

MANAGEMENT OF LEARNING RESOURCE MATERIALS, TECHNOLOGY UTILIZATION, AND TEACHERS' COMPETENCE IN SELECTED PUBLIC SCHOOLS

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ABSTRACT

The government is drawing up blueprints for the provision of quality education through its adoption of the K-12 curriculum. This transformation of the education system creates entirely new demand for producing the kind of talent its economy needs to sustain growth and development. Master teachers and school heads must be able to utilize technology inside the classroom and be competitive enough and able to manage the resource materials under Learning Resource Management Development System. This study aimed to assess the status of learning resource materials utilization, level of management of learning resources, technology utilization, and teachers' competence. The study utilized a descriptive, inferential quantitative method and a survey questionnaire. The data gathered were interpreted using the weighted mean and Z- test. The salient findings of the study showed that both the master teacher and the school head, Strongly Agree on the status of resource materials utilization. Results revealed that the hypothesis on the significant difference in the status of learning resource materials utilization was accepted; hence, it was not significant. The hypothesis about the test of difference on the level of management of resource materials was rejected; therefore, it was significant. To establish the difference in the assessment on the level of technology utilization, the hypothesis was rejected; therefore, it was significant. On the level of the master teacher's competence based on their Performance Commitment and Review Form, it purported that respondents assessed it as Excellent. The test of difference on master teachers' competence based on IPCRF revealed that it was significant; thus hypothesis was rejected. The findings were the basis for a proposed plan for Teachers' Capacity Training Program on Technology Utilization. It was of great help in designing a technology utilization plan that could increase teachers' competence in the full realization of the Department of Education goals and objectives.

Keywords: Learning Resources, Technology Utilization, Teachers Competence, Descriptive Method, Public Schools, Philippines

INTRODUCTION

The transformation of the education system with its adoption of the K-12 curriculum could create entirely new demand for producing the kind of talent its economy will need to sustain growth and development. Master teachers and school heads must be able to utilize technology inside the classroom through their competence in the use of such by attending workshops and seminars and being able to manage the learning resource materials which is the ultimate goal of

Learning Resource Management Development System (LRMDS). As the country seeks to develop and expand its economy to better serve all socio-economic groups, an effort to boost the country's educational system are gaining fraction. Upgrading teachers' competence through proper utilization of technology and proper management of learning resources will play the key role in the overall development. As described by the former Secretary of Education, Mr. Jesli Lapus (2015,) the current condition of Philippine Basic quality education had sunk to its lowest level.



Accordingly, this was very alarming. Therefore, educational leaders must do something to address these aspects of the system that needs special attention. On the other hand, Leonor Magtolis Briones (2017) – DepEd, Secretary believed that a challenge among the school heads, master teachers and teachers exists in raising the quality of education all throughout the country with regard to management of learning resources in school, utilization of technology in class and most significantly the articulation of teachers competence in carrying out the objective of the Department of Education in its vision of creating a globally competitive learners. The challenges and expectations are great, and the task is daunting in the management of Learning Resource Materials (LRM) as cited by Domingo (2018) but the master teachers and school heads are confident that through the wise utilization of such resources, the Department of Education will be able to achieve such reform in the education system. However, the adequacy and sufficiency of learning resource materials were always the main consideration in the attainment of the aforementioned DepEd goals and objectives. Master teachers are the key players in the utilization of technology in class as perceived by Cornelia (2015), considering the rapid and pervasive technological changes throughout the country. Master teachers are capable of carrying over with such tremendous improvement in the education sector for they are highly responsible for the improvement of the instructional competence of teachers in the department where they belong. The knowledge, expertise and the experiences of master teachers play a big part in the evaluation and improvement of learning resource materials leading to the attainment of producing globally competitive teachers and learners. However, not all of the master teachers are doing such task because the majority of them are also suffering from the lack of knowledge and technical know-how concerning technology utilization. On the other hand, the competence of public-school teachers was also of prime significance in the management of learning resources, utilization of technology in the heads find themselves enduring, it is hard to

classroom, Rada (2015). Their knowledge and skills should be evaluated in terms of their ability to utilize Information and make it more responsive to the needs of students in a classroom. Assessing and evaluating of teacher's competence can serve as the basis in designing a management program that will cater to the significant aspects of teaching and learning process. The above contentious ensure the need to identify the problems encountered by the teachers and school heads in terms of learning resource materials and the utilization of technology to provide a possible solution that will lead to better functioning of the school as a whole. With this, there is a strong need to identify the gaps that are existing and continuously contributing to an increasing problem in the Department of Education concerning the management of learning resource materials, the utilization of technology in classrooms and teachers' teaching competence.

CONCEPTUAL FRAMEWORK

The framework states the process of obtaining the answer to the problem of teacher's capability to manage and utilized Learning Resource Materials Development System (LRMDS) effectively. It is important that the teacher's technical know-how and capabilities to improve their involvement in this fast-changing society. A skill that should be present to the 21st-century teacher is the teacher's ability to create and innovate something that will contribute to the attainment of learning goals and objectives. In view of this, the diversity of learning materials must be created and be used in teaching diversified learners by all levels. Shared-Decision Making is defined in their article as a quote from Senge, is "the willingness to collaborate, pass on complete and accurate information/ tasks through proper utilization of human resource" (cited in Rice and Doyle, 2010) Thus, the school heads could embrace shared-decision making through using leadership teams and being authentic with the teachers. Understandably, in the throes of all of the high-stakes accountability that school

Relinquish the power of decision making over to the master teachers and teachers knowing that to build high competence the leader must live with the results. (Wahlstrom & Louis, 2008). It was noted that the school leader should keep in mind the following concepts when leading a team through proper utilization of learning resource materials in class. Select modest material, explain how this change fits the students' need,

evaluate the changes often, keep the materials tangible, interlink the learning materials with professional development, create collaboration time for team members, conduct well-organized teachers meetings, and allow the practice to persuade proper utilization. Thus, the instructional leader when sharing the responsibility of communicating school goals can empower the school staff

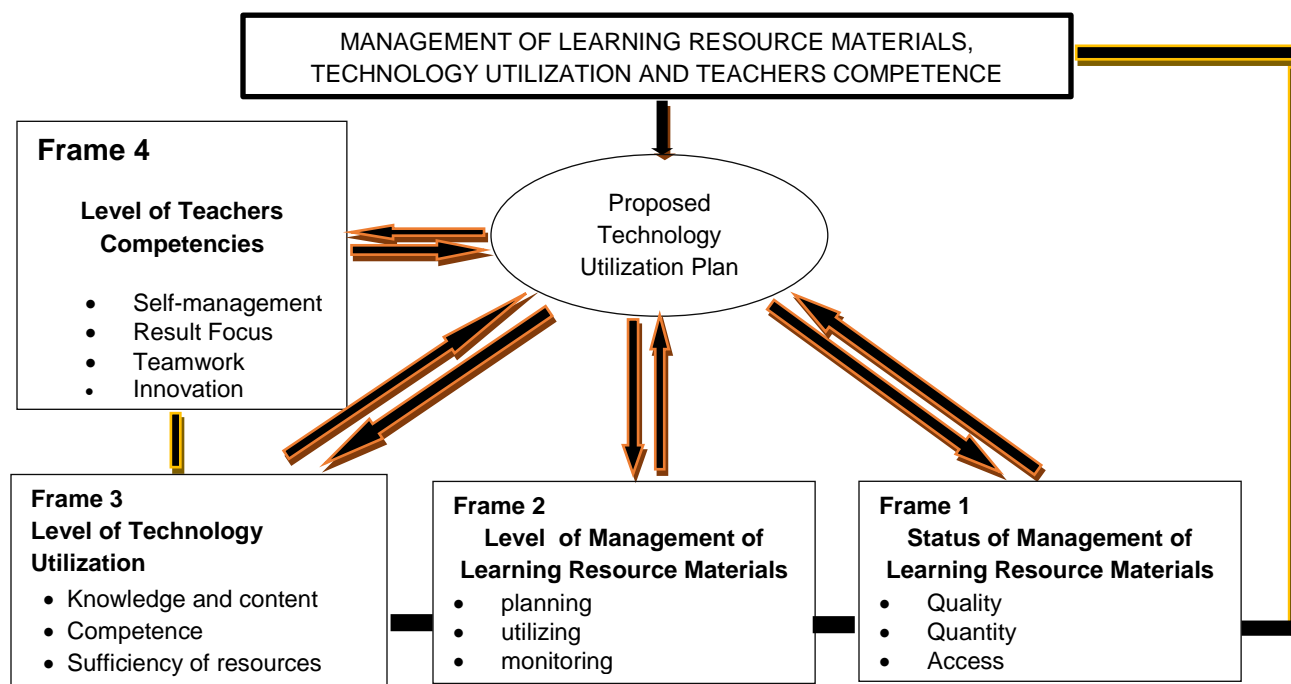


Figure 1. Research Paradigm

OBJECTIVES OF THE STUDY

The main purpose of the study was to assess the status of learning resource materials utilization, the level of management of learning resources, technology utilization and teachers' competence in selected public schools in Caloocan, Malabon, Navotas, and Valenzuela (CAMANAVA), Philippines. Specifically, it aims to: (1) determine the status of learning resource materials utilization (2) assess the level of management of learning resource materials (3) determine the significant difference between the levels of control of learning resource utilization (5) determine the significant difference

on the level of technology utilization (6) assess the level of teachers' teaching competence based on the Individual Performance Commitment Review Form (IPCRF) (7) determine the significant difference in the level of competence of master teachers (8) develop a proposed technology utilization Plan for better learning outcomes.

METHODOLOGY

The study used a descriptive method since it wanted to know "what is" the prevailing conditions particularly how assessments differ. It



dealt with assessing the status of learning resources utilization, the level of management of resource materials technology utilization, and teacher's competencies through a survey questionnaire which was the source of data. Purposive sampling technique was employed for the respondents of the study who were master teachers and their school heads comprising 172 and 32 respectively across four Schools Divisions in the National Capital Region particularly at CAMANAVA. The researcher perused related studies to be able to construct the survey instruments which was used to gather the data needed; likewise, four indicators under competence from the IPCRF were included. The questionnaire-checklist was used to determine the status of the utilization of learning resource materials, the level of management of learning resource materials, technology utilization, and teachers' competencies. It comprised four parts namely: Part I focused on the status of the learning resource materials utilization, in terms of quality, quantity and access, Part II focused on the master teachers' and school heads' assessment on the management of learning resource materials in terms of planning, utilizing, and monitoring. Part III covered the master teachers and school heads assessment on the level of technology utilization in terms of

knowledge and content, competence, and sufficiency of resources. Part IV covered the assessment on teachers' competencies based on Individual Performance Commitment and Review Form (IPCRF). The statistical tools that were used in the study are as follows: Weighted Mean was used to determine the status of learning resource materials utilization as assessed by the master teachers and school heads. Weighted Mean was also used in determining the level of technology utilization as assessed by the respondents in public schools in CAMANAVA as well as to determine the level of teacher's competencies based on Individual Performance Commitment and Review Form (IPCRF). Z-test was used to determine the assessment of both the master teachers and the school head in terms of the status of learning resource materials utilization, level of management of learning resource materials, the level of technology utilization and teachers' teaching competence. All data were interpreted and computed with the use of Statistical Package for Social Sciences (SPSS) version 17. A three-point Likert scale was used in the status of learning resource materials utilization, level of management of learning resources and technology utilization. A four-point Likert scale was used in assessing the competencies of teachers.

RESULTS AND DISCUSSION

1. Status of Learning Resource Materials Utilization in terms of Quality, Quantity, and Access

Table 1. Summary of the Status of Learning Resource Materials Utilization

| Variables | Master Teacher | | School Head | | AWM | DV |
|------------------------------|-----------------------|-----------|-----------------------|-----------|-------------|-----------|
| | Average Weighted Mean | DV | Average Weighted Mean | DV | | |
| A. QUALITY | 2.67 | SA | 2.55 | SA | 2.61 | SA |
| B. QUANTITY | 2.39 | SA | 2.52 | SA | 2.46 | SA |
| C. ACCESS | 2.57 | SA | 2.43 | SA | 2.50 | SA |
| Overall Weighted Mean | 2.54 | SA | 2.50 | SA | 2.52 | SA |

The table shows that both the master teacher and the school head respondents Strongly Agree in all the three indicators as evidenced by the overall weighted means of 2.54 and 2.50, respectively. This has been supported with the combined average weighted mean having the same descriptive value. These manifest that the master teachers are bridging

collaborative efforts with the school heads in utilizing learning resource materials with quality and quantity, likewise, ensuring access to the available learning resource materials. According to Manuel, D. (2015) the curriculum must become more relevant to what students will experience in the 21st-century workplace.



2. Level of Management of Learning Resource Materials as regards to Planning, Utilizing and Monitoring.

Table 2. Summary of the Level of Management of Learning Resource Materials

| Variables | Master Teacher | | School Head | | AWM | DV |
|------------------------------|-----------------------|-----------|-----------------------|-----------|-------------|-----------|
| | Average Weighted Mean | DV | Average Weighted Mean | DV | | |
| A. PLANNING | 2.71 | SA | 2.69 | SA | 2.70 | SA |
| B. UTILIZING | 2.58 | SA | 2.52 | SA | 2.55 | SA |
| C. MONITORING | 2.57 | SA | 2.49 | SA | 2.53 | SA |
| Overall Weighted Mean | 2.62 | SA | 2.57 | SA | 2.59 | SA |

The table shows that both groups of respondents Strongly Agree on all items under planning, utilizing and monitoring as evidenced by the overall weighted means obtained such as 2.62 and 2.57 which are both interpreted as Strongly Agree, which is the same descriptive value for the combined average weighted mean of 2.59. Further, these manifest that the master teachers and school head respondents have a very strong collaboration, likewise, they are

competent enough to assist teachers in so far as management of learning resources is concerned. Just as Chiu, H. (2015) stated in her study, that a technology-enhanced learning environment does not automatically produce high-quality learning outcomes. It needs to be supported by suitable learning materials and strategies for blended learning which suit the learning needs of students in the present educational context.

3. Test of difference in the assessment of the two groups of respondents on the level of management of learning resource materials in terms of planning, utilizing and monitoring

Table 3. Test of Difference in the Assessment of the Two Groups of Respondents on the Level of Management of Learning Resource Materials

| Respondents | N | Mean | SD | Computed Z -Value | Critical Z-Value at 0.05 | Decision | Interpretation |
|-----------------|-----|--------|--------|-------------------|--------------------------|-----------|----------------|
| Master Teachers | 172 | 0.2284 | 0.0379 | 6.7923 | 1.972 | Reject Ho | Significant |
| School Heads | 32 | 1.2031 | 0.0795 | | | | |

The data in the table show the computed means of 0.2284 and 1.2031 and the standard deviation of 0.0379 and 0.0795, and based on these data, it could be gleaned that, the computed Z-value of 6.7923 is greater than the critical Z-value of 1.972 with 202 as degrees of freedom and 0.05 level of significance, thus, the null hypothesis (H_0) is Rejected. Therefore, the assessment of two groups of respondents on the level of management of learning resource materials manifested Significant difference. This implies that the school head had a different way of looking into the availability, usability, and adaptability of learning materials in school. This means that since master teachers are tasked on

the instructional, supervisory function, school heads give them the leeway to make a regular assessment on this matter. Likewise, the challenges and expectations are great and the task is daunting in the management of Learning Resource Materials (LRM) as cited by Domingo (2018) but the master teachers and school heads are confident that through the wise utilization of such resources, the Department of Education will be able to achieve such reform in the education system. However, the adequacy and sufficiency of learning resource materials were always the main consideration in the attainment of the aforementioned DepEd goals and objectives.



4. Level of Technology Utilization as Assessed by the Two Groups of Respondents In terms of Knowledge and Content, Competence, and Sufficiency of Resources

Table 4. Summary of the Level of Technology Utilization as Assessed by the Two Groups of Respondents

| Variables | Master Teacher | | School Head | | AWM | DV |
|------------------------------|-----------------------|-----------|-----------------------|-----------|-------------|-----------|
| | Average Weighted Mean | DV | Average Weighted Mean | DV | | |
| A. Knowledge and Content | 2.49 | HU | 2.51 | HU | 2.50 | HU |
| B. Competence | 2.45 | HC | 2.31 | C | 2.38 | HC |
| C. Sufficiency of Resources | 2.37 | HS | 2.21 | S | 2.29 | S |
| Overall Weighted Mean | 2.44 | HU | 2.34 | HU | 2.39 | HU |

It can be gleaned from the table that both groups of respondents have the same assessment that yields a descriptive value of Highly Sufficient as shown by the overall weighted mean which is 2.44 and 2.34 respectively. Although master teachers assessed knowledge and content with an average weighted mean of 2.49 interpreted as Highly Utilized, they are Highly Competent in the second indicator which is competence, with 2.45 average weighted mean; likewise, they had 2.37 and a descriptive value of Highly Sufficient in the last indicator which is a sufficiency of resources. Moreover, the combined average weighted mean of 2.39 had a

descriptive value of Highly Utilized. On the other hand, the assessment of the school heads as regards to knowledge and content had an average weighted mean of 2.51 with a descriptive value of Highly Utilized. This finding is further supported by Clemente, A. (2014) in her article entitled "Technology Leadership: Enhancing Positive Educational Change." Based on this article, school leaders must face reality in the world of education that technology is a changing phenomenon. The school leaders, therefore are expected to possess not only general leadership skills but also technology leadership skills.

5. Test of difference in the assessment of the two groups of respondents on the level of technology utilization in terms of knowledge and content, competence and sufficiency of resources.

Table 5. Test of Difference in the Assessment of the Two Groups of Respondents on the Level of Technology Utilization

| Respondents | N | Mean | SD | Computed Z-Value | Critical Z-Value at 0.05 | Decision | Interpretation |
|-----------------|-----|--------|--------|------------------|--------------------------|-----------|----------------|
| Master Teachers | 172 | 0.2127 | 0.0246 | 15.5219 | 1.972 | Reject Ho | Significant |
| School Heads | 32 | 1.0990 | 0.3230 | | | | |

The table shows that based on the computed weighted means of 0.2127 and 1.0990 and the standard deviation of 0.0246 and 0.3230, the computed Z-value of 15.5219 is greater than the critical Z-value which is 1.972. This purports that the null hypothesis (H_0) is Rejected. Therefore, at 0.05 or 5 percent level of significance and degrees of freedom of 202, it can

be concluded that the assessment of master teachers on the level of technology utilization has Significant difference with that of the school head respondents' assessment. This result further concludes that as far as technology utilization is a concern, master teachers have a better grasp as regards to knowledge and content and also competence since they are the front liners, while



the school heads oversee the sufficiency of resources since they are the only person accountable with regard to the school financial aspects. This findings is supported by Luna, G. (2016) in his article entitled “The Great Demand of the Learners in the Automated World”, stated

that a good reflective teacher regularly and systematically reviews the results of her teaching, identifies loopholes as well as success ingredients and in the end “reconstructs” future alternative.

6. Level of Competence in terms of Self-Management, the Result Focus Teamwork, and Innovation

Table 6. Summary of Master Teachers’ Level of Competence as Assessed by the Two Groups of Respondents

| Indicators | Master Teacher | | School Head | | AWM | DV |
|------------------------------|-----------------------|----------|-----------------------|----------|-------------|----------|
| | Average Weighted Mean | DV | Average Weighted Mean | DV | | |
| A. SELF- MANAGEMENT | 3.37 | E | 3.22 | E | 3.30 | E |
| B. RESULT FOCUS | 3.43 | E | 2.90 | E | 3.17 | E |
| C. TEAMWORK | 3.26 | E | 3.32 | E | 3.29 | E |
| D. INNOVATION | 3.41 | E | 3.22 | E | 3.32 | E |
| Overall Weighted Mean | 3.37 | E | 3.17 | E | 3.27 | E |

The table shows that both groups of respondents assessed that master teachers are Excellent in all the four indicators as evidenced by the overall weighted means of 3.37 and 3.17 respectively. These mean that master teachers’ competencies are within their grasp based on their Individual Performance Commitment

Review Form (IPCRF). However, the combined average weighted mean of 3.27 shows that the descriptive value is only Excellent. This means that master teachers need improvement as regards competencies. This could be the basis of a future plan to capacitate the teachers.

7. Test of difference on the assessment of the two groups of respondents on the level of master teachers’ competence as regards self-management, the resulting focus, teamwork, and innovation in their Individual Performance Commitment Review Form (IPCRF).

Table 7. Test of Difference in the Assessment of the Two Groups of Respondents on the Level of Master Teachers’ Competence Based on IPCRF

| Respondents | N | Mean | SD | Computed Z -Value | Critical Z-Value at 0.05 | Decision | Interpretation |
|-----------------------------|-----|--------|--------|-------------------|--------------------------|-----------|----------------|
| Master Teachers | 172 | 0.3914 | 1.0194 | | | | |
| School Heads | 32 | 1.9766 | 0.9643 | 2.8702 | 1.972 | Reject Ho | Significant |
| Level of Significance: 0.05 | | | | df = 202 | | | |

The data in the table show that based on the assessment of the master teachers and school heads respondents, the mean of the former is 0.3914 while the latter is 1.9766 with the standard deviation of 1.0194 and 0.9643

respectively. With the degrees of freedom of 202, the computed Z-value is 2.8702 which is greater than the critical Z-value of 1.972 at 0.05 level of significance, thus, the null hypothesis is rejected. Therefore, it can be concluded that the test of

significant difference in the assessment of the two groups of respondents on master teachers' competence based on their IPCRF is found to be significant. This further shows that objectivity on the part of the school heads in rating the master teachers it can be construed to be real, or it may be biased, according to Robins, (2015). But, this partiality or impartiality of the school heads is manifested in their assessment. Therefore, in the present study, significance has been established that master teachers would differ in their assessment of themselves as regards competence over the assessment of the school heads.

8. Proposed Technology Utilization Plan

Rationale

In order to deliver best teaching and learning process that will produce students imbued with adequate knowledge and skills with appropriate attitudes needed in accepting the challenges of the fast-changing society the teachers need to conduct a Technology Utilization plan that will address the weak points in his/her instructional competence in the utilization of instructional materials with special consideration to the pervasiveness of technology in class as revealed in the research conducted. This proposed Technology Utilization Plan was inspired by the Individual Performance Commitment and Review Form (IPCRF). This was used for the teachers to enhance their instructional competencies, technology utilization further, the wise use of instructional materials and eventually become effective in their teaching methodology.

Objectives

This Technology Utilization Plan is a five-day activity, aims to achieve the following objectives:

1. Identify the strengths and weaknesses of school-based programs and eventually finds ways of improving them;

2. Cite possible strategies in proper allocation of resources in the school including the technical and material resources of the institution;
3. Demonstrate ways in creating an effective plan in responding to the needs of the school in relation to technology utilization;
4. Explain the underlying phenomena in the success of utilizing school learning resource materials and be able to convert it into school's best practices.
5. Demonstrate proper ways of utilizing learning resource materials as well as maximize the use of technological utilization plan.

Target Participants

The target participants in this five-day activity are the 172 master teachers and 32 school heads of selected public schools in the Division of Caloocan, Malabon, Navotas, and Valenzuela (CAMANAVA).

CONCLUSIONS

Based on the foregoing salient findings, the following conclusions are drawn:

1. Master teachers mandate as the instructional supervisor to ensure that instruction is well-delivered through the proper use of appropriate learning resource materials.
2. The assessment of the two groups of respondents on the status of learning resource materials utilization has no difference. This only showed that the three indicators have consistent interpretation.
3. Both respondents have consistently assessed the level of management of learning resource materials based on the three indicators; they have distinct roles or functions. The school principal looked at the items in each indicator and assessed them based on his or her standard distinct from that of a master teacher.



4. The difference in the assessment of the two groups of respondents had rejected the hypothesis in terms of technology utilization is concerned.
5. As regards master teachers' competence based on the IPCRF both groups of respondents had a very close assessment. Accordingly, master teachers themselves are Excellent in all four indicators.

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RECOMMENDATIONS

The following recommendations are hereto offered based on the findings of the study.

1. The result of this study should be presented to the schools across 16 schools divisions since there is a policy or guidelines set forth for the learning resource materials utilization. It mandates full implementation of LRMS. Therefore, this study highly recommends adopting some mechanisms on reviewing or revisiting the policy and ensure compliance thereat.
2. The salient findings of this study can be the bases in designing a school-based in-service training for LRMS focal persons. Therefore, a training program is hereby recommended for LRMS persons-in-charge or focal persons to enhance their competence in determining usability, quality, quantity, and accessibility of learning resource materials for school use.
3. The result of the study also deals on the technology utilization as part of the daily activities in the classroom; hence it is recommended that master teachers and non- master teachers should undergo an intensive training program focused on technology utilization.

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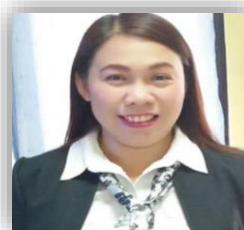
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