

K to 3 teachers' utilization and challenges in the implementation of learning resource management and development system

Sheryl B. Velasquez

Mabini College, Inc. Governor Panotes Avenue
Daet, Camarines Norte, 4600, Philippines
Email: sheryl.velasquez@deped.gov.ph

Sonia S. Carbonell

Mabini College, Inc. Governor Panotes Avenue
Daet, Camarines Norte, 4600, Philippines

Abstract: This study aimed to determine the K to 3 teachers' utilization and challenges while implementing the Learning Resource Management Development System in Daet South District elementary schools for the school year 2021-2022 as a basis for designing LRMDs training materials. Specifically, it sought to answer the following questions: 1) What is the profile of Daet South District K to 3 teachers in terms of age, sex, civil status, educational attainment, position, and length of service? 2) What is the K to 3 teachers' level of utilization on the implementation of the Learning Resource Management Development System (LRMDs) in Daet South District in terms of guidelines and policies, procedures and methods for resource development, c. technical and professional support from experts and evaluation and monitoring of developed resources? 3) Is there a significant relationship between the K to 3 teachers' utilization of the Learning Resource Management Development System (LRMDs) and their profile? 4.) What challenges and opportunities are encountered by the K to 3 teachers in utilizing the Learning Resource Management Development System (LRMDs)? 5) What intervention may be proposed to enhance the utilization of the LRMDs of K to 3 teachers? The greater number of the respondents, belong to the age bracket of 46-50 years old; all were female teachers, married, and attained bachelor's degrees. Teacher III is in position and has 21-25 years in service. The respondents are sufficiently engaged in LRMDs in the contexts of guidelines and procedures, were sufficiently engaged in the procedures and methods for resource development, highly engaged in the technical and professional support from experts. The respondents were sufficiently engaged in evaluating and monitoring developed resources. The profile in terms of position and level of utilization of LRMDs, along with technical and professional support, obtained a significant relationship. Likewise, the profile in terms of age and the level of utilization, along with evaluation and monitoring of the developed resources, obtained a significant relationship. In terms of LRMDs, the leading challenge was time constraints, rigorous quality assurance process, limited funds provided by external experts, limited time to sustain the evaluation and monitoring of learning resources. The findings showed that the leading opportunities in LRMDs utilization perceived by the respondents were enhanced ability to pilot new learning resources, improved competence in utilizing technology in learning resource production, enhanced research-based practices in LRMDs and enhanced quality assurance of learning resources. This intervention program was also designed to address the four major challenges in LRMDs. A greater number of the respondents are female, old adult teachers with bachelor's degrees, Higher teaching positions, and ample years of experience in teaching. In general, the teachers have an average or adequate level of participation in LRMDs. Teachers' profiles in terms of position, age, and length of service established connections with their engagement in LRMDs, However, their civil status and educational attainment do not correlate with their LRMDs practices. The LRMDs engagement of the teachers is challenged mostly by time constraints or limited time to execute multiple LRMDs-related tasks, rigorous and difficult processes of quality assurance, limited funds provided by external experts, and limited time to sustain evaluation and monitoring of learning resources.; However, teachers gain access to potential opportunities in LRMDs engagement in terms of enhanced ability to pilot new learning resources and materials in the classroom, improved competence in utilizing technology in learning resource production, enhanced research-based practices in LRMDs and enhanced quality assurance of learning resources. The proposed intervention program highlighted alternative practices and solutions to address hurdles in LRMDs teacher engagement. School leaders may identify the trends in teachers' profiles that can serve as the basis for informed training in surveys on the factors affecting teachLRMDs; Teachers may conduct furtherers' engagement in LRMDs. School leaders and academicians may implement further studies on teacher attributes that influence their LRMDs engagement.

K to 3 teachers' utilization and challenges in the implementation of learning resource management and development system

Keywords: K to 3 teachers, LMRDS, Daet South, Teachers' utilization, Challenges, Implementation

Date Submitted: May 13, 2025

Date Accepted: May 17, 2025

Date Published: May 23, 2025

INTRODUCTION

Teachers' engagement in learning resource development and management in Philippine education is highly and strictly subjected to specific and established policies and programs aligned with instructional materials and innovations. Filipino teachers cannot just easily venture into producing alternative learning materials because of the need for adherence to these policies. As attested by Sipahi (2020), most teachers are aware that learning resources must be completely subjected to quality assurance by the DepEd to ensure their validity and acceptability as educational materials for Filipino students. Through this quality assurance system, teachers and school leaders gain trust and confidence that the learning resources supplied and offered to the learners are developmentally appropriate, reliable, factual, and truthful in content and inputs, hence, advantageous for the learners.

In addition to the national scenario, the Department of Education paved the way for the Learning Resource Management and Development System (LRMDS) to become the standard and most comprehensive organization accountable for evaluating and monitoring teachers' developed educational resources and tools. As Gemotra (2018) described, the LRMDS is held most accountable and trusted in delivering support programs, learning materials, and learner resources. Through the LRMDS, Filipino teachers are oriented and reminded that it is not enough to invest in the quantity and accessibility of learning resources. Teachers are also guided by the realization that they must invest in the high-quality, validity, reliability, and functionality of both standard and alternative learning resources to ensure that they provide advantages for the learners.

Relatively, the LRMDS relates to the provisions of DepEd Order No. 76. Series of 2011, which is specifically concerned with the implementation of the Learning Resources Management and Development System (LRMDS). It provides guidelines for creating, managing, and distributing learning resources in support of the education system in the country. It clarifies that the LRMDS is the centralized platform for storing and managing digital and print learning resources. This policy also supports and promotes the empowerment of teachers in using and contributing to LRMDS, helping them to access and utilize resources for effective teaching and learning.

In addition, the LRMDS shares provisions to the standards of the QMT or the Quality Management and Technical provisions under the DepEd. The QMT relates to the policies, guidelines, and strategies to ensure the quality of education in Philippine schools through the effective management and use of technical support systems. One of the policies covered by the QMT relates to providing continuous professional development and training of teachers by providing technical assistance and support for teachers in developing teaching materials, classroom management, and the latest educational tools.

Relatively, Abogadie-Torbila (2021) found that most teachers view and consider adherence to LRMDs policies as highly beneficial to their professional growth and as their support in enhancing time-tested pedagogical strategies and professional skills. In this study, the teachers from kindergarten to grades 1-3 levels of Daet South District are also aware of the need to attain the standards of LRMDs during their engagement in producing various learning materials and resources. Many of these K to 3 teachers in the district have personally and directly experienced the complex procedures and system of learning resource production and compliance with LRMDs policies. During the pre-interviews with K to 3 teachers, it was revealed that most of their designed and developed learning resources focus and evolve on basic literacy skills such as reading, writing, and language-oriented skills. These teachers find engagement in learning resource development as a dual advantage on their part. First, the production of learning resources approved and validated by the LRMDs committee serves as an additional contribution to the support services of the learners regarding access to educational materials. Another is that teachers pursuing professional growth and advancement are also committed to producing learning resources that meet the quality assurance standards of LRMDs.

Moreover, this study is also based on the observations and understanding of the experiences of the K to 3 teachers regarding the varied difficulties, problems, and challenges they encounter, starting from the production process to the rigorous validation and quality assurance of their developed resources and innovations. That is why the researcher finds the need to assess the level of utilization of K to 3 educators along with compliance with the standards of LRMDs and how these teachers employ practices to support and reinforce their engagement in learning resource development and utilization. The study also aims to identify teachers' challenges and opportunities along LRMDs, which became the basis for proposed interventions.

Research Objectives

This study designed and developed a contextualized curriculum based in the current observations and concerns experienced by the researchers. Also, the study specifically assessed the proposed contextualized curriculum model in terms of practicality, usability, relevance, feasibility and replicability as assessed school heads and selected curriculum experts. In addition, the study aimed to examine if there would be a significant difference between the assessment of school heads and curriculum experts in assessing the proposed contextualized curriculum model.

METHODOLOGY

Research Design

This study employed a quantitative method using a descriptive-correlational research design. By nature, the quantitative method facilitates descriptions of the distribution of social attributes among the research participants without variable manipulation by the researcher. According to Sreekumar (2023), the quantitative method facilitates descriptions of the distribution of social attributes among the research participants without variable manipulation by the researcher. Specifically, the said method was applied in this study in the discussion of the focal concepts and major variables as to the profile of K to 3 teachers in Daet South District, the level of utilization of the teachers in the implementation of the Learning Resource Management Development System (LRMDs) in

K to 3 teachers' utilization and challenges in the implementation of learning resource management and development system

Daet South District, the challenges and opportunities encountered by the K to 3 teachers in the utilization of LRMDS, and the intervention program developed to enhance the utilization of the LRMDS.

Meanwhile, the correlation method was specifically applied in this study to establish the significant relationship between the teachers' level of utilization of the LRMDS and their profile

Respondents and Locale of the Study

This study's population included all the K to 3 teachers of Daet South District. A total of 89 teacher-respondents were subjected to the total enumeration method. The major data sources and respondents were the total population of K to 3 teachers in Daet South District; thus, total enumeration was used in this study. The major criteria for including the teacher-respondents in the study included their K to 3 teaching designation, length of service and teaching experiences as K to 3 teachers; training attended in K to-3 education, and their actual experiences in learning resource management and development.

Research Instrument

The primary research instrument used in this study was a structured survey questionnaire. This tool was developed to collect data on several key aspects of the research: the demographic and professional profiles of K to 3 teachers in Daet South District, their level of utilization of the Learning Resource Management Development System (LRMDS), and the challenges and opportunities they encounter in its implementation. The questionnaire was designed to allow respondents to assess their engagement with LRMDS across specific domains, including guidelines and policies, procedures and methods for resource development, technical and professional support from experts, and evaluation and monitoring of developed resources. The survey employed Likert-scale formats to quantify levels of utilization and frequency of challenges and opportunities. In addition to closed-ended items, the instrument facilitated structured data collection necessary for descriptive and correlational analyses. Prior to distribution, ethical standards were observed, including securing consent from the participants and ensuring data privacy compliance. The instrument was administered to the total population of 89 K to 3 teachers in the district, ensuring comprehensive data representation.

Data Analysis

The relevant data collected in this research were subjected to descriptive statistics. The following statistical tools were applied in the data treatment under each major research objective: Percentage and frequency were used to statistically treat the data on the profile of the K-3 teachers in Daet South District. The percentage method is computed by multiplying the frequency by the weight of the response group divided by the number of respondents.

The teachers' utilization level data on implementing the Learning Resource Management Development System (LRMDS) in Daet South District and the challenges encountered by the teachers in the LRMDS were treated using a weighted mean.

The Somer's Delta Coefficient was applied to treat data on the significant relationship between the teachers' level of engagement in implementing the Learning Resource Management Development System (LRMDS) in Daet South District and their profile.

The formula can be expressed as:

$$d = (C - D) / (n2 - T)$$

The data for the correlation of focal variables were subjected to SPSS (Statistical Package for the Social Sciences) Version 21. This is useful for analyzing the correlation of the variables of this study because it provides a user-friendly interface and solid statistical tools for analyzing the correlation among the data points. Moreover, in this study, the Contingency Coefficient C will be used to examine the correlation between two categorical variables involving the teachers' utilization of Learning Resource Management and Development System. In this study, the C helps to examine whether the variables of the study are significantly correlated with the diverse levels of teachers' participation in Learning Resource Management and Development System.

FINDINGS AND DISCUSSION

Profile of Daet South District K to 3 Teachers

Age. The results showed that 20.2 percent of the respondents belong to the age bracket of 46-50, while the lowest percentage of 1.1 belongs to 61 and above bracket. This implies that teachers within the age bracket of 46-50 possess in-depth and comprehensive expertise and experience in teaching and learning management. Hence, at this age, they have established competence in determining the best learning tools and in developing innovative learning resources. Teachers in this age bracket have established experiences in curriculum management, alignment, and application of instructional methods strategies that can guide and drive them toward efficient and meaningful engagement in learning resource development and utilization.

It also implies that teachers who are 46-50 years old are also observed to have a high sense of commitment and motivation towards lifelong learning, professional development, and empowerment, thus inspiring them to engage productivity in LRMDS for pedagogical and instructional enhancement. Therefore, with this dedication towards lifelong education, teachers in this age group often convey interest and motivation in actively participating in professional development training and programs aligned with LRMDS. These findings were conformed by Tarrayo and Anudin (2023), which concluded that teachers aged 46-50 years old are more likely to have established competence in learning resource management and development; hence, they can offer mentoring services to their younger or less experienced co-educators or colleagues along learning resource management.

It also implies that teachers who are 46-50 years old are also observed to have a high sense of commitment and motivation towards lifelong learning, professional development, and empowerment, thus inspiring them to engage productivity in LRMDS for pedagogical and instructional enhancement. Therefore, with this dedication towards lifelong education, teachers in this age group often convey interest and motivation in actively participating in professional

K to 3 teachers' utilization and challenges in the implementation of learning resource management and development system

development training and programs aligned with LRMDs. These findings were conformed by Tarrayo and Anudin (2023), which concluded that teachers aged 46-50 years old are more likely to have established competence in learning resource management and development; hence, they can offer mentoring services to their younger or less experienced co-educators or colleagues along learning resource management.

Sex. It was found that all the respondents, or 100 percent, are female. This implies that female teachers have a higher probability of utilizing the LRMDs than male educators, which can be attributed to the predominance of female teachers in education, especially at the basic education levels. Due to the traditional gender expectations in the education workplace, female teachers are more likely to fulfill roles and integral functions in designing, producing, and managing learning resources and educational materials for the learners. Female teachers are typically attributed to having more nurturing skills and focusing on organizing things and structures in the classroom. Hence, they are likelier to be more engaged and dedicated to learning resource development and management.

Moreover, female teachers possess skills and values that make them well-engaged in learning resource design and production. These skills include organizing objects and classroom tools, giving focus and attention to details, integrating creative designs and features in learning resource materials and aligning the contents and design of learning materials to the curriculum. These were conformed by Cahapay et al. (2021), who also concluded that in terms of values, female teachers are attributed with patience and diligence, giving value to aesthetics and commitment to respond to the interests and needs of 21st-century learners when it comes to visually-oriented learning resource materials.

Civil Status. The findings revealed that most respondents, or 93.3 percent, were married, while the remaining 6.7 percent were single. In Philippine schools and learning communities, more married and family-oriented teachers are more engaged in learning resource management and development than their single counterparts for salient reasons. This means that married teachers typically have broader and more intensive teaching experiences relatable to learning resource development, such as a profound understanding of the roles of learning materials and curriculum alignment and development.

In addition, married Filipino teachers engaged in LRMDs possess a more profound sense of accountability and commitment towards their classrooms and assigned areas, as well as the broader educational environment and community that rely on educational resources. The established life experiences and profound maturity of married educators make them more dependable in developing learning resources that are not only intended for their classes of learners but also for the broader student population and to benefit other educators.

Moreover, it can be gleaned that married teachers tend to have greater ability and competence in balancing their teaching roles and functions and their accountabilities and duties to their families. Thus, it makes them more accustomed, competent, and adapted to the complex process of learning resource production and management, with proper time management and work-life balancing skills. Another advantage of married teachers regarding LRMDs engagement is that

they can draw relevant support systems from their spouses, children, or family members while designing and producing educational resources. Furthermore, married teachers have stronger access to networks and resources to support their LRMDS endeavor. This finding was confirmed by Pelila et al. (2022), who also found that most of the teacher-respondents were married and had sufficient and active communication and collaboration with the education leaders in line with LRMDS practices.

Educational Attainment. The results indicated that the majority, 95.5 percent of the respondents, attained a bachelor's degree, while the remaining 4.5 percent attained a master's degree. These findings imply that most teacher-respondents are at the foundational levels and stages of professional development and career with bachelor's degrees. Therefore, their engagement in learning resource management and development can be deemed early initiatives and starting points in their professional development journey. It also implies that most respondents have greater focus and priorities on their teaching and pedagogical roles, including designing educational materials. Hence, they have more time to engage in LRMDS. Moreover, teachers with bachelor's degrees can view and perceive their engagement in learning resource production as professionally advantageous due to the wide array of skills they can learn and master from these LRMDS practices.

Position. It was revealed that nearly half (48.3 percent) of the respondents were Teacher-III, while the lowest percentage (1.1 percent) attained the position of Master Teacher-I. For several reasons, educators in the Teacher-III position can be viewed as engaging more in learning resource management and development. One is that teachers in the Teacher-III position are typically oriented and focused on classroom-based instruction and services, including designing and utilizing learning materials. These teachers are more directly and practically involved in tasks, functions, and activities that involve learning resource development and administration at the classroom level.

Specifically, teachers in the Teacher-III position actively and practically integrate LRMDS functions in their daily instructional and pedagogical activities. These include daily instructional planning, utilization of standard learning materials, and production of their versions of learning resources or teacher-made materials. These teachers are also specifically engaged in tasks such as adapting instructional materials to the LRMDS section of the DepEd. These are corroborated by Trinidad (2020), who also concluded that most of its respondents were Teacher-III with established experiences, proficiency, and competence in contributing services towards the learning resource system. It was also concluded that teachers in this position were more engaged in learning resource production for professional advancement.

Meanwhile, Master Teachers are typically entrusted with more administrative roles and functions, such as mentoring teachers in learning resource development and management. These expert teachers concentrate on coaching educators, designing year-round school programs, and evaluating instruction and teacher performance. Thus, they have less time for learning resource production, and their roles are more focused on quality assurance and evaluation of the learning resources developed by the teachers.

K to 3 teachers' utilization and challenges in the implementation of learning resource management and development system

Length of Service. The findings showed that more respondents, or 25.8 percent, belong to the 21-25-year-old group, while the lowest percentage, 3.4, belong to the 31-year-old group and above. These results imply that teachers with 21-25 years of experience in teaching have greater engagements in LRMS for salient reasons pertinent to their pedagogical experiences, exposure, and familiarity with developing and managing educational resources. The numerous years of their teaching experiences have shaped their competence and proficiency in designing, adapting, and managing learning resources from standard sources and their educational resource development initiatives and practices.

Moreover, teachers with 21-25 years of experience have established confidence, engagement, and convenience in utilizing learning resources, especially in digital and technology-aided formats and platforms. These teachers have witnessed the evolution and enhancement of educational technologies, including the rise of LRMS. They were trained in using digital and technology-aided teaching modalities. Hence, they become more accustomed to and trained in utilizing various educational resources. This is confirmed by Abogadie-Torbila (2021), who indicated in his study that most teacher-respondents had accumulated years of experience and assumed leadership roles aligned with LRMS. These leadership functions include mentoring novice teachers in gaining proper access to LRMS portals' design of learning resources and acting as resource persons in training and professional development programs related to learning resource development and management.

Level of utilization of the teachers in the implementation of the learning resource management development system

Guidelines and Policies. The findings show that the overall weighted mean of 2.91 generally indicates that the respondents have sufficient utilization in implementing LRMS in the context of guidelines and procedures. This implies that guidelines and procedures in utilizing LRMS of the teacher-respondents were assessed as sufficient because learning resource development is not the only focal priority in the classroom-based teaching of educators. The respondents' know-how in the guidelines and procedures is well aware of these LRMS standards; however, other aspects or areas of LRMS are left unexplored or less mastered by the respondents. Further, the fact also remains that teachers are involved in knowing and learning LRMS guidelines and procedures through specific efforts such as gaining access to the LRMS portal to utilize a variety of essential tools such as lesson plans, activity books, multimedia, and different e-learning materials that are adapted to the K to 12 curriculum guidelines and standards.

Moreover, by being oriented on the LRMS guidelines and procedures, teachers also understand the standards in creating and uploading learning resources. Teachers are oriented on the guidelines for the proper design, creation, and uploading of learning resource materials in the LRMS portals and how to access other functional tools from the portal, such as training modules or online modules that center on the use and integration of learning resources from the LRMS. These findings were conformed by Abogadie-Torbila (2021), who also concluded that adherence to the standards of learning resource development and management guides their engagement in professional development practices in line with educational resources and innovations and standards for resource selection and utilization.

It was also found that the leading response was making personal readings of the DepEd memos and orders regarding LRMDs guidelines, with the highest weighted mean of 2.97 interpreted as sufficiently utilized. This implies that the teachers' initiatives to utilize personal readings of DepEd memos and orders in line with LRMDs significantly vary according to certain factors. These integral factors include the teachers' teaching and pedagogical experiences and demands, levels of exposure and involvement in LRMDs, and the degree to which the educators understand the provisions and guidelines of LRMDs.

Therefore, the extent to which the teachers pursue personal exploration of LRMDs provisions and standards significantly relies on their own pedagogical, educational, and professional needs and also on the learning demands of their students. In addition, the personal readings on LRMDs guidelines also stem from the need for teachers to properly and adequately comply with the standards of the system, especially for those used in designing, developing, and managing educational resources for classroom-based purposes and practical teaching functions.

However, the least response was consulting the school head to acquire relevant information about LRMDs guidelines, with the lowest weighted mean of 2.80 or sufficiently utilized. This is because teachers have practical access to professional guidance and assistance from their school heads during the implementation of LRMDs. Specifically, the school heads orient and inform the teachers on the overview of LRMDs, including its goals, functions, guidelines, and procedures. School heads first explain to the teachers the goals of LRMDs and how it serves the more comprehensive objectives and roles of the DepEd, especially in fostering enhancement of the pedagogical and educational outcomes. Moreover, the school heads initiate discussions with the teachers about the integral and sequential procedures and systems involved in LRMDs.

Abendano (2020), who discussed that teachers also adhere to the standards of LRMDs by first consulting school leaders and experts to develop educational resources and innovative materials for technical and professional guidance, agreed with these findings.

Level of utilization of the k to 3 teachers on the implementation of the lrmds, along procedures and methods for resource development

Procedures and Methods for Resource Development. The findings show that, in general, the respondents were sufficiently utilizing in implementing LRMDs in terms of procedures and methods for resource development, with an overall weighted mean of 2.78. It implies that the teachers have adequate access to avenues, programs, or platforms to learn and adopt the procedures and methods for resource development under the LRMDs. These specifically include orientation programs and professional development training on the proper design, production, utilization, seeking quality assurance, instructional integration, and managing learning resources initiated by the teachers. Teachers also have access to resource development workshops under LRMDs. In addition, the other platforms that lead teachers towards learning the skills and competencies of LRMDs include peer collaboration and professional learning communities, making personal readings on LRMDs manuals, and guiding and accessing teachers to LRMDs portals and digital education platforms.

K to 3 teachers' utilization and challenges in the implementation of learning resource management and development system

It was also found that leading engagement is subjecting the learning resources to validation by the district and division committees in charge of LRMDs, with the highest weighted mean of 2.94 interpreted as sufficiently utilized. It shows that the district and division LRMDs committees are accountable for ensuring that teachers strictly adhere to curriculum guidelines and standards in learning resource development by using curriculum mapping and analyzing the overall accuracy of the learning resources designed by the teachers. In addition, the district and division committees and leaders of LRMDs also employ other relevant criteria for evaluating teacher-initiated learning resources. These include specific criteria on instructional relevance and quality, clarity of contents and proper structure of lessons, and accuracy and functionality of assessment methods adapted to the scope of learning resource materials.

It was also revealed that the least indicator was conducting a problem analysis and reflecting on LRMDs provisions before making a project proposal, which gained the lowest weighted mean of 2.51 and is still interpreted as sufficiently utilized. This still gains the interpretation of sufficient utilized by the teachers due to the scenario that teachers are trained first to conduct pre-problem exploration and analysis, which serves as the basis for implementing LRMDs-based interventions.

These results were conformed by Navidad (2019), who also revealed that most teacher-respondents first conducted a pre-problem analysis under LRMDs to identify the extent of learning gaps in students, analyze learner performance, and determine the demand curriculum contextualization of the learning resources. Furthermore, it was emphasized that the pre-problem analysis of teachers as part of LRMDs in the pre-implementation stage highlights a review of the accessibility of present educational resources and an analysis of resource constraints or limitations.

Level of utilization of the k to 3 teachers on the implementation of the lrmds along technical and professional support from experts

Technical and Professional Support from Experts. In general, the respondents attained a high level of utilization in implementing LRMDs regarding technical and professional support from experts, with an overall weighted mean of 3.28. This implies that educators receive several specific technical and professional support systems from experts that align with utilizing learning resource management and development. Specifically, these include technical support for accessing the LRMDs platform through training programs and sessions in navigating the learning resource portals. Moreover, the teachers receive training sessions on learning resource production and uploading educational resources, specifically in workshops and webinars led by experts in LRMDs. The DepEd experts, specifically from the LRMDs committee, orient and enlighten the teachers about the salient guidelines and standards of learning resource development in the contexts of quality of content, instructional design, and proper formatting of materials.

In addition, the other integral technical and professional support from experts includes broader LRMDs-based professional development programs and capacity-building measures. These specifically include utilizing the teachers in professional learning communities (PLCs) where they can receive expert advice regarding learning resource production and management.

There are also initiatives called Train the Trainer Program that highlight the leadership of experts in organizing and providing training programs to teachers so that they can also

become potential LRMSD trainers in the future in line with the best practices in

developing and managing learning resources. Moreover, the teachers also witness the support systems of experts in the quality assurance, content review, and evaluation of teacher-made learning resources and educational tools. Furthermore, the experts guide and direct the teachers in utilizing data analytics from the LRMSD section to determine and examine the usage of learning resources and analyze issues and gaps in the educational materials.

It was also revealed that the leading utilization of the respondents under technical and professional support from experts is seeking the assistance and professional services of computer programmers and experts in ICTs for the enhancement of the design and features of my developed learning resources, with the highest weighted mean of 3.38, interpreted as highly utilized. It implies that with the aid of computer programmers and IT experts specifically to enhance the integration of interactive features and components for their developed learning resources. These elements include animation, games, multimedia, visuals, videos, and simulations. The IT experts employ coding and programming skills to apply these interactive features to the teachers' educational resource materials.

Moreover, computer and IT experts also provide guidance and assistance to teachers in ensuring that teacher-initiated educational resources can be made more accessible across digital tools and platforms. These platforms specifically include laptops, smartphones, tablets, and other ICTs. With the support of an IT expert, teachers can ensure that their developed learning resources are mobile and adaptable to varied screen sizes and operating tools. Furthermore, teachers also resort to the services of technology experts to ensure that the learning resources are potentially and easily accessible to educators and learners through a user-friendly interface.

However, it was found that the lowest indicator is consulting first their instructional leaders to conceptualize the proposed learning resource, with the lowest weighted mean of 3.03, but still interpreted as sufficiently utilized. This was still interpreted as sufficiently utilized due to the practical and sustainable support of various instructional leaders such as school heads, Master Teachers, curriculum coordinators, and LRMSD officers in pursuing innovative proposals on the design and development of educational resources. These instructional leaders are the focal authorities to remind and guide the teachers in ensuring the adherence of teacher-initiated learning resources to curriculum guidelines and standards and in terms of alignment with grade-level skills and competencies of learners.

Carolino (2020) corroborated these findings, concluding that instructional leaders and experts contribute to the quality control of materials and ensure the relevance of learning resources made by teachers to local contexts.

Level of utilization of the k to 3 teachers on the implementation of the lrmsd along evaluation and monitoring of developed resources

K to 3 teachers' utilization and challenges in the implementation of learning resource management and development system

Evaluation and Monitoring of Developed Resources. The data show that, in general, the respondents attained sufficient utilization in implementing LRMDS in evaluating and monitoring developed resources with an overall weighted mean of 3.22. This implies that the teacher-respondents are sufficiently utilized in evaluating and monitoring developed learning resources for multiple reasons, such as quality assurance. This is mainly because the DepEd orients and mandates all teachers to ensure that all the learning resources and educational materials meet the standards of LRMDS. The respondents' utilization level was identified as sufficient because the LRMDS committee assumes the primary quality assurance functions. At the same time, the teachers are only tasked to employ personal efforts and measures to ensure that their learning resources adhere to the committee's guidelines.

Moreover, teachers have sufficient access to the LRMDS section that can aid in evaluating the quality of learning resources regarding content accuracy, relevance, and curriculum alignment. Through the LRMDS, teachers can also assess the adherence of the learning resources to the curriculum-prescribed learning objectives and competencies. The LRMDS also aids the teachers in ensuring the alignment of instructional materials and educational resources to the curriculum guides and other standard tools.

It was also found that the leading response was the distribution of rubrics and other evaluative forms to the instructional leaders to re-evaluate their developed materials, which obtained the highest weighted mean of 3.34 or highly utilized.

Specifically, the LRMDS highlights using varied evaluation tools for educators' diverse learning resources. These primarily include the LRMDS Resource Evaluation Rubric, which is applied to assess the quality and alignment of the learning resources to the standards and guidelines of the curriculum. Thus, the teacher-respondents have sufficient engagement in the use of these evaluation tools, particularly the LRMDS rubric, to evaluate the overall quality of learning resources in terms of accuracy of contents, alignment to the curriculum, language inputs, and presentation, and special features such as cultural sensitivity and interactivity of the materials.

Other relevant tools for teachers to evaluate learning resources include quality assurance forms, feedback and rating forms, rubrics for teacher competency, and evaluation forms for resource impacts. The second highest weighted mean of 3.28, or highly utilized, was obtained by the response to administering the post-learning assessment to the learner-beneficiaries of my developed learning resources. This implies that the administration of post-learning assessment to the learners after utilizing learning resources helps provide and clarify integral insights into the quality, functionality, and effectiveness of the developed educational resources. The post-learning assessment results also reflect the extent to which the performance and learning achievements of the learners in diverse learning areas are affected by the utilization of learning resources. This assessment helps to clarify and reflect how well the learners have understood and absorbed the instructional contents of the developed learning resources designed under LRMDS.

The post-implementation assessment tools allow the teachers to examine and analyze the degree of success and effectiveness of the learning resources in helping the students attain specific learning objectives. Moreover, the post-learning assessment also fosters immediate feedback on

the level of learners' understanding and mastery of the contents of the developed learning resources. The assessment results also provide teachers with concrete ideas and background information on what areas of instruction and educational resource materials require revisiting, reinforcement, and enhancement.

However, it was revealed that the lowest weighted mean of 3.03, interpreted as sufficiently utilized, was gained by the response to documenting all the activities they have accomplished while using their learning resources. This was still interpreted as sufficiently due to the adequate competence and utilization of the teachers in the varied practices under LRMS that are well-documented, such as the production, utilization, review evaluation, and sharing of learning resources to the learners and teachers. Through the documentation, teachers can ensure that all these LRMS efforts, actions, and initiatives are systematic, organized, relevant, transparent, and significantly impactful to the learning community.

The documentation allows teachers to have proof of their LRMS efforts and practices. It secures a concrete record of the ways and practices involved in the teachers' utilization of educational resources and how they adapt their LRMS practices to curriculum goals and standards. By documenting LRMS activities, the teachers can also provide guidance and inspiration to their fellow educators regarding best practices for learning resource development and sharing educational resources.

Dhakal (2020) corroborated these findings, which also found that most teacher participants viewed documentation as useful in developing educational resources. This was because documentation of the learning resources was indispensable to the teacher participants' instructional practice and daily activities, such as lesson planning, instructional management and review, and educational assessment.

Relationship between the respondents' profile and their level of utilization of the LRMS

The test for significant relationships that may exist between the profile of the respondents in terms of age, civil status, educational attainment, length of service and position, and the level of utilization of the LRMS along guidelines and policies, procedures, and methods for resource development, technical and professional supports from experts and evaluation and monitoring were tested using the Contingency Coefficient (C) and Somer's Delta Correlation Coefficient (d). Data reveals that the profile in terms of position and level of utilization of LRMS along technical and professional support obtained a significant relationship with a coefficient of .226 and $p\text{-value} < 0.01$. The positive correlation indicates that the higher the position of the respondents, the higher the level of utilization of the LRMS along with technical and professional support. This means that Teacher III, Master Teacher I, and II still seek the assistance and professional services of computer programmers and experts in ICTs to enhance the design and features of their developed learning resources.

Likewise, the profile in terms of age and the level of utilization, along with evaluation and monitoring of the developed resources, obtained a significant relationship with $d = .120$ and a $p\text{-value} < .05$ level. The positive correlation suggests that the age of the respondents, ranging from 41 and above, are still meticulous in polishing their works, for they subjected their materials to

K to 3 teachers' utilization and challenges in the implementation of learning resource management and development system

reevaluation done by the experts for improvement. Similarly, the profile along the length of service and evaluation and monitoring of LRMDS also obtained a significant relationship with $d = .086$ and $p\text{-value} < .05$ level. The positive correlation indicates that as the length of service increases, there is a tendency for the respondents to subject their works to re-evaluation of their developed materials for enhancement or modification.

Test for significant relationship between the respondent's profile and their level of utilization of the LRMDS

On the other hand, other variables related to the respondents' profiles and some variables related to the level of utilization failed to obtain significant relationships due to their $p\text{-values} > .05$. These findings imply that the significant correlation between the position of teachers and their utilization in the technical and professional support from experts in LRMDS can be justified by the fact that teacher position especially the classroom teachers define their extent of exposure to the use of educational resources to support their instructional practices. These were conformed by Fernando (2019), who concluded that teachers in higher positions or professional levels gained greater access to technical and professional support from advanced sources.

Meanwhile, the significant relationship between teachers' age profile and their engagement in LRMDS in terms of evaluation and monitoring of the developed resources under LRMDS can be justified by the scenario of the difference between younger and older teachers in terms of their attitudes towards LRMDS. Younger teachers have more familiarity and inclination toward digital technologies. Hence, they can be more open to using LRMDS, especially in digital materials. However, younger teachers are less experienced; thus, they might rely more on structured and generalized LRMDS guidelines for learning resource production. These results were conformed by Otero (2020), who concluded that the older teacher-respondents were more reliant on traditional methods and, hence, would have less preference for digital learning resources. The study also highlighted that older teacher-respondents were found to be well-experienced. Hence, they might have more ample knowledge and understanding of LRMDS standards that they apply in their learning resource development practices.

On the other hand, the salient relationship between teachers' length of service and evaluation and monitoring of resources under LRMDS can be justified by the influence of teaching experiences, access to training, and technology of educators in supporting their LRMDS practices. This finding was corroborated by Cahapay et al. (2021), who also revealed that most teacher-respondents with many years of teaching experience gained maximum exposure to using learning resources. Hence, they developed a more in-depth understanding of the LRMDS standards. However, teacher-respondents with fewer years of teaching experience also learned the same standards of LRMDS in supporting their classroom-based resource management practices. Still, they tend to rely more on more standardized and structured guidelines and policies of LRMDS as their guide in resource development.

Moreover, the lack of a relationship between the profile variables of civil status and educational attainment and the teachers' engagement in LRMDS guidelines, policies, procedures, and methods can be attributed to the fact that personal factors or characteristics of teachers have

no direct connections to LRMSD implementation. These were conformed by Sinaga and Setiawan (2022), who also concluded that teachers' engagement in LRMSD guidelines and policies, procedures, and methods was more influenced by institutional and professional factors such as educational leadership, access to opportunities for professional development, technological support, and access to training and professional development program rather than by personal factors such as civil status and teachers' educational attainment.

Challenges and opportunities encountered by the k to 3 teachers in the utilization of LRMSD

Challenges encountered by the teachers in the utilization of LRMSD

Guidelines and policies

Regarding LRMSD guidelines and procedures, the leading challenge is time constraints or limited time to execute multiple LRMSD-related tasks, with a weighted mean of 2.89, interpreted as often encountered. It implies that the challenge of time constraints in LRMSD tasks can be justified by the fact that teachers are usually given limited instructional time to cover and undertake a wide array of instructional and pedagogical activities, such as lesson planning, lesson delivery, presentation, assessment of learning, and other salient roles. Thus, limited instructional time also makes integrating LRMSD roles and practices, such as resource development and production, resource distribution, and quality assurance of educational materials, difficult.

These are supported by Wahyuningsih et al. (2021), which revealed that most teachers also found learning resource development highly challenging due to the high volume of instructional content, lessons, and competencies in the specified academic periods needed to integrate into the learning resource materials. Thus, additional learning resource management activities and functions such as production and quality assurance of educational resources further complicate instructional time management.

Procedure and methods for resource development

Regarding procedures and methods for resource development, the major challenge identified is the rigorous and difficult quality assurance process, with a weighted mean of 3.10, interpreted as always encountered. It implies that quality assurance of teacher-made learning resources exposes educators to the rigid, detailed, complex, and time-intensive processes and system of validation of their developed tools. It can also be justified by the reality that the rigors of quality assurance lie in the difficulties of evaluating the learning resource itself and in evaluating and analyzing the effectiveness of instructional strategies used in support of the educational materials developed by the teachers. These are corroborated by Nwuke and Agu (2021), who found that quality assurance was also made more crucial and difficult along the learning resource development as school authorities and leaders also require teachers to evaluate the performance level and learning outcomes of students who are subjected to the utilization of the developed learning resources. It further implies that the complexity of quality assurance of learning resources lies on the diversity and multiplicity of procedures and standards along the evaluation of materials. These include adherence to curriculum provisions, alignment with learning objectives and demands for making learning resource materials more developmentally-appropriate and responsive to learners' needs.

K to 3 teachers' utilization and challenges in the implementation of learning resource management and development system

Moreover, the challenge of quality assurance is attributed to other factors such as limited trainings, limited competence of teachers and lack of evaluation tools.

Technical and professional support from experts

In the context of technical and professional support from experts, the leading challenge is limited funds provided by external experts, who obtained a weighted mean of 3.93, interpreted as always encountered. It implies that schools and learning institutions often encounter problems in terms of limited funds that are directed and allocated to support and sustain various school needs and demands, such as staff salaries, classroom materials, and basic supplies and needs for school infrastructure. This was conformed by Osuji and Iheanyichukwu (2021). who revealed that when school funds are fully distributed and constrained, minimal portions of the budget are typically left for external experts, specialized training, and educational learning development resources. These factors make it hard for schools to access high-quality services from external learning resource production experts. These findings imply that limited funds are sourced from external experts to support LRMDS because the priorities of school financial management are more on supply of basic learning needs and instructional materials. Hiring external experts commonly encompass salient costs for professional fees, logistics and trainings, something which may not be attainable and less sustainable due to diverse needs of schools in other aspects of teaching and learning.

Evaluation and monitoring of developed resources

Regarding evaluating and monitoring the developed resources under LRMDS, the focal challenge is limited time to sustain the evaluation and monitoring of learning resources, which gained a weighted mean of 3.89, interpreted as always encountered. It implies that the challenges educators face with limited time to pursue the evaluation and monitoring of developed resources can be justified by a combination of crucial factors, such as time constraints, rigorous quality assurance and resource material evaluation, and heavy teaching duties and workloads of teachers.

Opportunities encountered by the k to 3 teachers in the utilization of LRMDS

Guidelines and policies

The findings show that in terms of LRMDS guidelines and procedures, the leading opportunity perceived by the respondents is learning resources sharing, with a weighted mean of 3.92 interpreted as highly agree. This implies that teachers are allowed under LRMDS to select materials or even produce versions of learning resources, including digital and interactive tools, to address the learning needs of their students. These imply that the LRMDS guidelines serve a structural framework and support the teachers' cognizance and understanding of the standards and procedures for developing and utilizing learning resources. This allows teachers to pursue opportunities to confidently design, evaluate and share learning resource materials that align the curriculum.

These are affirmed by the Wahyuningsih et al. (2021), which also revealed that piloting new learning resource materials was the major opportunity posed by teachers' engagement in learning resource production. The study concluded that learning resource management enables

teachers to test the use of these learning resources and examine how these materials suit specific learning contexts, needs, and environments.

These imply that the LRMDs guidelines serve a structural framework and support the teachers' cognizance and understanding of the standards and procedures for developing and utilizing learning resources. This allows teachers to pursue opportunities to confidently assign, evaluate and share learning resource materials that align the curriculum.

Procedure and method for resource development

Regarding procedures and methods for resource development, the major perceived opportunity was improved competence in utilizing technology in learning resource production, with a weighted mean of 4 interpreted as highly agree.

It implies that in the context of LRMDs, the teachers' competence in the utilization of technology fosters meaningful streamlining of the diverse and multiple processes in learning resource production, distribution, updating, and utilization of these materials. This was conformed by Kapur (2019), which revealed that the teachers expressed more demands for technological support and digital support systems from school leaders in accessing standard learning resources and designing their versions of innovative learning materials. This support system was mainly sourced to school leaders and learning resource management experts.

These findings imply that teachers consider and perceive enhanced competence in utilizing technology as the focal opportunity in LRMDs utilization. This is because many teachers are gaining more confidence and competencies in utilizing digitally-supported educational materials and resources. Relevantly, it reflects the implications of sustaining the access of teachers to professional development and infrastructure to enhance the benefits and contributions of LRMDs in improving teaching-learning outcomes.

Technical and professional support from experts

In the context of technical and professional support from experts, the leading challenge is limited funds provided by external experts, who obtained a weighted mean of 3.93, interpreted as always encountered. It implies that schools and learning institutions often encounter problems in terms of limited funds that are directed and allocated to support and sustain various school needs and demands, such as staff salaries, classroom materials, and basic supplies and needs for school infrastructure. This was conformed by Osuji and Iheanyichukwu (2021), who revealed that when school funds are fully distributed and constrained, minimal portions of the budget are typically left for external experts, specialized training, and educational learning development resources. These factors make it hard for schools to access high-quality services from external learning resource production experts. The findings further imply that the teachers' competence in utilizing significantly improves their capacity to navigate and support LRMDs, fostering greater accessibility of educational resources. The technological competence reinforces the meaningful streamlining of LRMDs procedures, minimizing duplication, enhancing quality of resources and foster collaboration. As a result, well-equipped educators can ensure alignment of learning

K to 3 teachers' utilization and challenges in the implementation of learning resource management and development system

resources with the learning needs of learners and promote greater responsiveness and innovative and supportive learning system and environment.

Evaluation and monitoring of the developed resources

In evaluating and monitoring the developed learning resources under LRMDS, the leading opportunity is enhanced quality assurance of learning resources, with a weighted mean of 3.91, interpreted as highly agree. This implies that although the teacher-respondents faced a high level of challenges in terms of rigorous and difficult quality assurance of learning resources under LRMDS, they can still perceive and recognize the great opportunities posed by LRMDS in the efficient and functional validation and quality assurance system for their developed resources.

The quality assurance system of LRMDS offers teachers a functional and sustainable system and framework to assess, improve, and sustain the quality and effectiveness of their developed educational resource materials. It clarifies the guidelines and standards teachers need to attain regarding resource development and management despite the rigorous and difficult quality assurance process. This was conformed by Safta-Zecheria (2020), who also concluded that the teachers involved in learning resource design and production primarily relied on compliance with the standards of quality assurance framework to arrive at more valid and acceptable learning resource materials. The quality assurance system of LRMDS offers teachers a functional and sustainable system and framework to assess, improve, and sustain the quality and effectiveness of their developed educational resource materials. It clarifies the guidelines and standards teachers need to attain regarding resource development and management despite the rigorous and difficult quality assurance process. This was conformed by Safta-Zecheria (2020), who also concluded that the teachers involved in learning resource design and production primarily relied on compliance with the standards of quality assurance framework to arrive at more valid and acceptable learning resource materials.

Developed intervention program to enhance the utilization of the LRMDS

Based on the study's results, the researcher designed and developed an intervention program for teachers to enhance the utilization of LRMDS as shown in Appendix H. To make it more specific and functional, the researcher anchored the provisions of the intervention program to the identified four major challenges, which are time constraints or limited time to execute multiple LRMDS-related guidelines and policies, rigorous and difficult process of quality assurance, limitation of funds provided by external experts and limited time to sustain evaluation, and monitoring of learning resources.

The developed intervention program in the study included the training design proposal entitled Project "LEARN" or Learning Enhancement through Access and Resource Navigation through LRMDS. Specifically, the training design was anchored on the focal objectives including the need to foster enhancement in the understanding and knowledge of teachers in LRMDS utilization along guidelines and policies, procedures and methods, technical and professional support from experts and evaluation and monitoring of resources. The specific training initiatives and tasks highlighted in the training design included needs assessment survey, preparation of training modules, coordination with LRMDS centers, LRMDS orientation, trainings in resource

development, technical support and quality assurance. Furthermore, the training design also integrated proposed initiatives such as coaching and mentoring on LRMDS integrated proposed initiatives such as coaching and mentoring on integrated development.

The intervention program aims to enhance the teachers' engagement in LRMDS utilization. Specifically, it seeks to attain its salient objectives, including the need to address the challenge of time constraints or limited time to execute multiple LRMDS-related guidelines and policies, minimize the rigors and difficulties in the process of quality assurance of learning resources, provide alternative solutions to address the limitation of funds provided by external experts and employ interventions to address limited time to sustain evaluation and monitoring of learning resources.

The intervention program is also designed to address the four major challenges identified among the teacher-respondents and their involvement in LRMDS. Specifically, in terms of LRMDS guidelines and policies, the major challenge to be addressed by the proposed intervention was time constraints or limited time to execute multiple LRMDS-related guidelines and policies. Meanwhile, regarding procedures and methods for resource development, the focal challenge was dealing with a rigorous and difficult process of quality assurance. On the other hand, in the context of technical and professional support from experts, the major problem that required intervention was a limitation of funds provided by external experts. Differently, in evaluating and monitoring developed resources, the leading challenge to be addressed was limited time to sustain evaluation and monitoring of learning resources.

CONCLUSION

Based on the findings, the following conclusions were drawn:

Most respondents are female, elderly adult teachers with a bachelor's degree, a higher teaching position, and ample experience. Generally, teachers participated at an average or adequate level in LRMDS guidelines, policies, procedures, and methods for resource development and evaluating and monitoring developed resources. However, they had the highest degree of LRMDS utilization in terms of technical and professional support from experts. Teachers' profiles in terms of position, age, and length of service established connections with their utilization in LRMDS, especially in technical and professional support and evaluation and monitoring of resources. However, their civil status and educational attainment do not correlate with their LRMDS practices. The teachers' LRMDS utilization is challenged mostly by time constraints or limited time to execute multiple LRMDS-related tasks, the rigorous and difficult process of quality assurance, limited funds provided by external experts, and limited time to sustain evaluation and monitoring of learning resources. However, teachers gain access to potential opportunities in LRMDS utilization in terms of enhanced ability to pilot new learning resources and materials in the classroom, improved competence in utilizing technology in learning resource production, enhanced research-based practices in LRMDS, and enhanced quality assurance of learning resources. The study's proposed intervention program highlighted alternative practices and solutions to address hurdles in LRMDS teacher's utilization, including guidelines and standards, procedures, evaluation and monitoring, and access to support from experts.

K to 3 teachers' utilization and challenges in the implementation of learning resource management and development system

RECOMMENDATION

Based on the findings and conclusions of the study, the following recommendations are hereby proposed: School heads and the LRMDs committee may identify and analyze the trends and gaps in teachers' profiles through surveys, interviews, and personal interaction with educators, which can serve as the basis for informed programs and professional training in LRMDs. School administrators and educators engaged in educational research may conduct further surveys and analyses of the factors affecting teachers' engagement in LRMDs utilization, such as motivation and commitment, access to resources, and organizational support, through collaborative LRMDs-oriented studies. Educational managers and LRMDs committees may implement further studies on specific teacher attributes that influence their LRMDs engagement and how these attributes influence the effectiveness of resource development by educators. LRMDs experts and committees, school heads, and expert educators may pursue collaborative intervention planning and policy reforms for LRMDs challenges faced by educators. The researcher herself may subject the developed intervention program to feedback from the LRMDs experts for further enhancement and integration of other potential interventions. This enhances teachers' access to best practices to support their learning resource development practices and endeavors. Future researchers may explore best practices for using LRMDs as a learning resource and teachers' efforts to enhance students' academic achievement.

REFERENCES

- Chua, R. C. (2019). Definition and goals of strategic educational resources. <https://www.coursehero.com/file/28873233/definition-and-goals-of-strategic-educational-resources>
- Stuesta, J. H. (2020). The Essentiality of Educational Intervention Materials. <https://www.teacherssoar.org/instructionaldev.essentiality-IM> Please include the exact/complete URL of this reference
- Bordia D. (2022). All you need to know about learning resources for teachers. <https://blog.teachmint.com/all-you-need-to-know-about-learning-resources-for-teachers/>
- Hepler R., Janovsky A., & Brooks A. (2025). Instructional materials in teaching. <https://study.com/academy/lesson/instructional-materials-definition-examples-evaluation.html>
- Dillon A. (2025). Digital Learning resources, definition, types, and examples. <https://study.com/academy/lesson/what-are-digital-learning-resources-overview-examples.html>
- Nelson G., & Thornburgh B. (2025). Professional development that changed my teaching and inspired my students. <https://blog.definedlearning.com/pd-that-changed-my-teaching>
- Abendano, K. A. (2020). The role of PDOS in learning resource design and development. depedmalaybalay.net/articles/the-role-of-pdos-in-learning-resource-design-and-development Please include the exact/complete URL of this reference
- Llego, M. A. (2019). DepED LRMDs coordinator duties and responsibilities. <https://www.teacherph.com/deped-lrmds-coordinator-duties-and-responsibilities/>

Dhakal, K. R. (2020). Challenges of the use of instructional materials in geography classroom in secondary school: Nepal. *Journal of Geographical Research*, 3(3). <http://dx.doi.org/10.30564/jgr.v3i3.2144>

Manganey, L. C. (2019). Guidelines on contextualized learning resource development processes and workflow. <https://depedpines.com/wp-content/uploads/2019/09/1-Guidelines-on-Learning-Resource-Related-Innovation-Revised-as-of-2019-09-16.pdf>

Fernando, S. L. (2019). Learning resource. <https://www.sunstar.com.ph/baguio/opinion/fernando-learning-resource>

Carolino, C.J. (2020). Steps in creating learning resource portal account on LRMSD site/ LDM 2 for teachers. <http://www.yourfriendmaestro.com/2020/09/steps-in-creating-lr-portal-account.html>

Malipot, M. H. (2022). DepEd cites the need to develop effective learning materials in teaching, learning. <https://mb.com.ph/2022/05/23/deped-cites-the-need-to-develop-effective-learning-materials-in-teaching-learning>

Singh T. P. (2025). MATATAG Curriculum: Redefining learning in the Philippines. <https://www.asiaeducationreview.com/others/vista/matatag-curriculum-redefining-learning-in-the-philippines-nwid-1598.html>

Labaguis D. (2023). Contextualization and localization of learning resources. <https://www.slideshare.net/slideshow/contextualization-and-localization-of-learning-resourcespptx/255615860>

Cervantes F. M. (2021). Quality assurance center for DepEd learning materials pushed. <https://www.pna.gov.ph/articles/1143927>

Wahyuningsih, D., Wahyono, S. B., & Nugroho, A. A. (2021). Teachers' difficulties in developing learning resources. *KnE Social Sciences*, 665-679. <https://knepublishing.com/index.php/KnE-Social/article/download/10024/16468>

Nwuke, T. J., & Agu, I. U. (2021). Educational resources in educational management for quality school administration. *Journal of Research in Humanities and Social Science*, 9(7), 57–63. <https://www.academia.edu/download/68582712/F09075763.pdf>

Osuji, C. U., & Iheanyichukwu, C. (2021). Material resources management for effective teaching and learning in Nigerian tertiary education: Implications for quality tertiary education delivery. *International Journal of Innovative Education Research*, 9(3), 13-28. <https://www.seahipublications.org/wp-content/uploads/2025/03/IJIER-S-2-2021.pdf>

Mengiste, T. (2019). Educational materials management in government secondary schools of Bale zone in Oromia regional state (Doctoral dissertation, Haramaya University). <http://ir.haramaya.edu.et/hru/bitstream/handle/123456789/4236/Tsegaye%20Mengiste.pdf?sequence=1>

Kapur, R. (2019). Development of teaching-learning materials. https://www.researchgate.net/profile/Radhika-Kapur-2/publication/334083571_Development_of_Teaching-Learning_Materials/links/5d15c7fc458515c11cfd5f3/Development-of-Teaching-Learning-Materials

Nilsen, A. G., Almås, A. G., & Gram, H. (2020). Producing digital learning resources (DLR) for teacher training. <https://hdl.handle.net/11250/2678423>

Safta-Zecheria, L., Negru, I. A., & Virag, F. H. (2020). Challenges experienced by teachers regarding access to digital instruments, resources, and competences in adapting the educational process to physical distancing measures at the onset of the COVID-19 pandemic in Romania. *Journal of Educational Sciences*, 21, 69-86. <https://files.eric.ed.gov/fulltext/EJ1282885.pdf>

K to 3 teachers' utilization and challenges in the implementation of learning resource management and development system

Eom, S. (2022). The effects of the use of mobile devices on the E-learning process and perceived learning outcomes in university online education. *E-learning and Digital Media*, 20(1), 80–101. <https://doi.org/10.1177/20427530221107775>

Balliammanda, K. (2021). Perceptions of teachers on teaching and learning with mobile devices in higher education classrooms in Oman: A pilot study. *Studies in Technology Enhanced Learning*, 1(2). <https://stel.pubpub.org/pub/01-02-balliammanda-2021/release/1>

Hasan, M., Karimuzzaman, M., Abdulla, F., & Hossain, M. M. (2024). Mobile use in the classroom is a mixed bag, and lecturers need to provide students with guidelines. *SAGE Open*, 14(4). <https://doi.org/10.1177/21582440241299481>

Lai, Y., Saab, N., & Admiraal, W. (2022). University students' use of mobile technology in self-directed language learning: Using the integrative model of behavior prediction. *Computers & Education*, 179. <https://doi.org/10.1016/j.compedu.2021.104413>

Abogadie-Torbila, C. J. (2021). Impact of teacher factor on the utilization of LRMDs in the division of Biliran. *World Wide Journal of Multidisciplinary Research and Development*, 7(2), 55-58. https://wwjmr.com/upload/impact-of-teacher-factor-on-the-utilization-of-lrmds-in-the-division-of-biliran_1614926559.pdf

Navidad, R. S. (2019). Management of learning resource materials, technology utilization, and teachers' competence in selected public schools. *N*, 82-91. https://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID33379262_code3404774.pdf?abstractid=3347487&mirid=1

Asio, J. M. R., & Jimenez, E. (2021). Implementation of alternative delivery mode learning resources amidst the COVID-19 pandemic: Basis for intervention program. *International Journal of Humanities, Management and Social Science (IJ-HUMASS)*, 4(2), 95-102. <https://doi.org/10.36079/lamintang.ij-humass-0402.293>

Tarrayo, V. N., & Anudin, A. G. (2023). Materials development in flexible learning amid the pandemic: perspectives from English language teachers in a Philippine state university. *Innovation in Language Learning and Teaching*, 17(1), 102–113. <https://doi.org/10.1080/17501229.2021.1939703>

Cahapay, M. B., Loranía, J. B., Labrador, M. G. P., & Bangoc, N. F. (2021). Instructional development for distance education amid COVID-19 crisis in the Philippines: Challenges and innovations of Kindergarten Teachers. *Asian Journal of Distance Education*, 16(2), 69-84. <http://files.eric.ed.gov/fulltext/EJ1332393.pdf>

Tortola, R.L. (2024). Unveiling resilience: Exploring coping strategies among the teachers in the department of education. *International Journal of Academic Multidisciplinary Research*, 8(6), 530-546. <https://philpapers.org/go.pl?id=TORURE&proxyId=&u=https%3A%2F%2Fphilpapers.org%2Farchive%2FTORUR.E.pdf>

Pelila J. R., Bag-ongan Q. F. L., Taliana J.L.P. (2022). Factors and barriers influencing technology integration in the classroom. *Journal of Language Education and Educational Technology (JLEET)*, 7(1). <http://dx.doi.org/10.33772/jleed.v7i1.18704>

Javier, B. F. (2021). Practices of Filipino public high school teachers on digital teaching and learning technologies during the COVID-19 pandemic: basis for learning action cell sessions. <http://files.eric.ed.gov/fulltext/ED616121.pdf>

Elger D. (2007). Theory of Performance. https://www.facultyguidebook.com/4th/demo/1/1_2_1.htm

Maskin, E. (1983). The theory of implementation in Nash equilibrium: A survey. <https://dspace.mit.edu/bitstream/handle/1721.1/64198/theoryofimplemen00mask.pdf?sequence=1>

Wilhelm, A. A. (2020). Factors to Consider when Developing Specialized Learning Materials. www.globaleduc.com/teachingaids-factors-to-consider-when-developing-specialized-learning-materials