equipped with multimedia technology and global networking.

Shonje (2016) emphasized the value of teaching-learning resources, which encompass all of the physical spaces inside and outside of the school. According to Baah and Amoako (2011), it takes a variety of elements, including the nature of the work, a sense of accomplishment, acknowledgment, accountability, and chances for personal development, for people to feel valuable inside an organization. But as Steele et al. (2010) noted, low-quality instructional materials and communication technology have a detrimental impact on teachers' satisfaction. Effective instruction delivery is positively correlated with school facilities, such as internet connectivity, air conditioning, and building conditions.

According to Yildiz (2017), proficient instructional supervision techniques can raise student accomplishment and encourage desired behaviors. These techniques include teaching effectively, rewarding suitable behavior, controlling inappropriate behavior, modifying lessons, and making efficient use of class periods. Al-Amarat (2015) emphasized the importance of classroom management techniques and upholding order for the educational process and fundamental needs.

Temli-Durmus (2016) found that inadequate instructional supervision is still a major problem for primary school instructors globally, despite the significance of effective instructional supervision abilities. When teachers concentrate more on problem behaviors than instruction, poorly managed classrooms lead to chaotic learning processes and unmet competencies (Etheridge, 2010). Darci Borden (2013) pointed out that when good classroom management isn't implemented, teachers become frustrated and occasionally decide to quit teaching.

Research show that digital technology expertise and instructional supervision abilities are critical to the educational process, however these research are frequently conducted in international contexts. Granito and Chernobilsky (2012), for example, discovered that motivation and instructional tactics are improved when one is knowledgeable about digital technology. Piccinini and Scarantino (2016) established a connection between teaching effectiveness and digital technology expertise by means of enhanced information and computation processes. Using a quantitative research approach, this study attempts to explain the relationship between teachers' instructional supervision skills and their understanding of digital technology, as mediated by the availability of teaching-learning resources, specifically in the Philippine environment, namely in Maa District, Davao City. Understanding the importance of the availability of teaching-learning resources—a paucity of research—was accomplished using mediation analysis.

B. Theoretical/Conceptual Framework

This study is grounded in Roth's (2013) situated cognition theory, which highlights how using online technology in the classroom encourages students to create

motivated learning strategies and improves the effectiveness of teachers. In a classroom mediated by computers, students exchange knowledge and help one another communicate while computers record expert explanations and responses. Wanjala and Wanjala (2017) made the case that school resources have an impact on teacher effectiveness as well as student achievement. Inadequate resources, like subpar educational technology and inadequate upkeep, reduce the effectiveness of instruction (Iwu and Iwu, 2013; Steele et al., 2010). The delivery of education is favorably correlated with school infrastructure, such as internet connectivity, air conditioning, and building conditions.

The concepts of the study are outlined in the conceptual framework, which is shown in Figure 1. Knowledge of digital technology, which includes opinions about new technologies, is the independent variable. Temberger and Konrad (2021) define digital technology knowledge as having technical proficiency, pedagogical understanding, ethical consciousness, and a welcoming mindset towards novel technologies. The framework emphasizes how crucial these elements are to comprehending how digital technology affects student learning outcomes and the efficacy of instruction.
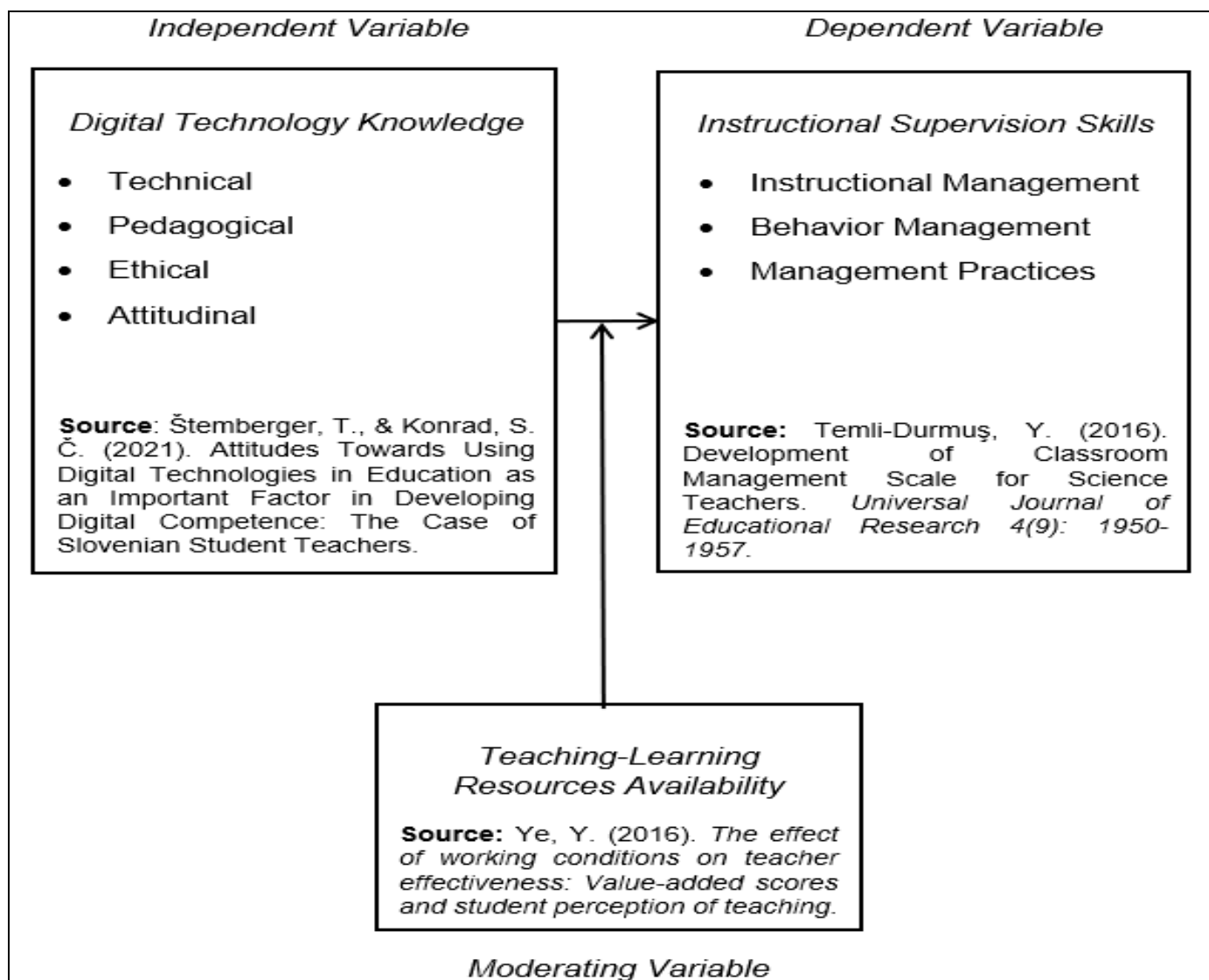

Fig 1 Conceptual Framework of the Study

C. Statement of the Problem

This study examined how teaching-learning materials availability moderated the interaction between digital technology knowledge and instructional supervision skills of Maa District, Davao City teachers. The researcher sought to answer these questions:

➢ What is the extent of digital technology knowledge of teachers in terms of:

- Technical;
- Pedagogical;
- Ethical; and
- Attitudinal?

➢ What is the extent of instructional supervision skills of teachers in terms of:

- Instructional management;
- Management practices; and
- Behavior management?

➢ What is the extent of teaching-learning resources availability in Maa District, Davao City?

➢ Is there significant relationship between digital technology knowledge and instructional supervision skills of teachers in Maa District, Davao City when moderated by teaching-learning resources availability?

➢ Do teaching-learning resources availability have significant moderating effect on the interaction between digital technology knowledge and instructional supervision skills of teachers in Maa District, Davao City?

D. Hypothesis

The following hypotheses were tested at 0.05 level of significance:

➢ H_{01}:

There is no significant relationship between digital technology knowledge and instructional supervision skills of teachers in Maa District, Davao City when moderated by teaching-learning resources availability.

➢ H_{02}:

Teaching-learning resources availability do not have significant moderating effect on the interaction between digital technology knowledge and instructional supervision skills of teachers in Maa District, Davao City.

II. METHOD

A. Research Design

Data, concepts, facts, and information were gathered for this investigation using a non-experimental, descriptive correlation design. This quantitative method emphasizes precise reasoning and numerical, static data (Babbie et al., 2010). According to Myers and Well (2013), correlational design establishes a cause-and-effect link by examining the impact of the independent variable on the dependent variable. It made it possible for the researcher to see two factors at once and explain how they related to one another. The study looked at the relationships between teaching-learning resource availability, instructional supervision skills, and knowledge of digital technology. Specifically, it looked at whether resource availability affected the way that teachers in Davao City's Maa District interacted with their knowledge of digital technology and their ability to supervise others.

B. Research Respondents

212 elementary school teachers in Davao City's Maa District were chosen for this study using stratified random sampling. Using this technique, a population is divided into strata, or subgroups, according to shared traits like income or level of education (Shi, 2015). The respondents—permanent regular high school teachers in the Maa District who willingly completed the informed consent form—were selected on the basis of their capacity to supply pertinent information. The study did not take the socioeconomic situation or gender of the teachers into account; it only addressed the research topics.

C. Research Instrument

The study used researcher-made questionnaires, divided into three parts, to fit the respondents' context. The first part assessed teachers' digital technology knowledge across technical, pedagogical, ethical, and attitudinal indicators, using a 5-point Likert scale. The scale's reliability was excellent, with a Cronbach's alpha of 0.964. The descriptive levels ranged from "Very Extensive" (4.20-5.00) to "Not Extensive" (1.00-1.79), indicating the frequency with which digital technology knowledge is observed among teachers.

The second part evaluated instructional supervision skills, covering management practices, behavior management, and instructional management, also using a 5-point Likert scale. This scale had a Cronbach's alpha of 0.900, indicating high reliability. The descriptive levels ranged from "Very Extensive" (4.20-5.00) to "Not Extensive" (1.00-1.79), reflecting how often these skills are manifested in teaching practices.

The third part examined teaching-learning resource availability, adapted from Ye (2016), using a similar 5-point Likert scale. The reliability was excellent, with a Cronbach's alpha of 0.966. The descriptive levels ranged from "Very Extensive" (4.20-5.00) to "Not Extensive" (1.00-1.79), indicating the presence of resources. The scaling ensured a uniform interval of 0.80, with validation and revisions by three experts before administration.

D. Data Analysis

Several statistical tools were employed by the researcher to approach the collected data. First, in order to meet objectives 1, 2, and 3, the mean was used to describe the availability of teaching-learning resources, digital technology expertise, and instructional supervision abilities. Second, in order to address objective 4, partial correlation was used to evaluate the significant relationship between the independent variable (knowledge of digital technology) and the dependent variable (instructional supervision skills), with the availability of teaching-learning resources acting as a moderator. In order to meet objective 5, the moderating effect of teaching-learning

resource availability on the relationship between digital technology knowledge and instructional supervision skills was lastly assessed using hierarchical regression analysis.

III. RESULTS AND DISCUSSION

A. Digital Technology Knowledge of Teachers in Maa District, Davao City

➢ *Technical.*

The technical component's mean rating of 3.78 points to a broad category, indicating that teachers in Davao City's Maa District are frequently aware of digital technologies. The mean rating for certain goods varied from 3.18 to 4.08. For example, "knowing how to solve their own technical problems" was rated as moderately observed with a mean score of 3.18. On the other hand, "using technology tools to process data and report results" was rated 4.08 out of 5, indicating that educators see it frequently.

These results highlight the fact that educators in Davao City's Maa District typically have positive views toward digital technology, which has an impact on their instructional strategies, efficacy, and ability to support students' learning. This supports the claim made by Mahajan (2016) that there is a favorable correlation between teaching techniques and instructional support and attitudes toward technology. In a similar vein, teachers with self-assured teaching approaches typically have positive attitudes about technology, according to Vaseghi et al. (2012).

Table 1. *The Extent of Digital Technology Knowledge of Teachers in terms of Technical*

Statement	Mean	Descriptive Rating
1. Knowing how to solve their own technical problems.	3.18	Moderately Extensive
2. Using technology tools to process data and report results.	4.08	Extensive
3. Feeling apprehensive about using a computer.	3.90	Extensive
4. Using technology in the development of strategies for solving problems in the real world.	4.00	Extensive
5. Being confident that I can handle computer without damaging it.	3.75	Extensive
Mean	*3.78*	*Extensive*

➢ *Pedagogical.*

When the pedagogical component is specifically examined, the results indicate a category mean of 3.51 that is characterized as extensive, suggesting that teachers in Maa District, Davao Occidental, frequently have pedagogical knowledge of digital technology. Specific items have mean ratings ranging from 2.61 to 4.18. The mean assessment of 2.61 for the task of "choosing technology that can enhance teaching approaches for a lesson" indicates that it is somewhat observed. However, with a mean grade of 4.18, "using digital technology to enhance the presentation of work, justifying extra effort" is clearly widely observed in Davao City's Maa District.

According to Cavanagh and Koehler (2013), these results imply that pedagogical knowledge encompasses how content might be presented and arranged to improve comprehension. This is consistent with the idea put forth by

Koehler & Mishra (2009) that part of educational knowledge is being aware of students' biases and misconceptions in relation to particular subject areas.

Table 2. *The Extent of Digital Technology Knowledge of Teachers in terms of Pedagogical*

Statement	Mean	Descriptive Rating
1. Using digital technology help me improve my teaching efficiency.	3.02	Moderately Extensive
2. Working with digital technology help me do my work conveniently.	3.95	Extensive
3. Using digital technology allows me to do more interesting and imaginative work.	3.77	Extensive
4. Choosing technology that can enhance the teaching approaches for a lesson	2.61	Moderately Extensive
5. Using digital technology enhance the presentation of my work to a degree which justifies the extra work.	4.18	Extensive
Mean	*3.51*	*Extensive*

➢ *Ethical.*

With a category mean of 3.40, which is understood as frequently noticed, the table shows that teachers in Davao City's Maa District rated the ethical dimension as comprehensive. The range of mean ratings for individual products was 2.78 to 4.20. The mean rating for "recognizing copyrighted information" was 2.78, suggesting that it is moderately monitored. On the other hand, respondents in Davao City's Maa District rated "being honest when engaging in digital technology" as extremely extensive, with a mean score of 4.20. They also regarded this as something they constantly do.

These results imply that educators regularly witness actions connected to digital technology ethics. This is consistent with the findings of Abdullah et al. (2015), who pointed out that emotional experiences and the perception of technology's effects on daily life shape attitudes toward it. Furthermore, Oye and Iahad (2013) stressed the need of having good attitudes and intents toward the usage of technology in educational settings.

Table 3. *The Extent of Digital Technology Knowledge of Teachers in terms of Ethical*

Statement	Mean	Descriptive Rating
1. Avoiding using foul language while using digital technology.	3.72	Extensive
2. Recognizing copyrighted information.	2.78	Moderately Extensive
3. Being honest when engaging in digital technology.	4.20	Very Extensive
4. Safeguarding personal and private data.	3.34	Moderately Extensive
5. Being polite and respectful in communicating while using digital technology.	2.98	Moderately Extensive
Mean	*3.40*	*Extensive*

➢ *Attitudinal.*

Table shows that instructors in Maa District, Davao City, assessed the attitudinal dimension as extensive with a category mean of 3.61, indicating frequent observation. Specific item ratings averaged 2.78–4.09. The mean assessment for "grabbing opportunities to use computers at school" was 2.78, indicating moderate observation. The mean score for "evaluating and selecting new information

approaches and technological innovations based on their appropriateness for specific tasks or topics" was 4.09, which was extensive and common in this category.

These data indicate that Maa District teachers are generally favorable about digital technology and actively seek ways to incorporate it into their lessons. This supports research showing that educators' technological views affect how they use new tools and advances.

Table 4. *The Extent of Digital Technology Knowledge of Teachers in terms of Attitudinal*

Statement	Mean	Descriptive Rating
1. Being open in using digital technology in teaching.	3.53	Extensive
2. Grabbing opportunity that I can come in contact with computers at school.	2.78	Extensive
3. Using computers at school when it is necessary for teaching and completing tasks.	3.93	Extensive
4. Using technology for more collaboration and communication with students.	3.73	Moderately Extensive
5. Evaluating and selecting new information approaches and technological innovations based on their appropriateness on specific tasks in particular content or topic.	4.09	Extensive
Mean	*3.61*	*Extensive*

These results show that respondents' varied degrees of engagement with online technology tasks are reflected in the behaviors they occasionally encounter in this domain. This is consistent with the findings of Sánchez-Prieto et al. (2017), who believe that involvement is essential to understanding people's participation and behaviors in relation to their attitudes. As defined by Wang and Liu (2014), involvement is a behavioral commitment based on individuals' levels of interest or concern, independent of specific positions or activities, and has been researched across a variety of contexts, including products and actions.

To summarize the extent of digital technology knowledge among teachers in Maa District, Davao City reveals across various indicators: technical knowledge at 3.78, pedagogical knowledge at 3.51, ethical considerations at 3.40, and attitudinal disposition at 3.61, all categorized as extensive, indicating that these aspects of digital technology are often observed and well understood by teachers. Overall, teachers demonstrate a robust understanding of digital technology, with an average score of 3.58 across these indicators, reflecting a comprehensive familiarity with technological tools and practices in their educational contexts.

Table 5. *Summary on the Extent of Digital Technology Knowledge of Teachers in Maa District, Davao City*

Indicators	Mean	Descriptive Equivalent
Technical	3.78	Extensive
Pedagogical	3.51	Extensive
Ethical	3.40	Extensive
Attitudinal	3.61	Extensive
Overall	*3.58*	*Extensive*

Teachers' positive or negative assessments of new technology were common. This supports Kutluca's (2014) claim that technology and social norms shape attitudes, shaping behaviour and identity. Shaukenova (2016) also noted that online technologies and ICT devices help teachers develop positive attitudes toward computers by facilitating organizational tasks, deepening understanding, and familiarizing them with diverse educational resources, research methods, creative activities, and assessment methods. These characteristics improve educators' views and use of technology in education.

B. Instructional Supervision Skills of Teachers in Maa District, Davao City

➢ Instructional Management.

Its category mean is 3.50, indicating that teachers' instructional supervision and management skills are common in Maa District, Davao City. Items' mean ratings range from 2.85 to 3.98. For instance, "preparing well-structured learning activities" had a mean value of 2.85, indicating moderate extent and instructor use. At 3.98, "encouraging learners to engage in learning tasks" was extensive and regularly seen in this district.

According to Temli-Dumus (2016), instructional management involves the teacher's capacity to hold students' attention and keep them focused. This agrees with Nevid (2011) that lecture-based instruction should be updated to engage students. TeacherVision (2016) also recommends cooperative learning, which promotes positive interdependence, face-to-face engagement, accountability, and group processing.

Table 6. *The Extent of Instructional Supervision Skills of Teachers in Terms of Instructional Management*

Statement	Mean	Descriptive Rating
1. Encouraging learners to engage in learning tasks.	3.98	Extensive
2. Preparing good structured learning activities.	2.85	Extensive
3. Encouraging learners to be active during learning – teaching process.	3.42	Extensive
4. Being good at time management.	3.39	Moderately Extensive
5. Knowing effective strategies to attract students attention.	3.88	Extensive
Mean	*3.50*	*Extensive*

➢ Management Practices.

This dimension's category mean is 3.31, indicating moderate extent and sometimes seen by instructors in Maa District, Davao City. Items' mean ratings range from 2.61 to 3.92. For instance, "persuading learners to obey classroom rules" had a mean grade of 2.61, suggesting moderate extent and occasional manifestation. "Recognizing students' needs" scored 3.92, considered extensive and common among teachers.

These findings imply that assessment data, instructional coaching, and professional support can improve teacher instruction and student learning (Ye, 2016). Orodho and Waweru (2013) found that improving teachers' working circumstances increases satisfaction and reduces turnover,

which is essential for a high-performing workforce. Teachers prefer comfortable, convenient workplaces to improve their teaching.

Table 7. *The Extent of Instructional Supervision Skills of Teachers in Terms of Management Practices*

Statement	Mean	Descriptive Rating
1. Encouraging learners to determine classroom rules.	3.81	Extensive
2. Persuading learners to obey the classroom rules.	2.61	Moderately Extensive
3. Having required skills about Classroom Management.	2.62	Moderately Extensive
4. Providing effective communication skills in classroom.	3.60	Extensive
5. Recognizing what students demand.	3.92	Extensive
Mean	**3.31**	***Moderately Extensive***

➢ *Behavior Management.*

Table 8 specifically shows a category mean of 3.69 for behavior management, which is considered extensive. This suggests that teachers in Davao City's Maa District frequently exhibit this facet of their instructional supervisory skills. The table also demonstrates that the items' mean ratings vary from 3.06 to 3.98. For instance, "dealing with learners' misbehaviors positively" earned 3.98, regarded as extensive and frequently noticed, whereas "using preventive strategies" received a mean rating of 3.06, indicating it is moderately extensive and seldom displayed.

Noted by Temli-Durmus (2016), these results highlight how crucial it is for teachers to be able to control their students' conduct during teaching-learning processes. This is consistent with the viewpoint of Moore and Miller (2015), who highlight character development as an effective approach to training, teaching, and remediation.

Table 8. *The Extent of Instructional Supervision Skills of Teachers in Terms of Behavior Management*

Statement	Mean	Descriptive Rating
1. Coping up with disruptive behaviors.	3.69	Extensive
2. Using preventive strategies.	3.06	Moderately Extensive
3. Dealing with learners misbehaviors positively.	3.98	Extensive
4. Influencing the behavior of learners to achieve desired outcomes.	3.95	Extensive
5. Establishing clear expectations	3.77	Extensive
Mean	**3.69**	***Extensive***

Table 9 provides a concise overview of the level of instructional supervision skills possessed by instructors in Maa District, Davao City. The average score for instructional supervision skills is 3.50, which is considered to be extensive. Behavioral management had the greatest average score of 3.69, indicating that it was frequently observed, while instructional management had the lowest average score of 3.31, indicating that it was occasionally observed among teachers.

These findings underscore the intricacy of instructing and overseeing a classroom for educators. According to Nasey (2012), management practices refer to the measures undertaken by teachers to guarantee that students fulfill their assigned responsibilities. These practices include establishing

rules, procedures, instructional structure, and organizing learning materials and activities. Zouzou (2015) highlights that instructional supervision skills encompass methods to minimize disruptive conduct, inspire students, and ensure a seamless teaching-learning process. These abilities serve as a comprehensive set of policies, actions, and strategies for efficient classroom management.

Table 9. *Summary on Instructional Supervision Skills of Teachers in Maa District, Davao City*

Indicators	Mean	Descriptive Equivalent
Instructional Management	3.50	Extensive
Management Practices	3.31	Moderately Extensive
Behavior Management	3.69	Extensive
Overall	*3.50*	*Extensive*

C. Teaching-Learning Resource Availability

The data shown in Table 10 illustrates the level of availability of teaching-learning resources in Maa District, located in Davao City. Upon closer examination of the teaching-learning resource availability domain, it is evident that the category mean is 3.69, indicating an extensive level. This suggests that the teachers in Maa District, Davao City frequently have strong instructional supervision skills in this particular domain. The data also shows that the average rating of the items varies between 3.06 and 3.98. The item "The school climate created by a strong leadership team and support from the staff helps to create a positive environment in which to teach" has a mean rating of 3.06, indicating a moderate extent of manifestation. On the other hand, the item "My school principal provides me with all kinds of support in order to complete my tasks" has a mean rating of 3.98, indicating a high extent of manifestation.

The outcome suggests that the learning environment, including the facilities within the school premises and its environs, often has a noticeable impact.

Table 10. *The Extent of Teaching-Learning Resources Availability in Maa District, Davao City*

Statement	Mean	Descriptive Rating
1. My principal supports my decisions and actions by allocating sufficient resources.	3.87	Extensive
2. My principal is very supportive of the staff when new teaching methods are being implemented.	3.49	Extensive
3. My principal ensures that we have the necessary materials to carry out our teaching assignment.	3.69	Extensive
4. The school climate created by a strong leadership team and support from the staff helps to create a positive environment in which to teach.	3.06	Moderately Extensive
5. My school principal provide me all kind of supports in order to complete my tasks.	3.98	Extensive
6. Having sufficient access to instructional technology, including computers, printers, software and internet access	3.95	Extensive
7. Having access to reliable communication technology, including phones, faxes and email.	3.77	Extensive
Mean	**3.69**	***Extensive***

This finding resonates with Nyagaya's (2015) perspective that job satisfaction among workers is significantly influenced by working conditions and the work environment, which are crucial for personal comfort and work efficiency. It also aligns with Selamat et al.'s (2013) view that the availability of teaching-learning resources is fundamental to staff members' perceptions of their working environment.

D. Relationship Between Digital Technology Knowledge and Instructional Supervision Skills of Teachers in Maa District, Davao City when Moderated by Teaching-Learning Resources Availability

The investigation uncovers a noteworthy positive correlation between the attitude towards digital technology knowledge and the instructional supervision skills of instructors in Maa District, Davao City. This correlation is influenced by the availability of teaching-learning resources. Table 11 shows that there is a strong and significant link ($r = 0.788$, $p < 0.05$) between changes in digital technology knowledge and variations in instructional supervision skills. This relationship is influenced by the availability of teaching-learning materials. In addition, the study discovered strong positive correlations between different aspects of digital technology knowledge (technical, pedagogical, ethical, and attitudinal) and instructional supervision skills ($r = 0.351$, $r = 0.659$, $r = 0.246$, and $r = 0.812$ respectively, all $p < 0.05$), with the availability of teaching-learning resources as a moderating factor.

The results of this study provide evidence that aligns with Piccinini and Scarantino's (2016) claim that having a favorable outlook on digital technology might boost computational and informational processes, ultimately leading to improved teaching efficacy. Furthermore, they concur with Saeed's (2015) viewpoint that technology provides teachers with cognitive skills to create efficient learning settings. Furthermore, the findings align with Okoya's (2013) findings that teachers in schools with enough resources tend to demonstrate more favorable opinions towards their teaching environments compared to those in less desirable conditions.

Table 11. *Significant Relationship Between Digital Technology Knowledge and Instructional Supervision Skills of Teachers in Maa District, Davao City*

Variables	Instructional Supervision Skills		
	Teaching-Learning Resource Availability (Moderator)		
	r-value	p-value	Decision
Technical	0.351*	0.000	Reject H$_0$
Pedagogical	0.659*	0.000	Reject H$_0$
Ethical	0.246*	0.000	Reject H$_0$
Attitudinal	0.812*	0.000	Reject H$_0$
Overall Digital Technology Knowledge	*0.788**	*0.000*	*Reject H$_0$*

*Significant @ p<0.05

E. Moderating Effect of Teaching-Learning Resource Availability on the Interaction Between Digital Technology Knowledge and Instructional Ability of Teachers in Maa District, Davao City

The study employed hierarchical regression analysis to assess the moderating effect of teaching-learning resource availability (TLR) on the relationship between digital technology knowledge (DTK) and instructional ability of teachers (IA) in Maa District, Davao City. In Step 1, DTK ($\beta = 0.105$, $p < 0.05$) and TLR ($\beta = 0.211$, $p < 0.05$) independently contributed to explaining 63.80% of the variance in IA ($R^2 = 0.638$, $p < 0.05$). Step 2 introduced the interaction term (DTK*TLR), revealing significant effects for DTK ($\beta = 0.384$, $p < 0.05$), TLR ($\beta = 0.177$, $p < 0.05$), and DTK*TLR ($\beta = 0.224$, $p < 0.05$). This model explained 72.20% of the variance in IA ($R^2 = 0.722$, $p < 0.05$), with the interaction term contributing an additional 8.40% of explained variance ($\Delta R^2 = 0.084$). These results underscore the significant role of both DTK and TLR, highlighting the enhanced explanatory power of their interaction in predicting IA among teachers in the study area.

Table 12. *Moderating Effect of Teaching-Learning Resource Availability on the Interaction Between Digital Technology Knowledge and Instructional Ability of Teachers in Maa District, Davao City*

Step 1	Instructional Ability (IA)				
	B	Beta	S.E.	p-value	Decisions
Digital Technology Knowledge (DTK)	.105	.131	.056	.000	Reject H$_0$
Teaching-Learning Resource Availability (TLR)	.211	.078	.049	.000	Reject H$_0$
R^2 = 0.638	F-value = 117.884**			p-value = 0.000	
Step 2					
Digital Technology Knowledge (DTK)	.384**	.576	.031	.000	Reject H$_0$
Teaching-Learning Resource Availability (TLR)	.177**	.126	.048	.000	Reject H$_0$
Moderator (DTK*TLR)	.224**	.089	.052	.000	Reject H$_0$
R^2 = 0.722	F-value = 132.087**			p-value = 0.000	
*Significant @ p<0.05					

The results led to the rejection of the null hypothesis, suggesting that the availability of teaching-learning resources (TLR) had a significant role in moderating the link between teachers' digital technology knowledge (DTK) and their instructional ability (IA) in Maa District, Davao City. This discovery supports the assertion made by Granito and Chernobilsky (2012) that cultivating favorable attitudes towards digital technology boosts instructors' drive and creativity in their teaching methods, allowing them to effectively address educational obstacles. Furthermore, the research indicates that when people's attitudes towards online technology become more positive, they are more likely to easily adjust to activities that involve technology integration. This is advantageous because they are already familiar with digital technologies. Furthermore, the results corroborate the perspective of Wanjala and Wanjala (2017) that school resources have an impact not only on student accomplishment but also on teacher effectiveness. On the other hand, Iwu and Iwu (2013) contended that insufficient school resources, such as inadequate instructional technology and maintenance, can reduce the effectiveness of instruction and decrease teacher satisfaction. Steele et al. (2010) also found that subpar communication technology and instructional materials have negative effects on teachers' professional experiences.

IV. CONCLUSIONS AND RECOMMENDATIONS

A. Summary of Findings

The study sought to examine the impact of the availability of teaching-learning resources on the link between digital technology knowledge and instructional supervision skills among 212 public elementary school teachers in Maa District, Davao City. The researcher employed a non-experimental quantitative methodology and correlation methodologies to determine that teachers possess a comprehensive level of digital technology knowledge, with an overall mean of 3.58. The knowledge included several aspects including technical, pedagogical, ethical, and attitudinal dimensions, with average scores of 3.78, 3.51, 3.40, and 3.61, respectively. Instructional supervision skills had an average

rating of 3.50, indicating a high level of proficiency. These skills encompass instructional management, management practices, and behavior management, with mean values of 3.50, 3.31, and 3.69, respectively. The availability of teaching-learning resources was assessed at 3.69, suggesting a high level of availability.

In addition, the study found a strong positive correlation ($r = 0.788$, $p < 0.05$) between proficiency in digital technology and the ability to supervise instruction. This association was influenced by the availability of teaching-learning resources. This indicates that there was a notable shift in the instructional supervision skills of instructors in Maa District as their knowledge of digital technology varied. Furthermore, the hierarchical regression analysis provided confirmation that the presence of teaching-learning resources had a substantial moderating effect on the relationship between knowledge of digital technology and skills in instructional supervision ($R^2 = 0.722$, $p < 0.05$), accounting for 72.20% of the variability. This highlights the essential importance of resources in improving instructors' capacity to seamlessly incorporate technology into their teaching methods, consequently impacting their total ability to supervise instruction.

B. Conclusions

From the findings and limitations of this study, numerous conclusions can be drawn. Teachers in Maa District, Davao City possess a comprehensive understanding of digital technology in several aspects such as technical skills, teaching methods, ethical considerations, and attitudes. This reflects the prevalent usage and acceptance of technology in their teaching practices. They possess substantial instructional supervision skills, notably in instructional and behavior management. However, their management practices demonstrate a limited level. There is a strong correlation between teachers' proficiency in digital technology and their ability to supervise education. This suggests that changes in attitudes towards digital technology are closely linked to variations in teaching efficacy. The availability of teaching-learning resources is broad and plays a vital role in modulating the interplay between teachers' pedagogical tactics and learners' self-directedness, thereby improving instructional outcomes. The results confirm that the availability of resources has a substantial impact on how knowledge of digital technology affects instructional supervision skills in the Maa District, Davao City.

C. Recommendations

The researcher suggests that the Department of Education should persist in offering orientation sessions to primary school teachers in Maa District, Davao City, with a specific focus on efficiently incorporating digital technology into classroom environments. These orientations aim to provide teachers with the requisite basic knowledge and practical skills to optimize teaching and learning using digital resources. Furthermore, it is strongly recommended that school administrators and stakeholders allocate resources to enhance information and communication technology (ICT) infrastructure in schools, in accordance with a comprehensive school-wide ICT development strategy. This strategy guarantees uniformity and efficiency in the integration of ICT into educational activities.

Moreover, educators are urged to utilize cutting-edge instructional methods utilizing digital tools to cultivate favorable attitudes and drive among students. It is important to prioritize continuous professional development for teachers through in-service training. This will help them to integrate various instructional methods that improve student engagement and academic success. Finally, further investigation is needed to examine other variables that impact the correlation between teachers' proficiency in digital technology and their ability to supervise instruction in Maa District, Davao City, within a wider educational framework.

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