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**Teachers' Utilization of Open Educational Resources:
A Proposed Instructional Enhancement Program**

A THESIS

Presented to The College of Advanced Studies
Philippine Normal University
Manila

In Partial Fulfillment
of the Requirements for the Degree
MASTER OF ARTS IN EDUCATION – CURRICULUM AND INSTRUCTION

Rosario F. Peralta

November 2025

Chapter 1

The Problem and Literature Review

This chapter delves into the background of the study and literature review, including the theoretical framework, conceptual framework, research problems, hypothesis, and definition of terms of the study.

Background of the Study

As a result of the advancement of modern educational technology, teachers have gained greater opportunities to use varied and flexible tools to enhance instruction and address the diverse learning needs and interests of students. Beyond traditional textbooks, teachers explore and utilize online learning resources to enrich classroom experiences. Through technology, they create instructional materials using online platforms and share or upload these materials for broader access. They also reuse some of their colleagues' work by downloading from internet sources and modifying these materials according to specific instructional purposes.

Open Educational Resources (OER) are tools that are gaining popularity in education. Open Educational Resources are teaching, learning, and research resources in any format or media that are either in the public domain or are protected by copyright and published under an open license that allows for free access, reuse, repurpose, adaptation, and redistribution by others (United Nations Educational, Scientific and Cultural Organization, 2022). It encompasses a wide variety of online formats, including online text-

books, recorded lectures on video, YouTube videos, web-based texts for independent study, simulations, animations, digital diagrams, and graphics, some MOOCs, as well as assessment tools like tests with computerized answers, PowerPoint slides, and lecture notes in PDF format.

There are five activities involved in OER: Retain, Reuse, Revise, Remix, and Redistribute (Wiley & Hilton, 2018). These give the chance for teachers to explore and adapt different learning resources suited to the subject matter. OER such as presentations are more flexible, allowing teachers to personalize and contextualize content to meet learners' learning needs and goals. OER also gives teachers the freedom to create their own materials, allowing them to refine and improve their materials over time. A teacher can reuse, create, collaborate, and contextualize OER.

Research on OER has been conducted and continues to grow. Most research studies on OER generalized that OER improves students' learning and reduces the cost of educational resources. The benefits of OER are as follows: free access to educational resources without copyright restrictions, flexibility in using and adapting OER to meet the needs of diverse learners, improved ease of use and accessibility of educational resources, cost savings for teachers and school districts with limited budgets, availability of multimedia materials to enhance student learning, and potential for personalized instruction and differentiated learning (Tang, 2020). In addition, OER enhances the collaboration and communication of teachers through the sharing of ideas and resources.

Recent studies also indicate an increasing awareness and use of OER globally. According to Bay View Analytics in 2023, 64% of faculty members in the U.S. are now

familiar with OER, while 29% utilize them in their teaching. The K–12 sector is experiencing a comparable trend, with awareness of OER achieving its peak in the last five years (Seaman & Seaman, 2024). However, awareness does not always translate into effective use. Research has shown that although teachers are aware of OER, their ability to use and develop these resources is hindered by issues like insufficient time, lack of technical skills, and inadequate institutional support (Marín et al., 2022).

In the Philippine context, while awareness of OER is growing, its use in teaching practices has remained inconsistent (Arinto, 2020). This inconsistency underscored the need to assess how teachers currently use OER and identify specific challenges they face. Professional development programs are crucial for helping teachers understand, access, and effectively use OER (Arispe et al., 2023).

On June 3, 2022, the Department of Education-Philippines launched the Basic Education Development Plan (BEDP) 2030, the department's long-term plan for basic education. In connection to the roadmap established, this study contributed to the goals of BEDP 2030, which include anticipating the future of education and introducing innovations in fostering resiliency and embedding the rights of children and youth in education, closing access gaps, confronting the issue of education quality, and addressing the effects of pandemic on learning and participation, addressing learning loss while deepening learning gains. The OER is made to meet the demands of learners for 21st-century skills delivery, interaction, and digitalization, therefore preparing them for the future (Department of Education, 2019). Therefore, its promotion and application in the Philippine education system can be considered appropriate.

Locally, the Schools Division Office (SDO) - Mandaluyong City released a Division Memorandum to conduct a training workshop for some 60 public school teachers and at least eight SDO officials on the use and curation of OER in 2019. The program outlined the advantages of adopting Open Educational Resources (OER) as a potent tool to promote offline e-learning even in the absence of internet access. In the same year, another training workshop on the use and curation of OER was held for Mathematics teachers. In 2021, the division also conducted webinar sessions for Open Educational Resources for all Alternative Learning System (ALS) teachers. The purpose was to introduce the talents, functions, and benefits of educational platforms/channels and current technology that would aid ALS teachers and suit learners' requirements.

While Open Educational Resources (OERs) were advocated to enhance educational access and quality, there was still a lack of empirical research specific to contexts, focusing on teachers' awareness and use of OERs, their challenges, and how awareness correlates with utilization. Additionally, the existing body of literature rarely converted these insights into actionable, data-informed professional development initiatives. This research addressed these shortcomings by assessing the current use of OERs by teachers and suggesting a professional development program aimed at improving instruction with integration of OER.

Literature Review

This section laid out recent international and local scholarly-related literature and studies that have been published about teachers' awareness and use of Open Educational

Resources, and the barriers to its utilization to discuss the problem deeply and broadly.

The content was arranged thematically based on research questions.

Awareness of Open Educational Resources

Awareness involves teachers' comprehension of the features of OER, including licensing systems, and educational value. Studies indicated that when educators are informed about the nature and advantages of OER, they were more likely to investigate, assess, and incorporate them into their teaching methods (Kuo et al., 2024; Tang et al., 2020). This awareness also affects their confidence and readiness to develop or alter current materials, thereby improving classroom innovation and resource variety.

The United Nations Educational, Scientific, and Cultural Organization, or UNESCO, underlined that OER is essential for encouraging creativity in the processes of teaching and learning, lowering the cost of educational supplies, and improving accessibility to education. Open Educational Resources are teaching, learning, and research resources in any format or media that are either in the public domain or are protected by copyright and published under an open license that allows for free access, reuse, repurpose, adaptation, and redistribution by others (UNESCO, 2022). OER provides a chance for teachers to modify learning resources to be more specific, measurable, attainable, relevant, and time-bound to their teaching objectives and align with the learning needs of their students. The ability to reconstruct such learning materials pushes teachers to imply creativity in their daily teaching lives by using the right materials with their teaching techniques and by catering to the multiple intelligences and interests of learners. Teachers can acquire OER from different sources to create more applicable learning modules.

These freely accessible online learning resources cover a wide range of digital formats, including online textbooks, lecture recordings, YouTube videos, web-based textual resources for self-directed learning, simulations and animations, digital diagrams and graphics, Massive Open Online Courses (MOOCs), lecture notes in PDF format, automated test materials, and PowerPoint slides (Bates, 2019). The online learning materials cover a wide range of themes and offer a variety of topics, all of which are regularly produced and distributed. using open licensing. These days, Open Educational Resources (OER) are becoming more widely available and functional due to the innovative impact of technological advancement on the educational system.

Open licensing, which permits unlimited use, modification, and distribution by others, is the main feature of OER. The OER's 5R permissions/activities are retain, reuse, revise, remix, and redistribute (Wiley & Hilton, 2018). Retain is the right to make, own, and control copies of the content through downloading, duplicating, storing, and managing the OER. Reuse is the right to use the content in a wide range of ways, such as in a class, in a study group, on a website, or in a video. The term "revision" refers to the authority to change, adapt, or modify the actual content. It can also translate the content into another language. Remix is the right to combine the original or revised content with other material to create something new or integrate the content into a mashup. Redistribution, the right to share copies of the original content, your revisions, or your remixes with others, like giving a copy of the content to a friend, completes the activities on OER. Being transparent helps make educational resources more affordable and inclusive while also encouraging collaboration and innovation among educators. It is crucial to remember that

the diversity and accessibility of online resources might vary depending on the topic, the kind of educational setting, and the people or organizations in charge of creating and distributing them.

Teachers can prepare, improve, or supplement their teaching practices with the use of openly licensed, high-quality educational resources known as OER (Admiraal, 2022). The integration of these materials into instruction has the potential to greatly boost teachers' pedagogical practices. When teachers use these resources effectively, they expose students to a wide range of viewpoints and cultural contexts. This is because several OER are created by professionals and educators worldwide.

OER provide teachers with open access to educational materials that are freely licensed (Tang, 2020). It was reiterated that these online materials can be retained, reused, revised, remixed, and redistributed by teachers to aid in their teaching. The main goal of OER is to enhance the accessibility and adaptability of educational resources of high quality, therefore decreasing the challenges to education and promoting advancements in pedagogy and intellectual property. Additionally, these online resources are very beneficial to educators because they promote and facilitate collaboration, which leads to the development of more diverse and collaborative learning materials that are available to the public. OER help in the contextualization of the educational curriculum by making it more understandable, adaptable, and accessible.

OER provide the capacity to increase student involvement and motivation, hence contributing to the overall quality of the learning process (Itasanmi, 2020). These online educational materials often use technological advancement to offer engaging and diverse

learning opportunities. OER features such as various multimedia strategies, interactive quizzes, and suitable scenarios which made up the teaching and learning materials have the potential to enhance the joy of learning and stimulate students' interest to explore the subject matter in more detail. Teachers may share their own learning experiences, innovative teaching strategies, and best practices for using these online learning resources among peers, building a supportive and creative collaborative network in the long run. This fosters a collaborative environment that increases meaningful involvement among teachers as well as student-to-student connection.

A study conducted at Indian Central University provided valuable information about faculty members' knowledge, perspectives, and behaviors around Creative Commons licenses (Saikia & Sultana, 2022). The study emphasized the current obstacles to wider use and contribution, as well as the increasing acceptance of Creative Commons-licensed content in scholarly contexts. The current study found out that faculty members at central university demonstrate awareness and comprehension of creative commons licenses, with a significant portion exhibiting a neutral stance towards these licenses. However, there is still a need to promote the use of Creative Commons licenses in the educational community.

Meanwhile, OER has become more apparent, serving as a significant course of action through which teachers and students may access and improve their interactions with education and the method and practice of teaching (Zaid & Alabi, 2021). Teachers have the freedom to choose appropriate, adaptable, and creative learning materials because of the format variation and presentation that these materials offer to educational

factors. They are not only boxed and restricted to printed learning resources, but they can also choose multimedia and interactive materials so that teaching-learning processes will be more dynamic, collaborative, inclusive, and even reflective.

Moreover, the adoption of online learning resources has been recommended as a very practical and profitable way of improving the standard of teaching and learning (Sandanayake, 2019). These educational materials have the potential to stretch out beyond the traditional setting, therefore advocating informal and lifelong learning at the same time. OER can be used by students to learn new skills and acquire new information at their own preferred time and availability. The principal and pedagogical approach, which emphasizes collaboration, engagement, and student input into the development of educational materials, is in line with these.

Teachers are the key factor in OER adoption; therefore, more important details are needed about its use and the needed support (Baas et al., 2019). OER offers beneficial advantages such as cost-efficiency, adaptability, and accessibility, but despite all of that, teachers still need extra hands to assist and guide them in using, adapting, and creating them. More importantly, they can learn about OER, where to find them, and how to modify them for use in their teaching processes. Some of them might even be able to integrate them into various approaches, teaching strategies, and lesson planning. Encouraging them to work together and exchange their OER experiences might be advantageous. They might need assistance in contributing to the greater OER community by working with peers and submitting their work. To contribute to the overall OER community's work, they may need assistance working with peers and submitting their work.

Although OER provides many benefits for education, instructors still want guidance and additional information about how to use OER in their lessons. Their success in embracing and utilizing online learning materials in education may be attributed to a variety of factors, including professional development programs, peer cooperation, access to resources, and continuing mentoring. Currently, most teachers choose materials based on the educational advantages they provide regardless of whether they are freely accessible. It is a well-known problem that most teachers believe all digital materials are like OER (Ozdemir & Bonk, 2017). It is crucial to raise awareness since OER not only provides instructors with the benefits of the 5R but also lessens the possibility of facing an institutional lawsuit for unlawful use of copyrighted content.

The primary goal of OER is to promote inclusive education by removing barriers that limit the learning process and increasing the availability and accessibility of standardized learning resources and well-equipped experiences (Dsouza, 2021). The openness of inclusiveness in education allows every individual to challenge themselves to strive and be better in the middle of the crowd and be more expressive in knowledge acquisition. To help teachers better clench how to use these varied learning resources, there is a need to give them direct support and assistance (Marín et al., 2022). One of the challenging tasks in the educational system is providing training, seminars, and/or workshops for teachers, but it is a ladder to improve inclusive and accessible resources within the community. The goal of this assistance is to provide educators with the tools they need to use the course materials in a meaningful and efficient way in the classroom.

The advantages of using OER include covering the unnecessary financial expenses just to access the learning materials, the availability of top-tier learning resources, the possibility of reusing resources, and the encouragement of sharing the resources among teachers and the institution (Datt & Singh, 2022). Looking at the bigger picture, the benefits of OER when it comes to its usefulness, flexibility, quality, and accessibility greatly aid in the growth of education.

Learners can also benefit from OER utilization. In addition to learners' economic gain, other advantages of OER adoption include improved accessibility to educational resources because they are available and ready to grab at anytime and anywhere (Arunkumar & Kannan, 2020). With the reach of internet connectivity and a gadget at hand, students can easily learn through these resources that are available online. Quizzes, performance tasks, and other related activities can also be done with the use of such open learning materials.

A study about teachers' awareness of OER in the Philippines found out that teachers' awareness level of OER was approaching awareness (Peregrino et al., 2021). Noting the benefits of these resources, they also suggested improving the way that training on OER is conducted so that teachers are fully aware of all its facets. Also, creating an OER policy or training plan that will motivate teachers to fully use OER.

The adoption of Open Educational Resources (OER) is crucial in the Philippine education system. Specifically, the Department of Education's *Digital Rise Program* highlighted the need for teachers and students to enhance their digital literacy skills. Integrating OER can help the public school system, particularly the Last Mile Schools, over-

come challenges in accessing educational materials. Moreover, OER provides an alternative way to leverage technology for connecting schools without internet access and enables teachers and learners to become more globally competitive (DepEd, 2019).

In conclusion, OER provides a diverse array of advantages that have the potential to augment student engagement and enthusiasm by rendering learning more easily available, adaptable, pertinent, interactive, and cooperative. Enhanced student motivation and engagement have the potential to positively impact the overall quality of the learning process, hence resulting in improved educational results. Teachers' awareness of OER is an important factor in its intake in instruction. This awareness should encompass the wide scope of OER to use the resources effectively and legally. Technical and legal aspects of OER, including its pedagogical value and social and equity characteristics, should be clear to teachers. Benefits of OER extend wide in the scope of education sector. Utilizing these resources can create a large potential of inclusivity and dynamism in the field of education.

Use of Open Educational Resources

There is an expectation that the level of anticipation for adoption will increase with the growing licensing and knowledge of Open Educational Resources (OER). Teachers with background knowledge about distance learning were generally aware of alternative licensing choices, suggesting the existence of barriers before the familiarization of the subjects. Likely, teachers who emerged from the pandemic with a mandate to use digital resources and an aptitude for the internet are likely to encounter OER during their study and curricular creation (Seaman & Seaman, 2021). A notable and maybe long-

lasting adjustment to the available educational resource environment was a result of the health crisis, the COVID-19 pandemic, which led to urgent shifting of distance learning.

Teachers who had prior experience using online platforms before were more adept at using OER and different licensing approaches. At least 14% showed greater familiarity with Creative Commons and the public domain, while 9% showed a higher likelihood of being acquainted with OER. It was revealed that there was a significant increase in 31% of teachers reported being "very aware" or "aware" of OER (Altawalbeh, 2023). There is an affirmation that the teaching staff knows the significance of Open Educational Resources. It is suggested that teachers should be more aware of how important online learning materials are, encouraging them to develop and adapt to the OER and conduct training/seminars to assist teachers in using and producing it. The online learning resources help to ensure that all students have equal access to it. Moreover, to make the topic easier to use and emphasize its benefits, OER also enables teachers to design their lesson plans that cater to the specific needs of their pupils.

Meanwhile, the efforts of American higher education institutions were deeply committed to thinking about ways to facilitate the use of OER and substitute textbooks (McGowan, 2020). Results showed that universities have made progress in creating guidelines, proposal checklists, and weighting systems to aid in the decision-making process for faculty stipends and mini grants. OER still needs a lot of help to become a recognized and well-funded resource.

Although awareness of OER has increased, many teachers remain unaware of the existence of OER (Lieberman, 2019). Notably, there are a few teachers who are aware of

copyright issues, though the trend is going upward. According to reports, teachers are compelled to use it in at least one subject, and adoption is positively correlated with awareness. On the other hand, in recent years, educators have been using digital resources increasingly. For the first time, more instructors reported preferring digital textbook materials over printed ones or having no preference.

Considering the context, a multitude of educational establishments have shown a keen inclination towards the adoption and advancement of distance learning materials (Nyamweya, 2018). It was announced that the OER movement had accomplished this important goal, which is a community-wide effort to trace a billion savings across the globe by using OER. It was noted that not just educational institutions are using such a powerful tool, but also other companies and organizations.

An existing OER can be remixed or modified to create a publicly accessible resource that meets the needs of students (Fazzino & Turley, 2019). Remixing is the right to legally merge the original or updated content to produce something fresh. Revision is defined as the ability to legitimately modify, adapt, or update the material. Most educators adapt Open Educational Resources to meet their unique needs; nevertheless, a far lower percentage of teachers create, publish, or enhance OER (Admiraal, 2022). The study of Admiraal (2022) provided insights into how teachers utilize Open Educational Resources (OER), including what kinds of resources they use, why they use them, what obstacles they encounter, and how OER affects their teaching and students' learning. While producing, publishing, and adding OER have been found to be far less common, many teachers have stated that they modify OER to meet their personal requirements.

It was observed that links to open textbooks and webpages on the Internet are the most often cited OERs, behind YouTube videos (Dsouza, 2021). It is well-acknowledged that YouTube is a major platform for the distribution of educational content. Video resources may offer visually appealing and engaging learning experiences, which can aid in the understanding of complex subjects. Teachers can maximize their use in the teaching and learning process in a way that is applicable in planning, designing, and delivering the subject matter. Therefore, OER offers access to a wide range of materials, knowledge, and methods, which has the potential to transform instruction across all domains of the subject.

There are other groups of traits that influence the uptake of OER and create a clear and detailed representation known as the OER Adoption Pyramid shown in Figure 1 (Cox & Trotter, 2017). The framework, which is divided into six hierarchical categories, offers a concise summary of the major factors that impact the adoption of OER. It shows the various levels of control that teachers encounter over each element.

Figure 1

OER Adoption Pyramid (Cox & Trotter, 2017)



The pyramid reflected that the most important factor impacting instructors' or institutions' use of Open Educational Resources is access to infrastructure, computers, the internet, and electricity. This finding emphasizes the importance of technological availability and the physical infrastructure required to connect with digitally mediated educational resources.

Permission which refers to the use or creation of OER as determined by institutional intellectual property policy is the first factor that affects OER adoption. It depends on whether lecturers or institutions have permission to adopt OER. These are designed with the intention of being publicly available to a general audience. This implies that anyone, including educators and academic establishments, possesses the ability to freely access and use these resources without necessitating any specific authorizations. Open

education resources are purposefully designed for educational applications, making them highly suitable for integration within educational environments such as traditional classrooms and online courses. It is vital to possess knowledge about the precise license conditions associated with any OER. Certain OER may possess licenses with more stringent restrictions, therefore limiting certain uses or changes.

Understanding the concept and how it differs from other educational resources helps is the second factor that affects OER intake. It explains that the teacher has already heard of the concept of resources but does not fully understand it and may have an idea that these differ from traditional teaching resources but is not knowledgeable that they are frequently protected by copyright. Moreover, some studies suggest that teachers are unfamiliar with free and open educational materials because they are not aware of their (Ozdemir & Bonk, 2017). Several ways are being done to improve teachers' understanding of learning resources. Creating repositories, facilitating educator sharing, advocating for open licensing, offering chances for professional development, and fostering institutional adoption are a few of them.

The fourth factor is the capacity to find, use, create, and/or upload OER personally or with support. Due to a lack of knowledge about intellectual property policy and open licensing, finding appropriate materials that can be applied in teaching might be difficult and could hinder teachers from using them (Schuwer & Janssen, 2018). Not all Open Educational Resources are as complete or well-organized as teachers are advised to determine whether the contents are acceptable or may be reversed to fit a particular environment.

The availability of relevant OER of the requisite quality, which is necessary for the adaptive environment is the fifth factor in OER adoption. The base of the pyramid should be availability or can be placed lower than where it is now, giving educators the tools they need to appropriately examine and develop their willingness and capacity (Baas et al., 2019).

The volition to adopt OER is the sixth and last factor that affects OER adoption. Adoption has to do with the motivation or volition of individual lecturers or institutions. The views toward OER served as a mediating variable, and K–12 teachers' desire to utilize OER was predicted by how easy and useful they found the resource (Tang, 2020). The primary indicator of this statistic is how teachers exhibit a proactive attitude and unwavering commitment to using OER in their teaching methods. Many academic staff members have a positive attitude towards their work being made available online. Thus, it follows that the extent to which teachers use Open Educational Resources has previously been investigated (Alkhasawneh, 2020).

The different activities made by teachers on OER reflect their knowledge of OER and their motivation and intent to use these resources. Looking into this aspect of OER utilization can suggest institutional policies to effectively and legally explore these resources by teachers. With the innovative minds of teachers, OER evolution is greatly possible.

Barriers to the Use of Open Educational Resources

While OER is gaining popularity in the education system, it faces significant barriers that hinder its adoption. The most common barriers found out by different studies

are the following: lack of awareness of OER (Arunkumar & Kannan, 2020; Ganapathi, 2018; Jokiaho et al., 2018; Tang, 2020), lack of technical knowledge or skills (Arunkumar & Kannan, 2020; Datt & Singh, 2022; Ganapathi, 2018; Tang et al., 2020), lack of institutional support (Henderson & Ostashevski, 2018; Jokiaho et al., 2018; Li & Wong, 2021; Tang et al., 2020), and limited technology infrastructures or equipment (Al-khasawneh, 2020; Arunkumar & Kannan, 2020; Datt & Singh, 2022; Li & Wong, 2021)

OER adoption still faces some valuable challenges that affect the production of the materials (Datt & Singh, 2022). The significant threats are infrastructural barriers, language barriers, technical knowledge barriers, and the availability of Internet connectivity and speed. In their study, they proposed a model of OER barriers that consists of three levels. Level 1 highlights the barriers such as insufficient knowledge, drive, readiness, internet connectivity, and speed concerns. Level 2 emphasizes the barriers including the absence of adequate prior academic knowledge, linguistic proficiency, and ICT skills. Meanwhile, Level 3 presents barriers namely inadequate comprehension of instructions, unfamiliarity with internet resources, and commitment of time. They also emphasized that if OERs are to be widely acknowledged and used, it is vital that all these barriers be removed as soon as possible.

The challenges faced by K–12 instructors highlight both personal and contextual factors such as insufficient time, support, or pedagogical skills for integrating OER, as well as a lack of a supportive atmosphere (Tang, 2020). First-order barriers include insufficient assistance, a hostile environment, a lack of quality assurance, and schedule con-

straints. Lack of knowledge of OER, difficulty locating OER, and lack of experience incorporating OER into instruction are examples of second-order barriers.

A primary obstacle obstructing the adoption of Open Educational Resources is the deficiency of technological tools and assistance (Alkhasawneh, 2020). This barrier is common among studies, as it is one of the top-tier problems every teacher faces. The use of online learning resources is discouraged by the shortcomings of the technical infrastructure, issues with intellectual property rights, inadequate policy and support, lack of learning objectives, and language barriers (Li & Wong, 2021). For OER to be adopted and succeed, teachers frequently lack technical know-how and understanding of OER. (Ganapathi, 2018). Though a huge number of teachers today still cling to the traditional set-up and are not technology experts, they must also be adaptive in the ever-changing world to adapt to the use of OER.

The academic adoption of Open Educational Resources has been impacted by institutional and cultural variables (Jokiaho et al., 2018). It is believed that insufficient organizational support, expertise, and competency in using learning resources and incentives are some of these impediments. Interestingly, it noted that institutional intellectual property policies, a lack of incentives, and a lack of support and understanding in the creation, use, and sharing of educational resources are some of the obstacles of OER (Henderson & Ostashewski, 2018). These barriers amplify other obstacles. Another major obstacle to the utilization of Open Educational Resources (OER) is the lack of motivation from teachers in creating or adopting OER (Tlili et al., 2022). Some teachers are unwilling to OER. When educators do not see the value or enjoyment in using OER, their like-

likelihood of integrating these resources decreases (Herbert et al., 2023). Hence, motivational factors affect teachers' uptake of OER. With the institutional support and acceptance of modern educational technologies, these barriers can still be overcome.

Moreover, among the challenges in utilizing OER were finding pertinent resources, insufficient ICT skills to look for OER, inability to modify the various resources, and lack of awareness of different OER licenses (Nkwenti & Abeywardena, 2019). Using online learning resources is discouraged by insufficient knowledge of copyright law and open licensing initiatives. It is regarded, therefore, that for teachers to fully utilize OER, teachers must have the initiative to explore the resources, learn from their experiences, and equip themselves with the legal backgrounds of OER.

The credibility of the acquired materials, a lack of understanding of copyright regulations and open licensing initiatives, along with challenges in finding and accessing relevant OERs, are the primary barriers to accessing these resources (Dsouza, 2021). Another research also said that the obstacles faced in Open Educational Resources (OER) consist of restrictions on using copyrighted material without authorization, a general lack of understanding regarding copyright matters, insufficient technical expertise, a reluctance to share intellectual properties, ensuring the quality of open content, and inadequate technological resources (Arunkumar & Kannan, 2020).

In the Philippines, a policy brief derived from interviews with officials and staff of the ICTS Unit and the BLR of DepEd, participants in the OER teacher training workshops under the Digital Rise Program led by ICTS, and experts from two higher education institutions in the Philippines that are engaged in teacher training in using OER, re-

vealed the insights and analysis of OER adoption in the Philippines as follows: first, it appears that DepEd's understanding and use of Open Educational Resources (OER) are inconsistent, leading to little to no cooperation among DepEd units in the promotion of OER; second, the indexing, quality control, and reuse of static and interactive online resources are an issue; third, the concern in developing awareness of and respect for intellectual property rights (IPR) in teachers' use and remixing of resources should be addressed; finally, the lack of coordination between ICTS, BLR, and BLD is limiting the reach and impact of the OER teacher training program (Arinto, 2020).

In conclusion, barriers to OER can be deducted from teachers' perceptions and experiences. Most studies pointed towards insufficient awareness and training, technological barriers, pedagogical barriers, confusion about licensing mechanisms, and motivational factors. These barriers significantly affect teachers' utilization of OER.

Theoretical Framework

This research is anchored on Connectivism, a modern learning theory proposed by George Siemens in 2005, which suggests that learning takes place within a network of linked information sources, encompassing both human and non-human elements. In contrast to conventional theories that focus on internal knowledge creation, Connectivism acknowledges the significance of digital tools, social networks, and communal resources in enhancing learning (Siemens, 2005). Within this framework, the individual's capacity to connect with a variety of information sources is prioritized over simply memorizing facts.

Connectivism holds significant importance within the realm of Open Educational Resources (OER). These resources, ranging from digital textbooks and videos to teaching modules and learning platforms, are extensively available online and necessitate that users find, evaluate, and effectively utilize them. The involvement of educators with OER embodies a connectivism approach, where learning occurs through exploration, collaboration, and sharing on digital platforms.

The awareness and use of Open Educational Resources (OER) align with the connectivist concept that learning transcends the individual and exists within intricate online environments where information is constantly evolving. Barriers faced by educators, like inadequate access to technology or insufficient digital skills, can be seen as impaired or disrupted connections in the learning network. As a result, the instructional enhancement program suggested in this study is guided by connectivist principles, with the goal of boosting teachers' capacity to engage with OER platforms, participate in professional digital communities, and continuously adapt to evolving knowledge. By nurturing these networked skills, the study aims to enhance not only individual teaching practices but also to foster collaborative, open, and sustainable growth in education.

Conceptual Framework

This study is based on a conceptual framework that depicts the relationships among three primary variables: teachers' awareness of Open Educational Resources (OER), their extent of use of OER, and the barriers that affect utilization. The framework is grounded in Connectivism (Siemens, 2005), a learning theory that recognizes

knowledge as distributed across a network of connections, with learning consisting of the ability to construct and traverse those networks. In today's digital world, OER serve as vital knowledge hubs within this network, and teachers' ability to interact with them relies on their awareness and the structural factors that facilitate or hinder their use.

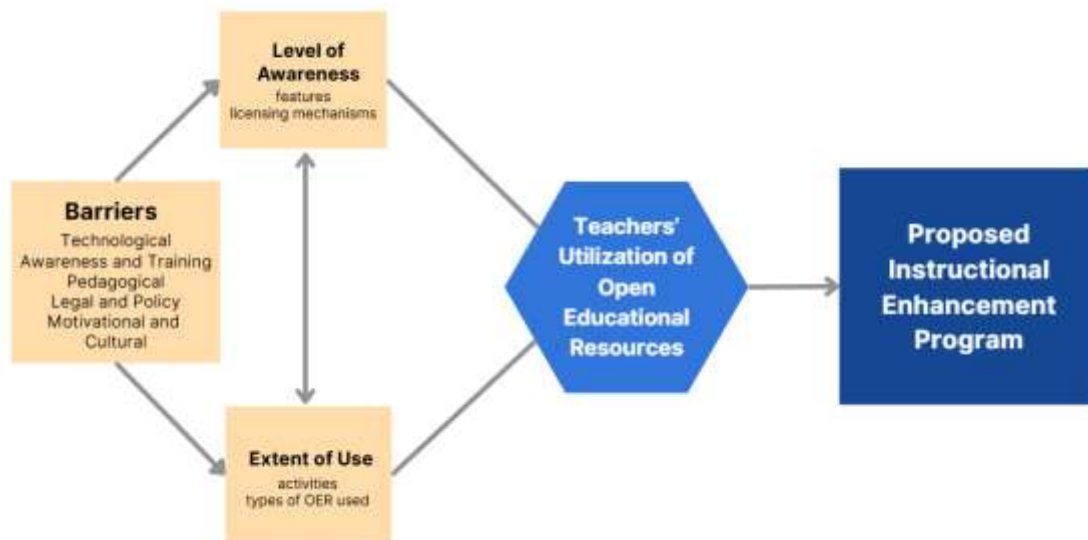
Awareness involves teachers' comprehension of the features of OER, including licensing systems, and their educational value. Studies indicate that when educators are informed about the nature and advantages of OER, they are more likely to investigate, assess, and incorporate them into their teaching methods (Kuo et al., 2024; Tang et al., 2020). On the other hand, extent of use refers to how frequently educators access, modify, combine, or incorporate OER into their lesson plans, teaching resources, or classroom activities, and how often they use the different types of OER. Active utilization of OER is linked to greater professional collaboration, localization of content, and flexibility in teaching methods (Nascimbeni & Burgos, 2019).

Research has indicated that as teachers become more aware, their utilization of OER also tends to increase. This is because awareness acts as a foundation for making informed choices and engaging confidently with OER. Teachers who possess a strong understanding of what OER are, how they function, and where to locate them are more inclined to investigate these resources and integrate them into their teaching practices (Tang et al., 2020). Increasing awareness is also linked to deeper engagements such as modifying and sharing OER rather than merely consuming them—as well as more regular use (Admiraal, 2022).

This association can be elucidated using the framework of Connectivism (Siemens, 2005), which posits that learning transpires through the establishment and exploration of networks of knowledge and information. From this perspective, awareness of OER signifies the establishment of links to digital information, whereas use denotes the capacity to navigate and implement such links in significant educational contexts.

Moreover, barriers play a critical mediating and limiting role. These barriers can be technological (e.g., lack of access to the internet or devices), pedagogical (e.g., limited ability to adapt OER in instruction), awareness and training (e.g., lack of training), legal (e.g., licensing uncertainty), or motivational and cultural (e.g., preference of conventional teaching methods). These hurdles frequently hinder teachers' ability to engage with OER, regardless of their interests (Bozkurt et al., 2019). Recent research confirms that these constraints can discourage teachers from exploring open information, impede knowledge exchange, and reinforce reliance on traditional proprietary materials (Luo et al., 2020; Tang et al., 2020) .

Situated at the end of the framework is the output of the study—a Proposed Instructional Enhancement Program, which was developed based on the results of this study. The program aimed to increase awareness, support utilization, and reduce identified barriers, thereby promoting the effective integration of OER in teaching. Figure 2 shows the illustrative conceptual framework of this study.

Figure 2*Conceptual Framework of the Study***Research Problems**

The study sought to determine teachers' utilization of Open Educational Resources (OER), which served as the basis for a proposed instructional enhancement program for teachers. It attempted to answer the following questions:

1. What is the level of teachers' awareness of OER in terms of:
 - a. features of OER
 - b. licensing mechanisms
2. To what extent do teachers utilize OER in teaching, in terms of:
 - a. activities done with OER
 - b. types of OER used

3. What are the encountered barriers of teachers in the utilization of OER?
4. Is there a significant correlation between the level of teachers' awareness of OER and their extent of use?
5. Based on the findings of the study, what instructional enhancement program can be proposed?

Hypothesis

There is a significant positive correlation between the level of teachers' awareness of Open Educational Resources (OER) and their extent of use, suggesting that higher levels of awareness are associated with greater utilization of OER in the educational context.

Scope and Limitations

This research investigated teachers' utilization of Open Educational Resources (OER) in basic education across both public and private institutions. It specifically examined three primary areas: the teachers' awareness of OER in terms of its features and licensing mechanisms; the extent of use in terms of activities done with OER and types of OER used; and the barriers to its utilization.

The study encompassed public and private elementary schools in Mandaluyong City for the school year 2024-2025. A mixed-methods research approach was employed, which combined quantitative data collected through a survey questionnaire and qualitative data from focus group discussions. The study intended to create a proposed instructional improvement program aimed at enhancing teachers' awareness, accessibility, and

use of OER. The study was conducted within a designated geographic area and period, meaning that the results may not apply to educators in other locations or educational levels. Moreover, the study depended on self-reported information, which could be influenced by biases that lead to over- or underreporting of actual OER usage.

Although both public and private school teachers were part of the sample, differing levels of access and institutional policies to digital resources might be noted. The research did not examine the direct effects of OER usage on student learning results, nor did it review all available OER platforms. Finally, while the instructional enhancement program was designed based on the findings of this study, its execution and efficacy were beyond the scope of the current investigation and were suggested for future exploration.

Definition of Terms

To fully understand the study on the teachers' utilization of Open Educational Resources, the following terms were hereby operationally defined:

Awareness is the knowledge of a situation or issue, based on understanding or experience, or the knowing that something exists. For this study, awareness pertains to teachers' knowledge and understanding of Open Educational Resources (OER). It indicates how cognizant teachers are of the features of OER.

Barriers are things that impede or separate as defined by Webster's Dictionary. It is also defined as things that block the way to make progress difficult. For this study, barriers refer to hindrances or challenges that teachers experience deterring them from utiliz-

ing Open Educational Resources. In some instances, these are related to but not limited to lack of awareness, lack of technical skills, and equipment among others.

Instructional Enhancement Program is a program that enhances the pedagogical skills of teachers. For this study, it is specifically the output that will be derived from the study. Since the study is linked to instruction improvement, the program targeted the instructional competence of teachers in terms of using instructional materials specifically OER. The program addressed the PPST's Domain 1 Strand 3 which is positive use of ICT, and Domain 4 Strand 5, which emphasizes that teachers can choose, create, organize, and employ appropriate teaching and learning resources, including ICT, to address learning objectives.

Open Educational Resources (OER) are research, teaching, and learning resources in any format or media that are either in the public domain or are protected by copyright and published under an open license that allows for free access, reuse, repurposing, adaptation, and redistribution by others (UNESCO, 2022). The definition is acceptable for this study, but for simplification and deeper contextualization in this study, Open Educational Resources are online, publicly available instructional materials that can be freely accessed, reused, modified, and shared by teachers to support instruction.

Use can be defined as the action of using something or the state of being used for a purpose. For this study and in the context of OER, use involves the actions/practices of teachers in OER. These are the activities done by teachers on Open Educational Resources. Using, creating, adapting, and sharing are examples of teachers' use of OER.

Utilization is the ability to see, hear, or become aware of something through the senses. For this study, utilization specifically refers to teachers' utilization of Open Educational Resources. Teachers' utilization of OER involves their awareness, use, and the perceived barriers to its adoption. It contributes to understanding whether Open Educational Resources are beneficial learning resources, how OER are used, and what are the barriers perceived in OER adoption to come up with a program of utilizing it effectively in instruction.

Chapter 3

Results and Discussion

This chapter provides the findings and analysis of the study, along with the interpretation of the data organized according to the research problems presented in Chapter 1.

Teachers' Awareness of Open Educational Resources

The tables below present the results on teachers' awareness of Open Educational Resources (OER) in terms of their features and licensing mechanisms.

Features of OER

Table 4 shows teachers' assessment of their level of awareness of OER in terms of their features. Items were grouped according to the quantitative results and their corresponding interpretations.

Table 4

Teachers' Level of Awareness of OER in terms of Features

Features of Open Educational Resources	Inferential Ordinal Median	Interpretation
1. OER are teaching, learning, and research resources available publicly and free of charge.	4	Very Aware
2. OER is provided with a license that allows free utilization.	4	Very Aware
3. OER has the ability to remix existing educational resources.	4	Very Aware
4. OER has the ability to repurpose.	4	Very Aware

Features of Open Educational Resources	Inferential Ordinal Median	Interpretation
6. Continual development of educational resources is important to OER.	4	Very Aware
7. OER is reusable.	4	Very Aware
8. Sharing is important to OER.	4	Very Aware
9. Use of OER is an effective method for improving retention for at-risk students.	4	Very Aware
10. Use of OER leads to improvement in student satisfaction.	4	Very Aware
11. Use of OER leads to improvement in student performance.	4	Very Aware
12. OER promotes more equitable access to education, serving a broader base of learners than traditional resources.	4	Very Aware
14. OER adoption at an institutional level leads to financial benefits for students.	4	Very Aware
5. OER can be redistributed after it is modified.	3	Aware
13. OER adoption at an institutional level leads to financial benefits for schools.	3	Aware

As shown in Table 4, teachers' level of awareness of Open Educational Resources (OER) was described as *Very Aware*, with an overall inferential ordinal median of 4. Twelve (12) items were rated *Very Aware* (ordinal median = 4), while two (2) items were rated *Aware* (ordinal median = 3).

The items that obtained an inferential ordinal median of 4 were Item 1 (OER are teaching, learning, and research resources available publicly and free of charge), Item 2 (OER is provided with a license that allows free utilization), Item 3 (OER has the ability to remix with existing educational resources), Item 4 (OER has the ability to repurpose), Item 6 (Continual development of educational resources is important to OER), Item 7 (OER is reusable), Item 8 (Sharing is important to OER), Item 9 (Use of OER is an effective method for improving retention for at-risk students), Item 10 (Use of OER leads to improvement in student satisfaction), Item 11 (Use of OER leads to improvement in student performance), Item 12 (OER promotes more equitable access to education, serving a broader base of learners than traditional resources), and Item 14 (OER adoption at an institutional level leads to financial benefits for students). Meanwhile, the items that obtained an inferential ordinal median of 3 were Item 5 (OER can be redistributed after it is modified) and Item 10 (OER adoption at an institutional level lead to financial benefits for schools).

It was revealed that Items 1, 2, 3, 4, 6, 7, and 8 reflect a high awareness of the central definition of Open Educational Resources such as free access, remixing, repurposing, and sharing. These findings aligned with UNESCO (2022) which emphasized that OER are freely licensed resources that allow for modification and reuse. Similar results were reported by Hilton (2020) which stressed that open licensing, which permits unrestricted access and usage, is a fundamental feature of OER and the 5Rs Framework of Wiley and Hilton (2018) namely, retain, reuse, revise, remix, and redistribute – highlights OER's adaptability and collaborative possibilities.

Items 9, 10, 11, 12, and 14 also showed a significant verbal interpretation of strong awareness which suggests that teachers acknowledge how OER affects educational access and student success. This supports the findings of Hilton (2020) and Colvard et al. (2018) which emphasized how OER closes access barriers, especially in environments with limited resources or low income and that students who use Open Educational Resources (OER) frequently perform on par with or better than those who use traditional resources, and that the cost advantages increase fairness.

Contrary to the study of Peregrino et al. (2021), which revealed that teachers' awareness level of OER was approaching awareness. This implies that although some educators were aware of Open Educational Resources (OER), their comprehension was still restricted, and they were not entirely cognizant of the many OER platforms, tools, and advantages that they might use to enhance their instruction.

Meanwhile, Items 5 and 13, which received a rating of *Aware* indicates knowledge gaps about the entire extent of OER licensing and its wider institutional advantages. This is similar to the studies of Allen and Seaman (2016) which stresses that teachers frequently utilize Open Educational Resources (OER), but they are not always sure about the legal terms for reuse and redistribution. This aligns with the study of Weller et al. (2015) which highlights cost savings and enhanced student performance as two of the financial advantages of OER adoption at the institutional level. The moderate knowledge may be explained by the fact that certain teachers are not quite sure that changed information can be redistributed.

OER materials were perceived as more up-to-date, interesting, and available, resulting in increased levels of student satisfaction and involvement (Colvard et al., 2018). To better connect course content with learning objectives, teachers found OER useful. Utilizing OER has demonstrated a positive impact on alleviating student financial burdens, enhancing course completion and retention rates, as well as boosting academic performance.

Licensing Mechanisms

Table 5 shows the teachers' level of awareness of OER in terms of licensing mechanisms. Three licensing mechanisms were rated as to their awareness. These were public domain, Creative Commons, and copyright.

Table 5

Teachers' Level of Awareness in Terms of Licensing Mechanisms

Licensing Mechanisms	Inferential Ordinal Median	Interpretation
1. Public Domain	4	Very aware
3. Creative Commons	4	Very aware
2. Copyright	3	Aware

As presented in Table 5, teachers' level of awareness of Open Educational Resources (OER) in terms of licensing mechanisms was described as *Very Aware*, with an overall inferential ordinal median of 4. Two (2) items were rated *Very Aware* (ordinal median = 4), while one (1) item was rated *Aware* (ordinal median = 3). The items that

received a rating of *Very Aware* were Item 1 (Public Domain) and Item 3 (Creative Commons), whereas Item 2 (Copyright) was rated *Aware*.

The teacher-respondents demonstrated a high level of awareness in terms of Item 1 on public domain and Item 2 on Creative Commons. The findings are comparable to several studies by Awujoola and Phillips (2020), who reported that as part of their interaction with Open Educational Resources (OER), academic staff in Nigerian institutions were said to be largely aware of open licensing schemes, especially Creative Commons, Schuwer and Jansen (2023) found that academics from a number of European universities were knowledgeable about the public domain and Creative Commons licenses, and they frequently used this information to curate or modify instructional resources, and Nobes and Harris (2023) revealed through capacity-building programs that prioritized the ethical and legal reuse of educational materials, educators in impoverished nations were becoming more knowledgeable of the ideas of public domain and Creative Commons.

This contradicts the findings of Baas et al. (2019) who reported that instructors had little knowledge of Creative Commons licenses. According to the study's findings, most faculty members have used Creative Commons-licensed content in their instruction. Faculty members had a neutral opinion towards Creative Commons licenses while being aware of the notion. The study of Saxena and Singh (2023) found out that a large number of educators have some knowledge of Open Educational Resources (OER), particularly in relation to digital learning tools.

Meanwhile, teachers categorized themselves at a moderate level of awareness in terms of copyright knowledge. A similar result patterned in the study of Di Valentino

(2016) which posits fewer respondents were aware of the copyright training options available, and only one-third had taken part in such training, even though most respondents were aware of the copyright rules or standards of their institutions. Faculty frequently turned to the institution's copyright policy or librarians for help. The study brought to light how difficult it is to get permission to use copyrighted materials in the classroom and how complicated copyright problems may be.

Teachers' Extent of Use of Open Educational Resources

The tables below present the results on teachers' extent of use of Open Educational Resources (OER) in terms of activities and types of OER used.

Activities Done with OER

The succeeding table shows the teachers' extent of use in terms of activities done with OER. Items were arranged according to their quantitative results and interpretation.

Table 6

Teachers' Extent of Use in Terms of Activities Done with OER

Activities on Open Educational Resources	Inferential Ordinal Median	Interpretation
1. Uses OER to aid instruction	4	Regularly
3. Adapts OER to fit teaching needs	4	Regularly
2. Creates OER as an original work	3	Occasionally
4. Combines OER to create a new resource	3	Occasionally

Activities on Open Educational Resources	Inferential Ordinal Median	Interpretation
5. Publishes/uploads an OER to a repository	3	Occasionally
6. Shares an OER with a colleague	3	Occasionally

Table 6 presents the frequency of teachers' activities in utilizing Open Educational Resources (OER), which was described as *Occasionally*, with an overall inferential ordinal median of 3. Four (4) items were rated *Occasionally* (ordinal median = 3), while two (2) items were rated *Regularly* (ordinal median = 4).

The items that obtained a rating of *Occasionally* were Item 2 on creating OER as an original work, Item 4 on combining OER to create a new resource, Item 5 on publishing/uploading an OER to a repository, and Item 6 on sharing an OER with a colleague. However, the items that obtained a mean of 4 were Item 1 on using OER to aid instruction and Item 3 on adapting OER to fit teaching needs. Although use and adaptation of OER are regularly done, these results lead to a low level of teacher participation in the more active and cooperative processes of OER creation and distribution.

Regarding Items 2, 4, 5, and 6, these findings echo the conclusion of Al-Zahrani (2024) that teachers have a significant level of awareness regarding OER and a strong willingness to use them in the future. The study found that various factors influenced the ease of using OER. Participants expressed different levels of difficulty or simplicity in employing OER for teaching with technology, indicating that their perceptions of ease varied depending on the technologies involved.

Moreover, the study of Tang et al. (2020) supported the present findings. Their study noted that teachers' opinions on the importance of OER improved when they actively participated in OEP, such as modifying existing OER to fit their curriculum, collaborating to create shared resources, or including OER in their lesson plans.

Generally, these studies highlight how OER improves instructional strategies, fosters teacher cooperation, and advances educational equity. Additionally, they emphasize the value of professional development, institutional support, and technology infrastructure in enabling instructors to create, utilize, modify, combine, publish, and share OER in an efficient manner.

Types of OER Used

Table 7 reveals the teachers' extent of use of OER in terms of the types of OER used. Thirteen (13) types of OER were rated by teachers as to their extent of use.

Table 7

Teachers' Extent of Use in Terms of Types of OER

Types of Open Educational Resources	Inferential Ordinal Median	Interpretation
1. Videos	4	Regularly
3. Images	4	Regularly
4. Infographics	4	Regularly
5. Interactive games or simulations	4	Regularly
6. Video lectures/tutorials	4	Regularly

Types of Open Educational Resources	Inferential Ordinal Median	Interpretation
7. Tests and quizzes	4	Regularly
8. Open textbooks, chapters from text-books	4	Regularly
9. Homework exercises, worksheets	4	Regularly
10. Slides and class presentations	4	Regularly
12. Elements of an existing course e.g., a module/unit	4	Regularly
13. Lesson Plans	4	Regularly
2. Audio podcasts	4	Occasionally
11. Whole course/subject	3	Occasionally

Table 7 shows that the types of Open Educational Resources (OER) were used by teachers *Regularly*, with an overall inferential ordinal median of 4. Eleven (11) items were rated *Regularly* (ordinal median = 4), while two (2) items were rated *Occasionally* (ordinal median = 3).

The items that obtained an inferential ordinal median of 4 were Item 1 (videos), Item 3 (images), Item 4 (infographics), Item 5 (interactive games or simulations), Item 6 (video lectures or tutorials), Item 7 (tests and quizzes), Item 8 (open textbooks or textbook chapters), Item 9 (homework exercises and worksheets), Item 10 (slides and class presentations), Item 12 (elements of an existing course, e.g., a module or unit), and Item 13 (lesson plans). Meanwhile, the items that obtained an inferential ordinal median of 3 were Item 2 (audio podcasts) and Item 11 (whole courses or subjects).

Teachers showed a high level of awareness in Items 1 and 6, which parallel the results of the study by Marín et al. (2022) that videos are one of the most popular OER

forms. Videos were more attention-grabbing than other types of material because they successfully blend action, sound, and images. They can swiftly and effectively communicate complicated information. Videos may also be shared, which expands their potential audience and effect. These findings extended on the conclusion that Edpuzzle-based interactive films can be used to help Grade 8 pupils with difficult Math skills that notably improved students' performance and comprehension while underscoring the potential of interactive video material to improve learning outcomes (Morata, 2024).

Teachers rated Items 3 and 4 as *Very Aware*, which confirmed the findings of Aguilar and Panoy (2022) that infographics successfully increased students' scientific knowledge, indicating that well-crafted visual aids improved comprehension in remote learning settings. The effectiveness of infographics in enhancing learning is widely recognized, and visual elements are often crucial in various Open Educational Resources (OER) formats, such as interactive presentations and infographics.

The study's high rating in Items 5, 7, and 10 corroborated the results reported in the study of Pakpour et al. (2021) that slides helped teachers leverage the vast array of high-quality resources that were readily available online or generously shared by fellow teachers. This pattern was documented by Baas et al. (2019) that there were classifications of publicly available online learning resources, highlighting their many digital media and educational functions.

Moreover, Items 8, 9, 12, and 13 were also rated *Very Aware* by teacher-respondents. Comparable results indicated in the study of Hilton (2020) with the author's multiple reviews of research and concluded that adopting OER-based textbooks and

course materials – including modular elements like slide decks and class notes—helped students perform on par with or better than traditional textbooks.

The results indicated that teachers were actively using interactive, visual, and modular forms of OER to improve students’ understanding, engagement, and flexibility. The widespread usage of presentations, videos, and infographics – all of which have been backed by various studies – confirmed the value of multifunctional learning resources in modern education.

On the other hand, the findings suggested that there may be a necessary improvement in knowledge, training, or resource assistance in audio podcasts and the course itself. Schools may consider promoting the advancement of audio podcasts for auditory learners and providing the necessary infrastructure for the creation and use of full-course OER.

The Encountered Barriers in the Utilization of Open Educational Resources

The qualitative data delved into teachers’ encountered barriers in the utilization of OER. The analysis of the qualitative data was performed by QDA Miner Software. QDA Miner is a user-friendly qualitative data analysis tool designed for the organization, coding, annotation, retrieval, and examination of groups of documents and images (Provalis Research, 2024). The treatment of data followed the six-phase coding methodology for thematic analysis by Clarke and Braun (2013). The phases included familiarizing with the data, generating codes, merging codes to create themes, reviewing themes, analyzing the themes’ relevance, and reporting the results.

The analysis revealed 12 codes that represented the barriers encountered by teachers in OER utilization. The codes were then merged with five themes. The themes were reviewed and analyzed properly according to their relevance to the problem. Table 8 shows the summary of results from the qualitative data analysis.

Table 8

Qualitative Data Analysis: Summary of Results

Themes	Codes
Technological Barriers	Lack of internet connection
	Insufficient digital facilities
	Accessibility or discoverability
Awareness and Training Barriers	Lack of awareness
	Lack of proper training
	Difficulty in finding and modifying OER
Pedagogical and Practical Barriers	Limited Instructional /Teaching Time
	Language barrier
	Reliability of OER resources and sites
Legal and Policy Barriers	Confusion about licensing mechanisms
Motivational and Cultural Barriers	Traditional teaching preference
	Lack of Motivation

Note. Twelve (12) codes and five (5) themes emerged from the analysis. It showed the different barriers that hinder OER utilization.

Each theme above was discussed further in Tables 9, 10, 11, 12, and 13. The specific challenges were discussed and enumerated. Relevant quotes from teacher-participants were also included.

Table 9

Technological Barriers

Codes	Description	Quotes
Lack of internet connection	Limited or no internet access prevents teachers from downloading and using OER.	“The number one barrier is the lack or limited internet connection.”
		“Our internet connection is too slow. We must find a place where the connection is good.”
		“Teachers can't access it if there's no internet.”
Insufficient digital facilities	Schools may not have enough computers, projectors, or other necessary equipment.	“We don't have a TV. It's hard.”
		“I have a TV in my room, but it's defective.”
Accessibility or discoverability	Some OER materials may be difficult to access due to platform restrictions or lack of user-friendly navigation.	“Most of the time, those who want access to OER are lost. They don't know where to go.”
		“When you are downloading the resources, and then when you accidentally click on something, there are pop-ups. There are ads.”
		“Some repositories are accessible, and there are others that cannot be accessed.”

Table 9 presents the technological barriers that point to the difficulties that educators encounter because of insufficient infrastructure, a lack of digital resources, and issues with accessing and utilizing OER. These challenges considerably affect the uptake and successful implementation of OER in education.

Lack of internet connection is one of the barriers that hinder OER utilization among teachers. Since OER are mostly accessible on the internet, educators find it challenging to download, adjust, and distribute these resources efficiently with limited or a lack of internet access. All FGD groups said that the main barrier in their utilization of OER is the lack or limited internet connection, gathering responses such as these: “The number one barrier is the lack or limited internet connection.”, “Our internet connection is too slow. We need to look for a place where the connection is good.”, and “Teachers cannot access the material if there is no internet connection.” Access to the internet remains a major challenge for educators in developing countries, limiting their ability to engage with OER platforms (King et al., 2018).

Additionally, insufficient digital facilities also confirm a barrier to OER utilization. Schools experience insufficient digital facilities such as computers, TVs, and other related facilities. Teacher A in a group said, “We don't have TVs. It's hard.” Another teacher also shared, “I have a TV in my room, but it's defective.” Studies show that limited technology infrastructures or equipment affect OER utilization (Alkhasawneh, 2020; Arunkumar & Kannan, 2020; Datt & Singh, 2022; Li & Wong, 2021)

Moreover, accessibility or discoverability also belongs to the technological barriers of OER. Some OER materials may be difficult to access due to platform restrictions

or a lack of user-friendly navigation. This difficulty robs their time and interest to access OER. Teachers shared their sentiments as these, “Most of the time, those who want access to OER are lost. They don't know where to go.” “When you're downloading the resources, and you click on it, something shows up. There are ads.”. Difficulties locating and accessing pertinent OER are one of the main obstacles to obtaining OER (Dsouza, 2021).

Table 10

Awareness and Training Barriers

Codes	Description	Quotes
Lack of awareness	Some teachers do not know what OER are or where to find them.	“Let's just admit it, not all of us know the features of OER.” “I am not informed of OERs’ use and features.”
Difficulty in finding and modifying OER	Searching for and adapting resources can be tedious and take a lot of time.	“What is the problem? Finding OER materials. There are free ones, but sometimes, you cannot download them. “Crafting the materials is also a problem. Sometimes, when you download something, you just end up leaving it.” “You still have to modify or edit the resources.”
Lack of proper training	Many educators lack training in accessing and using OER.	“Not all teachers know how to access and use OER. We are lacking in training, too.” “Lack of sufficient training, a thorough

Codes	Description	Quotes
		training on OER. Training should be hands-on so we might not forget.”
		“Another is the technical know-how. How to navigate through the sites, how to download, how to set up on the screen, we need assistance, especially for us oldies.”
		“Lack of proper training can also be one of the barriers. There are pieces of training, but only few are selected.”

Table 10 shows that the lack of awareness and training obstacles greatly impede educators from adopting and effectively using Open Educational Resources (OER). Numerous educators are still not informed about the availability and advantages of Open Educational Resources (OER) as one teacher said, “Let's just admit it, not all of us know the features of OER.”. Teachers had a limited understanding of OER, which hindered its incorporation into their teaching methods (Arunkumar & Kannan, 2020; Tang et al., 2020). This unawareness stops educators from discovering and using freely accessible educational materials.

Finding suitable OER that match specific curriculum standards and student requirements can be difficult. Moreover, adapting these resources for classroom application demands effort in customizing and contextualizing them. Teachers’ sentiments are, “Finding OER materials. There are free ones, but sometimes, you cannot download them. You must really look for accessible resources,” and “Sometimes, you don’t have the time

to look for what you need and modify the materials.” A significant obstacle to the adoption of OER is the challenge of locating and adapting materials.

Even when teachers know about OER, they frequently do not possess the skills needed to find, modify, and use these resources successfully. Lack of proper training is a barrier to OER utilization. Insufficient training is an important factor in teachers’ uptake of OER (Appiah et al., 2020) complementing the teacher’s response: “Not all teachers know how to access and use OER. We are lacking in training too.” Educators require continuous support systems for the adoption of Open Educational Resources, which encompasses training in effective teaching methods and OER technology.

Table 11

Pedagogical and Practical Barriers

Codes	Description	Quotes
Limited Instructional /Teaching Time	Teachers have limited time to integrate OER into lesson plans.	“Our instructional time is short. You must explain the lesson and use OER within 40 minutes.” “Because we are doing a lot of things, we just have a little time to integrate OER into our lessons.” “Sometimes, we have a problem with the time. It's a lot of work. Bringing the kids to the ICT room. Before we knew it, class time had finished.”

Codes	Description	Quotes
Language barrier	Some OER materials are not available in the teacher's preferred language.	"The language. If you use English, it's hard for the learners. So, if you are going to integrate OER in your motivation or discussion, it will take time because you must translate it and explain further."
Reliability of OER re-sources/sites	Teachers may be hesitant to use OER due to doubts about the reliability of the site, lesson alignment, or effectiveness.	"If you want to use OER, you should use a site that's reliable." "The information must be true and correct. It's better when it is a pdf file." "Some OERs do not exactly match the intended learning content. Some contains errors."

Table 11 shows the pedagogical and practical barriers that go into the difficulties that teachers encounter when integrating Open Educational Resources (OER) into their instruction, originating from issues related to teaching time, language, and reliable sources. These challenges influence the effectiveness of OER implementation in educational settings.

The restricted time available for instruction hinders the effective use of Open Educational Resources (OER). Access to OER is insufficient; teachers need structured experiences to engage with and implement open educational practices within their limited schedules (Arispe et al., 2023). Teacher-participants said, "Our instructional time is short. You must explain the lesson and use OER within 40 minutes.", "Because we are doing a lot of things, we just have a little time to integrate OER into our lessons." And "Some-

times, we have a problem with the time. It's a lot of work. Bringing the kids to the ICT room. Before we knew it, class time had finished.”” When time allotted for instruction is short, the successful incorporation of OER is hindered. Utilizing interactive and collaborative teaching methods is essential when implementing OER, and constrained classroom time may affect effective execution.

The use of online educational resources is also hindered by language barriers. A teacher shared this experience on OER: “The language. If you use English, it's hard for the learners. So, if you are going to integrate OER in your motivation or discussion, it will take time because you must translate it and explain further.”. Many OER resources are predominantly in English, limiting utilization for educators who prefer to instruct in their native language.

Furthermore, concerns about OER reliability and credibility affect its utilization (Al-Zahrani, 2024). Related responses from FGD are the following: “If you want to use OER, you should use a site that's reliable.”, “It’s better when it's a PDF.” and “Some OERs do not exactly match the intended learning content. Some contains errors.” Instructors doubt the quality of OER because of the absence of quality assurance. This doubt results in reluctance to incorporate these resources into their teaching plans, as teachers are concerned that the materials might not meet curriculum standards.

Table 12*Legal and Policy Barriers*

Codes	Description	Quotes
Confusion about licensing mechanisms	Uncertainty about Creative Commons licenses and how OER can be legally modified or shared.	“But sometimes, the problem is if the website needs fees.” “When you visit some websites, they won’t open. Some require payment.” “Some sites require payments and some OERs are exclusively for an organization.”

Table 12 presents the legal and policy barriers that teachers considered as one of the barriers to OER utilization. Confusion in licensing mechanisms affects OER utilization among teachers. Numerous educators lack knowledge about Creative Commons (CC) licenses, confusing how OER can be utilized, altered, and shared. Related responses gathered from teachers that prove the barrier are the following: “But sometimes, the problem is if the website needs fees.”, “When you visit some websites, they won’t open. Some require payment.”, and “Some sites require payments and some OERs are exclusively for an organization.” Using online learning resources is discouraged by insufficient knowledge of copyright law and open licensing initiatives.

Table 13*Motivational and Cultural Barriers*

Codes	Description	Quotes
Traditional teaching preference	Some educators prefer printed textbooks and conventional teaching methods.	“The stigma of the teacher, I do not like to use it, I'm still traditional. I will not download that.”
Lack of Motivation	Some teachers may lack the interest or initiative to explore OER.	“And sometimes... laziness. Right? You will think, “Oh, I’ll download that later.” Then you end up not doing it.” “Maybe they are already tired of exploring something new, afraid, or maybe, they do not want to use it.”

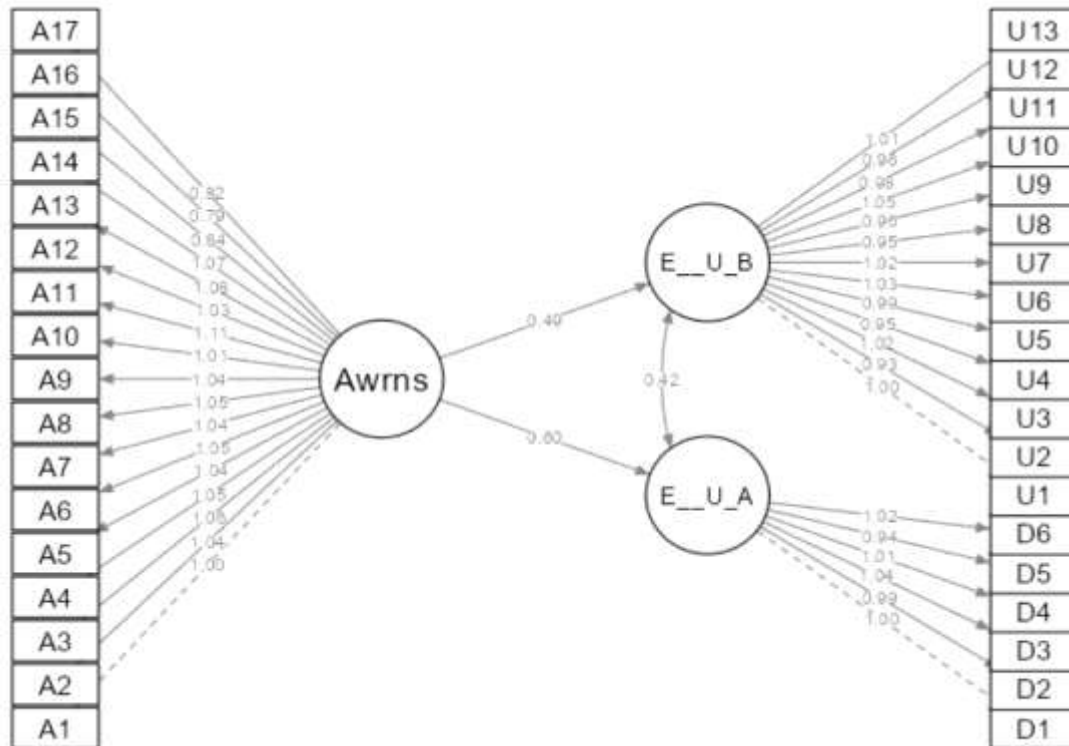
Table 13 highlights the motivational and cultural obstacles that relate to individual beliefs, attitudes, and social expectations that affect educators' readiness and capability to embrace Open Educational Resources (OER). Some teachers would prefer printed textbooks and traditional teaching methods. One teacher-participant shared this: “The stigma of the teacher, I do not like to use it, I am still traditional. I will not download that.” Negative attitudes and inadequate skills among teachers, rooted in conventional teaching methods and an unwillingness to change, have resulted in the minimal use and repurpose of OER resources.

Another major obstacle to the utilization of Open Educational Resources (OER) is the lack of motivation from teachers in creating or adopting OER ((Tlili et al., 2022). Various research studies have divulged the factors contributing to educators' hesitation or

unwillingness to adopt Open Educational Resources. When educators do not see the value or enjoyment in using OER, their likelihood of integrating these resources decreases (Herbert et al., 2023)

Significant Positive Correlation Between the Level of Teachers' Awareness of Open Educational Resources (OER) and their Extent of Use

The study sought to determine a significant correlation between the teachers' level of awareness of Open Educational Resources (OER) and their extent of use. Figure 7 presents the results of statistical analysis examining this relationship. Pearson's correlation analysis indicated a significant positive correlation between the two variables.

Figure 7*Structural Equation Model*

By analyzing the correlation coefficient's numerical value, which ranges from -1 = perfect negative correlation, -0.7 = strong negative correlation, -0.5 = moderate negative correlation, -0.3 = weak negative correlation, 0 = no correlation, 0.3 = weak positive correlation, 0.5 = moderate positive correlation, 0.7 = strong positive correlation, and 1 = perfect positive correlation, one can determine the strength of the relationship.

Items A1 to A17 show that the Pearson correlation ranges from 0.79 to 1.11 towards awareness of OER, implying a strong to perfect positive correlation. The three

highest correlations are Item A11 on OER promotes more equitable access to education, serving a broader base of learners than traditional resources with a correlation of 1.11, Item A13 on the use of OER leads to improvement in student satisfaction with a correlation of 1.08, and Item A14 on the use of OER leads to improvement in student performance with a correlation of 1.07, while the three lowest correlation are Item A16 on awareness of Copyright with correlation of 0.79, Item A17 on awareness of Creative Commons with correlation of 0.82, and Item A15 on awareness of Public Domain with correlation of 0.84.

Meanwhile, the extent of use A on the types of Open Educational Resources reveal that the Pearson correlation ranges from 0.94 to 1.04, also signifying a strong to perfect positive correlation. The three highest correlations are Item D3 on adapts OER to fit teaching needs, Item D6 on shares an OER with a colleague with a correlation of 1.02, and Item D4 on combines OER to create a new resource with a correlation of 1.01, while the three lowest correlations are Item D5 publishes/uploads an OER to a repository with a correlation of 0.94, Item D2 creates OER as an original work with a correlation of 0.99, and Item D1 on uses OER to aid instruction with a correlation of 1.00.

On the other hand, the extent of use B on the activities on Open Educational Resources has similar findings, which has a strong to perfect positive correlation where Pearson correlation ranges from 0.93 to 1.05. The three highest correlations are Item U10 on slides and class presentations with a correlation of 1.05, Item U6 on images with a correlation of 1.03, Item U3 on images and Item U7 on tests and quizzes with a correlation of 1.02, respectively, while the three lowest correlations are Item U2 on audio pod-

casts with a correlation of 0.93, Item U4 on infographics, and Item U8 on open textbooks, chapters from textbooks with the same correlation of 0.95.

Academic staff members were aware of Open Educational Resources (OER) and used them in a variety of ways (Ogunbodede et al., 2021). This suggests a positive correlation between awareness and usage. The instrument's reliability was assessed using Cronbach Alpha, which produced scores of 0.71 on Awareness and 0.77 on OER Usage. On Exploring the Factors That Influence K-12 Teachers' Use of Open Educational Resources, the findings showed that teachers generally had good opinions about using OERs. Teachers' adoption of OERs was significantly predicted by two factors: their perceived utility and simplicity of use (Kuo et al., 2024). As teachers become aware of OER, their extent of adoption increases.

Convergence of Quantitative and Qualitative Findings

This study utilized a mixed-methods approach, integrating the quantitative data on awareness and extent of use with qualitative results on barriers to OER utilization. The convergence of these results provided a deeper understanding of teachers' patterns of awareness and use and the challenges that hinder OER adoption. Table 14 shows the key areas of convergence of this study.

Table 14*Convergence of Quantitative and Qualitative Findings*

Aspect	Quantitative Findings	Qualitative Findings	Convergence
Awareness of OER	Teachers have a very high awareness of OER. The majority are familiar with OER.	Respondents express familiarity but lack deep understanding, especially in licensing and legal aspects.	There is awareness, but gaps in understanding OER hinder effective utilization and sharing.
Extent of Use of OER	Teachers use OER regularly but not extensively. Some teachers use OER occasionally.	Usage is limited by barriers, e.g., technological, training, pedagogical, and other barriers.	The use of OER exists, but barriers hinder its effective utilization.
Barriers to OER Utilization	Not directly measured, but some respondents report low usage.	Identified barriers consist of: Technological; Awareness and Training; Pedagogical and Practical; Legal and Policy; and Motivational and Cultural	The barriers explain why, despite high awareness, OER use remains limited.

The table shows the convergence of results revealing three key areas of teachers' utilization of Open Education Resources. The quantitative findings indicated that educators possess a strong awareness of OER, as most respondents indicated they are familiar with it. Nevertheless, the qualitative insights added depth by highlighting that although teachers acknowledge OER, their comprehension tends to be limited, particularly concerning licensing and legal aspects. Together, these findings imply that while awareness

exists, it does not necessarily lead to thorough understanding, which hinders the effective utilization and sharing of OER.

In terms of utilization, quantitative data revealed that educators regularly utilize OER, although their engagement is often limited, with some using it only occasionally. Qualitative results expanded on this by revealing various obstacles – technological, awareness and training, pedagogical and practical, legal and policy, and motivational and cultural – that hinder more extensive use. This alignment emphasized that while there is some degree of OER adoption, it has not reached its full potential due to ongoing challenges.

Finally, although barriers were not assessed quantitatively, the low usage reported aligned with qualitative descriptions of difficulties including technological constraints, inadequate training, policy issues, and cultural perspectives. This alignment clarifies the disparity between high awareness and lower to moderate usage: barriers serve as the mediating factor that limits successful integration of OER.

Chapter 4

Summary, Conclusion, and Recommendations

This chapter presents the summary of the study and its results and findings. The limitations and conclusions were drawn, and the recommendations were derived pertinent to the proposed instructional competence enhancement program.

Summary of the Study

This study is centered on teachers' utilization of Open Educational Resources (OER). It determined the level of awareness, extent of use, and the barriers to its utilization, which will serve as the basis for a proposed instructional competence enhancement program.

This study employed a concurrent-convergent mode of mixed method design, in which quantitative and qualitative data were collected and analyzed independently and then converged to provide deeper insights into the study. Quantitative data on awareness and extent of use was gathered using the survey instrument via Google Forms link sent to 1,346 teacher-respondents composed of public and private elementary teachers in Mandaluyong. Meanwhile, qualitative data on barriers to OER utilization was collected through the Focus Group Discussions (FGD) among six members of six (6) participating schools.

Moreover, an inferential ordinal median was used to measure the level of teachers' awareness of Open Educational Resources (OER) and their extent of use. Since the two variables were both latent, this study also employed structural regression to determine the

relationship or lack thereof. Pearson's correlation coefficient was applied to determine the significant positive correlation between the level of teachers' awareness of Open Educational Resources (OER) and their extent of use. Thematic analysis with the aid of QDA Miner was used in the treatment of qualitative data.

The results and findings were converged to support one another and arrive at a richer understanding of the study, which served as the basis for a proposed instructional enhancement program.

Summary of Results

The analysis and interpretation of data revealed the following:

1. Teachers' level of awareness of Open Educational Resources (OER) was Very Aware with the overall inferential ordinal median of 4 wherein twelve (12) items, specifically Item 1 on OER are teaching, learning, and research resources available publicly and free of charge, Item 2 on OER is provided with a license that allows free utilization, Item 3 on OER has the ability to remix existing educational resources, Item 4 on OER has the ability to repurpose, Item 6 on Continual development of educational resources is important to OER, Item 7 on OER is reusable, Item 8 on Sharing is important to OER, Item 9 on Use of OER is an effective method for improving retention for at-risk students, Item 10 on the use of OER leads to improvement in student satisfaction, Item 11 on the use of OER leads to improvement in student performance, Item 12 on OER promotes more equitable access to education, serv-

ing a broader base of learners than traditional resources, and Item 14 on OER adoption at an institutional level leads to financial benefits for students, were rated Very Aware with the inferential ordinal median of 4; while two (2) items, Item 5 on OER can be redistributed after it is modified and Item 13 on OER adoption at an institutional level leads to financial benefits for schools, were rated Aware with the inferential ordinal median of 3.

On the other hand, teachers' level of awareness in terms of licensing mechanisms is Very Aware, with the overall inferential ordinal median of 4. Two (2) items, Item 1 on Public Domain and Item 2 on Creative Commons, were rated as Very Aware, while one (1) item, Item 3 on Copyright was Aware.

2. The extent of use in terms of activities done in Open Educational Resources is Occasionally with an overall inferential ordinal median of 3 wherein four (4) items were rated Occasionally, and two (2) items were rated Regularly. The items that obtained a rating of Occasionally were Item 2 on creating OER as an original work, item 4 on combining OER to create a new resource, item 5 on publishing/uploading an OER to a repository, and item 6 on sharing an OER with a colleague. However, the items that obtained an inferential ordinal median of 4 were Item 1 on using OER to aid instruction and Item 3 on adapting OER to fit teaching needs.

The extent of use in terms of the types of Open Educational Resources that teachers use was Regularly with an overall inferential ordinal median of

4. Eleven (11) items were rated Regularly with an inferential ordinal median of 4, while two (2) items were rated Occasionally with an inferential ordinal median of 3. The items that obtained an inferential ordinal median of 4 were Item 1 on videos, Item 3 on images, Item 4 on infographics, Item 5 on interactive games or simulations, Item 6 on video lectures/tutorials, Item 7 on tests and quizzes, Item 8 on open textbooks, chapters from textbooks, Item 9 on homework exercises and worksheets, Item 10 on slides and class presentations, Item 12 on elements of an existing course e.g., a module/unit, and Item 13 on lesson plans. On the other hand, the items that obtained an inferential ordinal median of 3 were Item 2 on audio podcasts and Item 11 on the whole course/subject.
3. Identified barriers to OER utilization include: 1) Technological Barriers - lack of internet connection, insufficient digital facilities, and accessibility or discoverability; 2) Awareness and Training Barriers - lack of awareness and lack of proper training; 3) Pedagogical and Practical Barriers - difficulty in finding and modifying OER, limited instructional /teaching time, language barrier, and reliability of OER resources/sites; 4) Legal and Policy Barriers - confusion in licensing mechanisms; and 5) Motivational and Cultural Barriers - traditional teaching preference and lack of motivation.
4. There was a significant positive correlation between the level of teachers' awareness of Open Educational Resources (OER) and their extent of use,

suggesting that awareness significantly predicts the utilization of OER in the educational context.

Limitations of the Study

As this research offered important insights into awareness, utilization, and challenges related to Open Educational Resources (OER), it is crucial to recognize some limitations to several factors. First, 1,346 elementary teachers, both from public and private schools within the City of Mandaluyong, were the respondents who answered the quantitative survey questionnaire, while 36 participants from the select public schools were involved in the Focus Group Discussions (FGD) for qualitative analysis. The results of the study could be affected by institutional policies, technological resources, and cultural perceptions present in the schools involved. These elements may not apply to other educational environments that have varying degrees of support and implementation of OER. Second, the survey and the FGD were conducted during the third period to the fourth period of the school year 2024-2025 only, which was the duration of the data-gathering period. The research was carried out during a defined period, which might not reflect long-term patterns in OER usage. With the progression of educational technologies, new obstacles and possibilities may arise, necessitating continuous research to monitor these changes. Lastly, although the research focused on the level of awareness and usage, it did not analyze the quality of the OER resources utilized by educators or their effects on teaching effectiveness and student achievement. Subsequent studies could investigate how the types and quality of OER influence pedagogical effectiveness.

Conclusions

Based on the findings of the study, the following conclusions were drawn:

1. Teachers demonstrated a high level of awareness of OER in terms of its features. Teachers possessed a thorough awareness of OER, their operation, and their potential applications in the classrooms. In terms of teachers' level of awareness of licensing mechanisms, it implied that respondents have a high level of awareness when it comes to the aspect of Public Domain and Creative Commons and moderate awareness of Copyright. Teachers who are well-versed in these licensing procedures may utilize, modify, and distribute instructional resources in a way that is both legal and efficient, improving their quality and accessibility.
2. Teachers regularly use and adapt OER, but limitedly create, combine, publish and share OER. This indicated that teachers do engage in OER-related activities but only through a narrow lens. It can be noted that teachers only rely upon OER that is ready to use and adapt, failing to create, combine, publish, and share OER. In terms of the level of extent of use of the types of Open Educational Resources, teachers use OER regularly. Since teachers regularly used these resources, it implied that OERs were a key component of their teaching strategies, probably since they are easily accessible, flexible, and improve student learning. It also indicated that teachers find these resources essential in

lesson planning, instruction, and assessment. This research highlights the teachers' recognition and regular use of Open Educational Resources (OER).

3. Despite teachers' involvement with OER, there were barriers that hindered its effective utilization in instruction: Technological Barriers, Awareness and Training Barriers, Pedagogical and Practical Barriers, Legal and Policy Barriers, and Motivational and Cultural Barriers. While Open Educational Resources (OER) provided numerous benefits for enhancing teaching and learning, several limitations affected their integration in classroom practices.
4. A positive correlation implied that when one variable (awareness) rises, the other variable (use) is also likely to rise. This insinuated that as teachers become more aware of Open Educational Resources (OER), they were more inclined to utilize them.

Recommendations

Considering the research findings, recommendations are proposed to enhance the effective use of Open Educational Resources (OER) by teachers. By implementing these recommendations, education sector stakeholders can create a more conducive environment for the use of OER which will enhance teaching quality and education for all.

1. Training and skill development programs should be implemented to equip educators with the necessary technical and teaching skills needed for the successful integration of OER into their instructional practices.

2. School administrators should invest in improving internet connectivity, providing essential digital tools, and ensuring that teachers have access to reliable platforms for OER. They should also establish school support in the form of rewards and recognition to promote broader creation and usage.
3. The Department of Education should formulate organized frameworks that assist teachers in aligning OER with curriculum standards, guaranteeing that open educational materials are effectively utilized to improve student learning.
4. The proposed instructional program should be tested, evaluated, and refined based on teachers' feedback to ensure its effectiveness in overcoming identified challenges.
5. Further research and evaluation explore the long-term effects of OER training initiatives and examine other elements that might affect utilization.

Proposed Instructional Enhancement Program

Program Title:	Empowering Teachers through Open Educational Resources (OER): A Training Program to Enhance Awareness, Utilization, and Integration
Proponent:	ROSARIO F. PERALTA Teacher III Addition Hills Integrated School Mandaluyong City
Background and Rationale:	In the fast-changing pace of education, Open Educational Resources (OER) have become influential tools for improving teaching and learning. These freely accessible materials with open licenses allow educators to modify and tailor content to better serve their students' needs. Despite being generally aware of OER, teachers' utilization

	of them in instruction often varies due to the various obstacles, including limitations in technology, lack of sufficient training, gaps in institutional support and policies, and cultural resistance to technology. To address these issues, this training program has been launched as a strategic effort to equip teachers with the skills and knowledge necessary for effective utilization of OER into their teaching methods. This program aims to cultivate a culture of openness, collaboration, and innovation within education by tackling key obstacles through focused training. With a systematic approach encompassing theoretical insights, hands-on workshops, and advocacy for institutional support, the program intends to empower teachers to fully utilize OER in developing more inclusive, accessible, and engaging learning environments. The program is designed to equip educators with effective strategies for finding, modifying, and creating OER, while also ensuring that their implementation complies with ethical and legal standards. Furthermore, it seeks to improve institutional capacity by promoting policies that facilitate the sustainable adoption of OER. By the end of the training, participants will have gained both technical and pedagogical expertise and will be ready to advocate for OER.		
General Objectives:	This activity aims to: 1. Raise awareness about the concept, features, and global relevance of Open Educational Resources. 2. Enhance teachers' legal, technical, and pedagogical understanding of OER usage and licensing. 3. Build capacity in locating, evaluating, creating, and integrating OER into lesson planning and instruction. 4. Motivate teachers to adopt open teaching practices and align their roles with 21st-century learning demands.		
Participants:	School Head: 1 Administrative Staff: 3 Key Stage 1 and 2 Teachers: 76 Resource Speakers/Trainers: 3 Total: 83		
Indicative Project Schedule:	Schedule	Activities	Person/ s Involved

	Week 1	1. Pre-Implementation a. Needs assessment survey to identify specific areas of interest and barriers.	School Head, Department Heads, Program Coordinator, Teachers	
	Week 2	b. Development of training materials and resource guides.	Facilitators, Speakers	
	Week 3	c. Finalization of training program details	School Head, Department Heads, Program Coordinator	
	Week 4	2. Training Phase Conduct of 3-day program	School Head, Facilitators. Speakers, Teachers	
	Week 4	3. Post-Implementation a. Evaluation through feedback surveys and reflections	QAME Team, teachers	
	Ongoing	b. Continuous monitoring and mentorship	ICT coordinators, teachers	
Funding Requirements	Detailed Budget Requirements		Funding Source	Total Amount
	- Resource Materials/Handouts - Bond paper, A4, two reams (₱190/ream) - Black ball-point pens, 4 dozen/boxes (₱80/box) - Meals and Refreshments - Morning Snacks		MOOE	₱380.00 ₱320.00

	(₱100/pax, 3 days) - Lunch (₱200/pax, 3 days) - Afternoon Snacks (₱50/pax, 3 days) ● Trainers Incentives (3 resource speakers) ● Miscellaneous		₱24,900.00 ₱49,800.00 ₱24,900.00 ₱4,500.00 ₱1,000.00
	TOTAL	₱105,800.00	
	GRAND TOTAL	₱105,800.00	
Program of Activities	Activities	Schedule	
	See attached Training Matrix.		
Expected Output:	● Developed or adapted Open Educational Resources ● Enhanced teachers’ competence in instructional delivery ● Greater adoption of OER in educational practices ● Improved institutional support and policy structures for OER ● Emergence of a collaborative network of teachers focused on utilizing OER effectively in instruction		
Prepared by:	Proponent		
Checked by:	Assistant to the Principal		

Noted by:	Disbursing Officer
Approved by:	School Principal

Empowering Teachers through Open Educational Resources (OER): A Training Program to Enhance Awareness, Utilization, and Integration

TRAINING MATRIX
(Date) | 8:00 AM – 5:00 PM
(Venue)

DAY 1 (Date)	DAY 2 (Date)	DAY 3 (Date)
7:00 a.m. - 8:00 a.m. Registration	7:00 a.m. - 8:00 a.m. Attendance	
8:00 a.m. - 9:00 a.m. Opening Program	8:00 a.m. - 9:00 a.m. Management of Learning	
9:00 a.m. - 12:00 nn Session 1: What are Open Education- al Resources? Invited Resource Person	9:00 a.m. - 12:00 nn Session 1: Exploring OER Reposito- ries Through Basic ICT Skills Invited Resource Person	9:00 a.m. - 12:00 nn Session 1: Workshop on OER Inte- gration in Lesson Planning Invited Resource Person
12:00 nn – 1:00 p.m. LUNCH BREAK		
1:00 p.m. – 3:00 p.m. Session 2: Policy Primer: OER and DepEd Guidelines Invited Resource Person	1:00 p.m. – 3:00 p.m. Session 2: Hands-on Workshop: Cre- ating Simple OER Invited Resource Person	1:00 p.m. – 3:00 p.m. Presentation of Outputs Demonstration Teaching
3:00 p.m. – 5:00 p.m. Session 3: Case-Based Discussion: “Can I Use This?” Invited Resource Person	3:00 p.m. – 5:00 p.m. Session 3: Teaching for the 21st Cen- tury: Rethinking Our Role Invited Resource Person	3:00 p.m. – 3:30 p.m. Critiquing Post-conference 3:30 p.m. – 5:00 p.m. Closing Program

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Appendices

Appendix A

Survey Questionnaire

General Directions: The purpose of this study is to determine the teachers' utilization of Open Educational Resources in terms of awareness, extent of use, and the barriers encountered in its utilization. When answering this checklist, think about your experiences in Open Educational Resources. Please read the directions carefully and provide your responses honestly. In accordance with the Data Privacy Act of 2012, information gathered in connection with this study will be treated with the utmost confidentiality.

Name (Optional): _____

I. Level of Awareness of OER

A. Features of OER

Directions: Please rate each item by checking (✓) the box that corresponds to your answer. Use the legend as your guide.

	4 – Very Aware	3 – Aware	2 – Somewhat Aware	1 – Unaware
Features of OER	4	3	2	1
a. Legal and Technical Aspects				
1. OER are teaching, learning, and research resources available publicly and free of charge.	☐	☐	☐	☐
2. OER is provided with a license that allows free utilization.	☐	☐	☐	☐
3. OER has the ability to remix with existing educational resources.	☐	☐	☐	☐
4. OER has the ability to repurpose.	☐	☐	☐	☐
5. OER can be redistributed after it is modified.	☐	☐	☐	☐

Features of OER	4	3	2	1
6. Continual development of educational resources is important to OER.	☐	☐	☐	☐
7. OER is reusable.	☐	☐	☐	☐
8. Sharing is important to OER.	☐	☐	☐	☐
b. Pedagogical Value				
9. Use of OER is an effective method for improving retention for at-risk students.	☐	☐	☐	☐
10. Use of OER leads to an improvement in student satisfaction				
11. Use of OER leads to improvement in student performance.	☐	☐	☐	☐
c. Economic and Equity Aspects				
12. OER promotes more equitable access to education, serving a broader base of learners than traditional resources.	☐	☐	☐	☐
13. OER adoption at an institutional level leads to financial benefits for schools.	☐	☐	☐	☐
14. OER adoption at an institutional level leads to financial benefits for students.	☐	☐	☐	☐

B. Licensing Mechanisms

Directions: Please rate each item by checking (✓) the box that corresponds to your answer. Use the legend as your guide.

4 – Very Aware	3 - Aware	2 – Somewhat Aware	1 - Unaware		
Licensing Mechanisms		4	3	2	1
1. Public Domain		☐	☐	☐	☐
2. Copyright		☐	☐	☐	☐
3. Creative Commons		☐	☐	☐	☐

II. Extent of Use of OER

A. Activities Done with OER

Directions: Please rate each item by checking (✓) the box that corresponds to your answer. Use the legend as your guide.

	4 – Regularly	3 – Occasionally	2 – Rarely	1 – Never/NA
Activities	4	3	2	1
1. Uses OER to aid instruction	☐	☐	☐	☐
2. Creates OER as an original work	☐	☐	☐	☐
3. Adapts OER to fit teaching needs	☐	☐	☐	☐
4. Combines OER to create a new resource	☐	☐	☐	☐
5. Publishes/uploads an OER to a repository	☐	☐	☐	☐
6. Shares an OER with a colleague	☐	☐	☐	☐

B. Types of OER Used

Directions: Please rate each item by checking (✓) the box that corresponds to your answer. Use the legend as your guide.

	4 – Regularly	3 – Occasionally	2 – Rarely	1 – Never/NA
Types of OER	4	3	2	1
1. Videos	☐	☐	☐	☐
2. Audio podcasts	☐	☐	☐	☐
3. Images	☐	☐	☐	☐
4. Infographics	☐	☐	☐	☐
5. Interactive games or simulations	☐	☐	☐	☐
6. Video lectures/tutorials	☐	☐	☐	☐
7. Tests and quizzes	☐	☐	☐	☐
8. Open textbooks, chapters from textbooks	☐	☐	☐	☐
9. Homework exercises, worksheets	☐	☐	☐	☐
10. Slides and class presentations	☐	☐	☐	☐
11. Whole course/subject	☐	☐	☐	☐
12. Elements of an existing course e.g., a module/unit	☐	☐	☐	☐
13. Lesson Plans	☐	☐	☐	☐

Note. Parts I (A and B) and II (B) of the study were adopted and modified from a pre-existing questionnaire developed by Allen and Seaman (2016), while Part II (A) was developed by the researcher where the items were based on the activities or permissions in OER presented by Wiley and Hilton (2018).

Appendix B

Focus Group Discussion Guide

A. Preliminary Activities

1. Greetings
2. Introduction of the Topic
3. Relaying the Ground Rules

B. Discussion Proper Questions:

1. How has the use of Open Educational Resources (OER) impacted your teaching experience, especially in terms of student engagement and learning, lesson planning, and educational technology integration?
2. What are the barriers to the effective utilization of Open Educational Resources (OER) in your instruction? (Main Question)
3. How can these barriers be overcome?

C. Ending

1. Wrap-up Thoughts
2. Words of Gratitude

Appendix C

Summary of Validators' Feedback

Teachers' Utilization of Open Educational Resources: A Proposed Instructional Enhancement Program

I. Survey Questionnaire

The validators put a checkmark to corresponding column to rate if the criteria were met or not met by the tool. In the questionnaire validation tool, a space was also provided for their comments and suggestions. The table below shows the summary of validators' feedback on the quantitative data-gathering instrument, the survey questionnaire.

Evaluation Criteria	Validator				Comments/ Suggestions	Action Taken
	1	2	3	4		
A. Content Validity						
The survey questionnaire:						
a. introduces what decision will be made based on the data	/	/	/	/		
b. includes introduction explaining the purpose of the study	/	/	/	/	Kindly elaborate further the purpose of this study in the General Directions part. Please add the following: In accordance with RA No. 10173, titles Data Privacy Act of 2012, your responses to this study will be treated with utmost confidentiality.	The General Directions part was revised.
c. gives instructions that are easy to follow	/	/	/	/		
d. introduces the utilized rating scale to guide the evaluators	/	/	/	/		
e. avoids the use of jargon/terminology unfamiliar to the intended respondents	/	/	/	/		
f. contains items that are simple and concise	/	/	/	/	Include questions to determine if they really know what OER is about.	Included the legal and technical aspects, pedagogical value, and economic and equity features of OER supported by UNESCO and other related studies.
g. contains items that are all relevant to the objectives	/	/	/	/	The questionnaire covers various aspects of OER for the teachers to become	These were observed in the legal and technical aspects of OER.

					aware. However, consider adding some items that adheres to the policies and rules of open sharing resources. Include items specifically on the enhancement of regular course content to supplement information deficiencies.	
h. uses terminology that is understandable to the outside validators	/	/	/	/		
i. sequences the items that come from general to specific	/	/	/	/		
B. Face Validity						
a. has a clear heading which includes the intentions of the questionnaire	/	/	/	/		
b. has a clear layout	/	/	/	/		
c. looks professional	/	/	/	/		
d. uses point system in giving equivalent weights for each response	/	/	/	/		
e. uses familiar questionnaire format	/	/		/		
f. is free of grammar and spelling errors	/	/	/	/	Please the check the suggested revisions on grammar errors.	Complied.
g. includes clear instructions	/	/	/	/		

II. Focus Group Discussion Guide

Validators were asked to rate the core questions on a scale of 1 to 4 based on its relevance to the construct being measured. A space was also provided for their comments and suggestions. The table below shows the summary of validators' feedback on the

- 1 = Not relevant
- 2 = Somewhat relevant
- 3 = Quite relevant
- 4 = Very relevant

Core Questions	Validator				Comments/ Suggestions	Action Taken
	1	2	3	4		
1. How would you describe your experience using open educational resources (OER)?	4	4	4	4	All questions seem relevant to the research objectives but ensure that each item directly contributes to determining teachers' awareness and use for instructional purposes.	The questions were revised to thoroughly become relevant to the purpose of the study. The following were the final items:
2. What are the perceived barriers to the utilization of open educational resources (OER)? (Main Question)	4	4	4	4		
3. How might these barriers be overcome?	4	4	4	4	Add "How has the use of OER impacted your teaching experience?" Change "might" to "can" in number 3.	1. How has the use of Open Educational Resources (OER) impacted your teaching experience, especially in terms of student engagement and learning, lesson planning, and educational technology integration? 2. What are the barriers to the effective utilization of Open Educational Resources (OER) in your instruction? (Main Question) 3. How can these barriers be overcome?

Appendix D

Letter of Permission to Conduct the Study



PHILIPPINE NORMAL UNIVERSITY
The National Center for Teacher Education
College of Graduate Studies and Teacher Education Research
Taft Avenue corner Ayala Blvd., Ermita, Manila



August 21, 2024

DR. ROMELA M. CRUZ, CESO VI
Schools Division Superintendent
Office of the Schools Division Superintendent
Division of Mandaluyong City



Dear Dr. Cruz,

Greetings!

I am **Ms. Rosario F. Peralta**, a graduate student from the Philippine Normal University under the program Master of Arts in Education major in Curriculum and Instruction. I am currently writing my thesis paper titled, **"Teachers' Utilization of Open Educational Resources: Basis for a Proposed Instructional Competence Enhancement Program"**, as the terminal requirement in the completion of the degree. This research paper aims to determine teachers' utilization of Open Educational Resources in terms of level of awareness and use, and the barriers as basis for a proposed instructional enhancement program.

In this connection, I am humbly asking permission from your good office to allow me to conduct my study to **public and private elementary schools in our division**. Rest assured that there will be no disruption of classes during the conduct of this study and all processes will be in accordance with ethical considerations. The data gathered will be treated with utmost confidentiality and will only be used for the purpose of the study.

Your benevolent support and accommodation to this request will be highly appreciated and will be of great help for the success of this study.

Respectfully yours,

ROSARIO F. PERALTA
Graduate Student

Noted:

FLORISA B. SIMEON, Ph.D.
Thesis Adviser

Appendix E

Letter of Approval



Republic of the Philippines
Department of Education
NATIONAL CAPITAL REGION
SCHOOLS DIVISION OF MANDALUYONG CITY

R24-09-11

SCHOOLS DIVISION OFFICE MANDALUYONG

RECORDS SECTION

RELEASED

BY: [Redacted]

DATE: 05 2024 TIME: 4:01

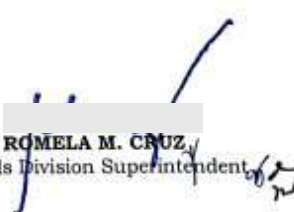
1st Endorsement

August 30, 2024

Respectfully referred to the **Public Elementary School Heads** the herein attached communication of **ROSARIO F. PERALTA** of **Philippine Normal University** in connection to her request to conduct a study to the abovementioned schools in relation to her research study titled **"Teachers' Utilization of Open Education Resource: Basis for a Proposed Instructional Competence."**

This Office interposes no objection to the above-mentioned request provided that:

1. The schedule of classes should be strictly followed. Interviews should be undertaken outside class hours.
2. Priority is given to school activities and functions of personnel to their duties and responsibilities.
3. No office materials will be used.
4. Participation of learners and teachers from public schools **shall be purely voluntary** and **will not hamper instructional time** in compliance with the provisions of *DepEd Order (DO) No. 34, s. 2022* titled *School Calendar and Activities for the School Year 2022-2023* and *DO 9, s. 2005* titled *Instituting Measures to Increase Engaged Time-on-Task and Ensuring Compliance Therewith and the policy on off-campus activities stated in DO 66, s. 2017*.
5. Ethical considerations related to this research shall be strictly observed by all persons involved in this study as stipulated in *D.O. No. 16, s. 2017*, *Research Management Guidelines*.
6. A **copy of the research** will be furnished to this Office.


ROMELA M. CRUZ
 Schools Division Superintendent



Address: Calbayog St. Brgy. Highway Hills, Mandaluyong City
 Email: sdo.mandaluyong@deped.gov.ph
 Website: www.depedmandaluyong.org

Appendix F

Letter of Permission to Conduct FGD



PHILIPPINE NORMAL UNIVERSITY
The National Center for Teacher Education
College of Graduate Studies and Teacher Education Research
Taft Avenue corner Ayala Blvd., Ermita, Manila



February 11, 2025

DR. ELVIRA R. CANILAO
School Principal III
Nueve De Febrero Elementary School
Division of Mandaluyong City

Dear Ma'am,

Greetings of peace and goodwill!

I am **Ms. Rosario F. Peralta**, a graduate student from the Philippine Normal University under the program, Master of Arts in Education with a specialization in Curriculum and Instruction. I am currently writing my thesis paper titled, **"Teachers' Utilization of Open Educational Resources: Basis for a Proposed Instructional Competence Enhancement Program"**, as the terminal requirement in the completion of the degree. This research paper aims to determine teachers' utilization of Open Educational Resources in terms of level of awareness and use, and the barriers as the basis for a proposed instructional enhancement program.

In this connection, I am formally writing to request your permission to conduct a Focus Group Discussion (FGD) which will involve 5 to 8 teachers and last approximately 45 to 90 minutes. This discussion will gather insightful perspectives from teachers regarding their experiences with Open Educational Resources (OER), including the level of awareness, the extent of use, and any challenges they face in utilizing these resources effectively in their teaching practices. The information gathered is critical to achieving the objectives of the study.

Rest assured that no classes will be interrupted during the FGD, and the session will be scheduled at a time convenient for the participants. The discussion will be conducted professionally and confidentially, ensuring that participants' privacy is respected. All ethical guidelines and the data collected will be used solely for research purposes and remain anonymous.

I kindly request your approval to conduct the FGD on **Wednesday, February 19, 2025, from 10:30 to 11:30 AM**. I would greatly appreciate your support in facilitating the recruitment of the participating teachers and arranging the necessary details for the discussions. Should you need further information or have any concerns, I am most humbled to address them through my email, rosario.peralta002@deped.gov.ph, or at 0948-158-5570.

Thank you for considering my request. I look forward to your positive response.

Respectfully yours,

Sgd. ROSARIO F. PERALTA
Graduate Student

Noted:

Sgd. FLORISA B. SIMEON, Ph. D.
Thesis Adviser

Approved:

Sgd. DR. ELVIRA R. CANILAO
School Principal III

Appendix G

Informed Consent Form



PHILIPPINE NORMAL UNIVERSITY
The National Center for Teacher Education
College of Graduate Studies and Teacher Education Research
Taft Avenue corner Ayala Blvd., Ermita, Manila



INFORMED CONSENT FORM

This Informed Consent Form has two parts:

- Part I: Information Sheet
- Part II: Consent Form

PART I: INFORMATION SHEET

Introduction

I am **Ms. Rosario F. Peralta**, a graduate student from the Philippine Normal University under the program Master of Arts in Education major in Curriculum and Instruction. I am writing my thesis paper titled, **"Teachers' Utilization of Open Educational Resources: Basis for a Proposed Instructional Competence Enhancement Program"**. OERs are utilized by teachers in their teaching-learning processes, thus affecting instructional delivery. It is significant to divulge the status quo of OER utilization among teachers for education advancement. As such, I am respectfully encouraging you to participate in this study

Purpose of the Research

This study purposely aims to determine teachers' utilization of open educational resources. The level of awareness, extent of use, and barriers to its utilization will be divulged, which will serve as the basis for a proposed instructional competence enhancement program.

Type of Research Intervention

This research is mixed-method research. It gathers both quantitative and qualitative data, utilizes a survey questionnaire and focus group discussion on the data gathering.

Participant Selection

You are humbly invited to take part in this research because I believe that your experience can highly contribute to the study. For your information, this study has selected one thousand three hundred forty-six (1,346) public and private elementary school teachers in Mandaluyong City as participants for the survey questionnaire method and six (6) selected elementary teachers from target schools for the focus group discussion method.

Procedures

For Survey-Questionnaire Participants: After the acknowledgment of the School Principal of the letter of permission to administer the survey questionnaire, the link to the survey questionnaire will be forwarded by the Assistant to the Principal (ASTP) to you. It can take 3-5 minutes to accomplish. You can accomplish it at your most convenient time between September 23-27, 2024.

For Focus Group Discussion Participants: After the acknowledgment of the School Principal of the letter of permission to conduct FGD with the specifics that there will be no disruption of classes during its conduct, the venue is within school premises, and shall not



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exceed 1 hour, the ASTP will inform you of your participation. We will be discussing the final schedule of the FGD to be conducted between October 1-11, 2024. Participation in this activity is voluntary.

Risks and Inconveniences

The risks and inconveniences of participants in this study are low. Questions or concepts that participants may not have previously considered may pose a challenge to them.

Benefits

You will have the opportunity to reflect on, express, and share your knowledge and experiences in OER. Also, the findings will enlighten you about OER utilization in instruction. This study will further benefit you as a teacher since its output is a proposed instructional enhancement program. Rest assured that findings and output shall be communicated to the Division Office and shall be forwarded to your school.

Anonymity and Confidentiality

This study strongly commits that your identity shall be anonymous. The responses from the survey questionnaire and the statements from focused group discussions shall kept strictly confidential. Your privacy shall be respected.

Voluntary Participation

The researcher respects your decision whether to participate in this study. Your voluntary participation will be highly respected and there will be no coercion to participate in this study.

Researcher's Contact Information

If you have any questions, you may ask me directly or you may contact me through the details below.

Name: Rosario F. Peralta
Contact No.: 09481585570
E-mail: rosario.peralta002@deped.gov.ph



PHILIPPINE NORMAL UNIVERSITY
The National Center for Teacher Education
College of Graduate Studies and Teacher Education Research
Taft Avenue corner Ayala Blvd., Ermita, Manila



PART II: CONSENT FORM

I, _____ voluntarily agree to participate in this research entitled "Teachers' Utilization of Open Educational Resources: Basis for a Proposed Instructional Competence Enhancement Program". I agree to participate now and withdraw anytime and refuse to answer questions without consequences of any kind. The purpose of this study has been explained to me, and I had the opportunity to ask about the study.

I understand that my participation involves answering the questions by the researcher. I appreciate that all the information I provide for this study will be treated confidentially, and the report on the results of this research and my identity will remain anonymous.

I understand that I am free to contact the researcher to seek further clarification and information.

By my signature, I acknowledge that I have read, understand, and agree to the policies and procedures of the research.

Signature over Printed Name of the Participant

Date: 09/27/2024

Conducted by:

ROSARIO F. PERALTA
Researcher

Approved by:

DR. FLORISA B. SIMEON
Thesis Adviser

Appendix H

Research Ethics Committee – Compliance Certificate

 PHILIPPINE NORMAL UNIVERSITY The National Center for Teacher Education Taft Ave. Cor. Ayala Blvd., Ermita, Manila 1000 Philippines Trunkline: +63-2-317-1768 loc. 750/751 ▲ eprdc@pnu.edu.ph ▲ www.pnu.edu.ph	Index No.	PNU-MN-2016-EPR-FM-020
	Issue No.	01
	Rev. No.	01
	Date	09-24-2018
	Page	1 of 1
EPR	CERTIFICATE OF COMPLIANCE	QAC No. CC-09242018-027

BASIC INFORMATION

REC Code:	2024-160-FR
Title of the Research Project/Thesis/Dissertation:	Teachers' Utilization of Open Educational Resources: Basis for A Proposed Instructional Competence Enhancement Program
Researcher/Project Leader and Designation/Affiliation:	Rosario F. Peralta

The following items [v] have been received and reviewed in connection with the above study conducted by the above researcher/principal investigator:

- ☒ Thesis
☐ Dissertation
☐ Research Article in APA Format

And hereby certified that it has fully complied with the PNU Code of Research Ethics and Guidelines for Review as stipulated in the BOR Resolution No. U-2303 s. 2015.

Date of Issuance: **May 6, 2025**


Dr. EDNA LUZ R. ABULON
 Secretary
 Research Ethics Committee


Dr. RENE R. BELECINA
 Chair
 Research Ethics Committee

Appendix I

Authenticity Result



PHILIPPINE NORMAL UNIVERSITY
The National Center for Teacher Education
GRADUATE STUDENT RESEARCH OFFICE
 Tiaft Ave. cor. Ayala Blvd., Ermita, Manila | (+632) 5317 1768 loc. 530 | gsrc@pnu.edu.ph



AUTHENTICITY RESULT

Date of Release: April 21, 2025
 Result Code: 2025-G1396
 Submission ID: 2651642247
 Title of Output: TEACHERS' UTILIZATION OF OPEN EDUCATIONAL RESOURCES: BASIS FOR A PROPOSED INSTRUCTIONAL COMPETENCE ENHANCEMENT PROGRAM
 Author (s): Rosario Peralta

Authenticity Report

Similarity Report: 13%

Interpretation: A similarity of 13% means that 13% of the entire paper is similar to sources in Turnitin's (authenticity software) online repository. The colored bibliographical references denote the sources of similarity to previously published work which may be from internet sources (12%), publications (9%), and student papers (6%) for the remaining similarity percentage.

Highlighted Text in the Manuscript:

- Red marks and highlights are a set of texts directly or exactly copied from online sources.
- Other color marks and highlights are a set of text exactly copied from other sources (student papers and publications).

WILFREDO C. CHUNG, DSc
 Director, Graduate Student Research Office



(All documents without the PNU QM Stamp or Control Identifier are Uncontrolled)

Appendix J

Certification of Language Editing



Philippine Normal University
College of Teacher Development
Faculty of Languages and Literature

28 April 2025

CERTIFICATION OF EDITING

This is to certify that I edited in its entirety the thesis of **ROSARIO F. PERALTA** titled **TEACHERS' UTILIZATION OF OPEN EDUCATIONAL RESOURCES: BASIS FOR A PROPOSED INSTRUCTIONAL COMPETENCE ENHANCEMENT PROGRAM** as a requirement for Oral Defense.

Respectfully,

A handwritten signature in black ink, appearing to read "Ma. Concepcion Y. Raymundo", is written over a grey rectangular redaction box.

PROF. MA. CONCEPCION Y. RAYMUNDO, M.A.
FLL
Language Editor

Appendix K
Certification of Statistical Advising

Statistician's Certification

This is to certify that this study titled, TEACHERS' UTILIZATION OF OPEN EDUCATIONAL RESOURCES: BASIS FOR A PROPOSED INSTRUCTIONAL COMPETENCE ENHANCEMENT PROGRAM, prepared and submitted by Rosario F. Peralta in partial fulfillment for the degree MASTER OF ARTS IN EDUCATION – CURRICULUM AND INSTRUCTION at Philippine Normal University has been statistically reviewed by the undersigned.


Rosie L. Conde, PhD
Statistician

Appendix L

Transcripts from Focus Group Discussions

The transcripts were summarized focusing on the main question of the qualitative data-gathering which is the teachers' encountered barriers utilization. Six groups participated in the focus group discussions that were held independently.

FGD 1: ADDITION HILLS INTEGRATED SCHOOL (AHIS)	
Facilitator:	What are the barriers to the effective utilization of OER in your instruction?
Teacher A1:	I think awareness is one of the barriers to the effective utilization of OER.
Teacher A2:	Let's admit that we do not know all the features of OER; that is why we cannot utilize it effectively. Maybe another barrier is the lack of proper training.
Teacher A3:	Some repositories are accessible, and there are others that cannot be accessed. There are those who have open access, right? But sometimes there are limited resources. Accessibility to resources is also one of the barriers.
Teacher A1:	Some sites require payments and some OERs are exclusively for an organization.
Teacher A4:	Did it happen to you? Sometimes, we are lost, and we do not know which site to go to. When you are downloading the resources, and then when you accidentally click on something, there are pop-ups. There are ads. If you want to use OER, you should locate a site that is reliable. I mean the materials or content suit our learning content. The information is true and correct. It's better when it's a PDF file. And if you are going to use it, sometimes you need to edit it.
Teacher A5:	Teachers can't access OER if there's no internet. There's a lack of internet.

Teacher A4:	There's a lack of awareness. For example, I am not informed of OERs' use and features. So, there is the teacher's stigma that goes, "I don't like it. I am still traditional."
Teacher A4:	Like these too, "It is hard to download. I do not want it. I will just do the Manila paper." So, what I am saying also is not all teachers can download and use OER. They are lacking in tracking.

FGD 2: JOSE FABELLA MEMORIAL SCHOOL (JFMS)	
Facilitator:	What are the barriers to the effective utilization of OER in your instruction?
Teacher J1:	First, is the Internet connection. Right? The internet connection is weak.
Facilitator:	What other barriers do we see when using OER?
Teacher J2:	Can I say the language barrier? Why? Because almost all OERs are in English. The language. If you use English, it's hard for them. So, if you're going to use OER for your motivation or discussion, it will take time.
Teacher J3:	Sometimes, we have a problem with the time. It's a lot of work. Bringing the kids to the ICT room. Before we knew it, class time had finished. The quarter also just passes by too fast. If ICT integration is the new thing that we're doing, we must give more time to the students.
Teacher J4:	There's a lack of training. We must include more teachers, especially seasoned teachers. We must include them. We must manipulate technology. Even if technology changes, we're the ones adjusting to it.

FGD 3: MANDALUYONG ADDITION HILLS INTEGRATED SCHOOL (MAHES)	
Facilitator:	What are the barriers to the effective utilization of OER in your instruction?
Teacher M1:	First, internet connection. You can't access anything without it. That's the issue.
Teacher M2:	You want to find a good video, but the question is—where will you find something that fits your lesson plan? That's a problem.
Teacher M3:	Finding OER materials is a problem, especially the free resources. There are free ones, but sometimes, you can't download them.
Teacher M2:	There are free downloaders. For example, Scribd. The Scribd Free Downloader. You can use that. I can download materials from there. There's also an EduPH downloader. You paste the URL, and it appears. You can choose PDF, PowerPoint, or other formats. It's just about perseverance. You must be patient. But sometimes, the problem is if the website needs fees.
Teacher M3:	When you visit some websites, they won't open. Some require payment. That's the real issue—accessibility.
Teacher M1:	Crafting the materials is also a problem. Sometimes, when you download something, you just end up leaving it.
Teacher M2:	The time is also a problem.
Teacher M4:	And sometimes... laziness. You think, "Oh, I'll download that later." Then you end up not doing it.

FGD 4: NUEVE DE FEBRERO ELEMENTARY SCHOOL (NDFES)	
Facilitator:	What are the barriers to the effective utilization of OER in your instruction?
Teacher N1:	Availability of internet for the students to engage in the lesson. So, first is the internet.
Teacher N2:	If you have data on your phone, you can connect. It's easier for the students to get the lesson through access to OER.
Teacher N3:	Also lack of digital facilities. We don't have a TV in our room.
Teacher N4:	Another is the technical know-how. How to navigate through the sites, how to download, how to set up on the screen, we need assistance especially for us oldies.
Teacher N5:	It takes time to set up the TV. Maybe 5 minutes. I've experienced that. You are running out of time.
Teacher N1:	Our instruction time is short. You must explain the lesson and use OER within 40 minutes. It's not enough.
Teacher N2:	Lack of sufficient training, a thorough training on OER. Training should be hands-on so we might not forget.

FGD 5: HIGHWAY HILLS INTEGRATED SCHOOL (HHIS)	
Facilitator:	What are the barriers to the effective utilization of OER in your instruction?
Teacher H1:	First, is the Wi-Fi connection. If there's no connection at school, we download the resources at home.
Teacher H2:	We don't have a TV in our room. We just have a hotspot. Cell-phones, laptops. That's it; we provide for ourselves.
Teacher H3:	We also have a problem with time. Because we do a lot of things, we just have a little time to integrate OER into our lessons.
Teacher H4:	Finding and downloading resources is a problem. But what we

	do is share resources. We support one another
Teacher H5:	With regards to teachers who do not use these resources, especially the oldies, it depends. Some teachers are stressed. Some are lazy. Some are afraid.
Teacher H1:	As for the training, there are training courses. But the problem is lack of application due to lack of resources like internet, laptop, and time.

FGD 6: PLEASANT HILLS ELEMENTARY SCHOOL (PHES)	
Facilitator:	What are the barriers to the effective utilization of OER in your instruction?
Teacher P1:	The internet connection is a barrier. This is also the problem of others. The connection is weak and sometimes none when you are in the dead spot.
Teacher P2:	When you use videos that are downloaded from the internet, some content may either be limited or beyond the learners' level. Some OERs do not exactly match the intended learning content. Some contain errors. As a result, you still must modify or edit the resources.
Teacher P3:	Lack of proper training can also be one of the barriers. There are pieces of training, but only a few are selected. Pieces of training should be re-echoed properly to the school level.
Teacher P4:	There are some myths about seasoned teachers. They fade away when it comes to using technology or OERs. Maybe they are already tired of exploring something new, afraid, or maybe they do not really want to use it.

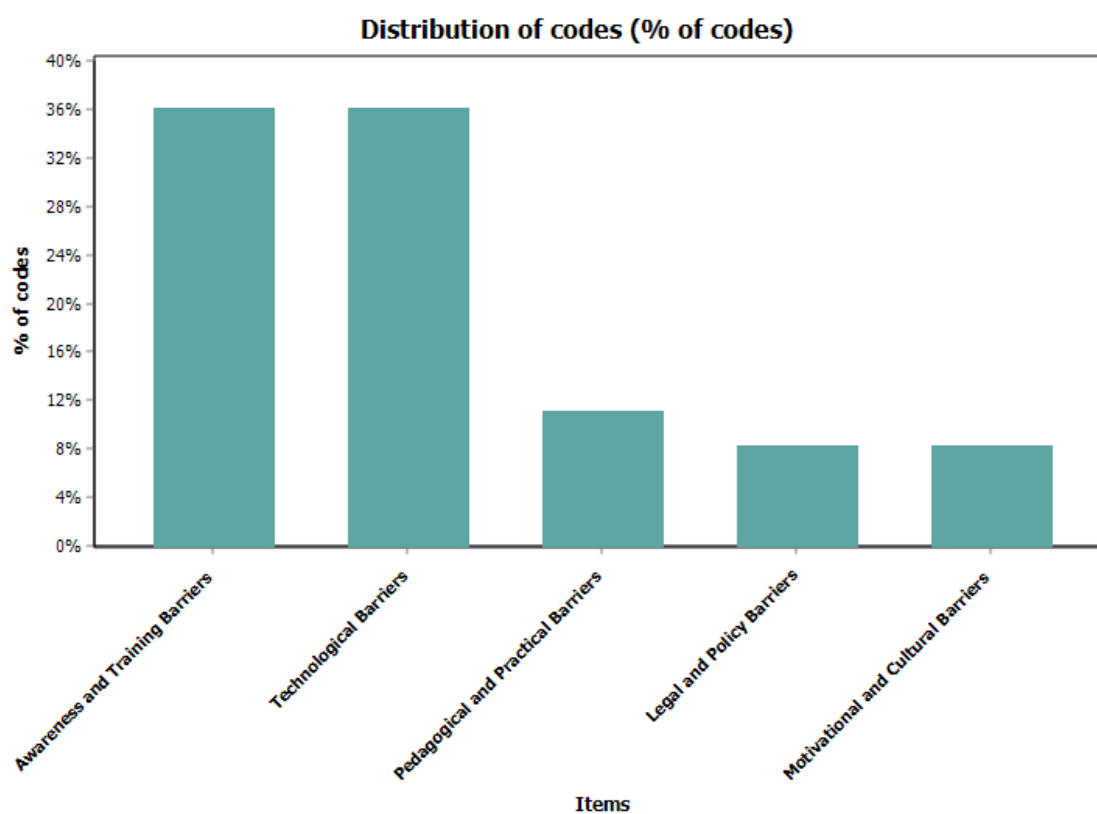
Appendix M

Code Retrieval

Category	Code	Text	Coder	Date	Words	% Words	Nemo	Variable
Awareness and Training Barriers								
Barriers	1. FGD AH8	I think awareness is one of the barriers to the effective utilization of OER.	Admin	30/04/2025	14	4.70%		DOCUMENT
Barriers	1. FGD AH8	we do not know all the features of OER.	Admin	30/04/2025	9	3.00%		DOCUMENT
Barriers	1. FGD AH8	another barrier is the lack of proper training.	Admin	30/04/2025	8	2.70%		DOCUMENT
Barriers	3. FGD MAHES2	Crafting the materials is also a problem. Sometimes, when you download something, you just end up losing it.	Admin	30/04/2025	19	8.80%		DOCUMENT
Barriers	6. FGD PH85	Lack of proper training can also be one of the barriers. There are trainings, but only few are selected.	Admin	30/04/2025	19	12.80%		DOCUMENT
Barriers	6. FGD PH85	you still have to modify or edit the resources.	Admin	30/04/2025	9	6.00%		DOCUMENT
Barriers	5. FGD HH85	Finding and downloading resources is a problem.	Admin	30/04/2025	7	4.30%		DOCUMENT
Barriers	5. FGD HH85	the problem is lack of application due to lack of resources like internet, laptop, and time.	Admin	30/04/2025	18	9.80%		DOCUMENT
Barriers	2. FGD JFM8	There's a lack of training. We must include more teachers, especially seasoned teachers.	Admin	30/04/2025	14	8.10%		DOCUMENT
Barriers	1. FGD AH8	I am not informed of OER's use and features.	Admin	30/04/2025	9	3.00%		DOCUMENT
Barriers	4. FGD NDPE8	Another is the technical know-how. How to navigate through the sites, how to download, how to set up on the screen, we need assistance especially for us older.	Admin	02/05/2025	29	17.20%		DOCUMENT
Barriers	4. FGD NDPE8	Lack of sufficient training, a thorough training on OER. Trainings should be hands-on so we might not forget.	Admin	30/04/2025	19	11.20%		DOCUMENT
Barriers	3. FGD MAHES2	Finding OER materials is a problem, especially the free resources. There are free ones, but sometimes, you can't download them.	Admin	30/04/2025	21	18.30%		DOCUMENT
Legal and Policy Barriers								
Barriers	3. FGD MAHES2	But sometimes, the problem is if the website needs fees.	Admin	30/04/2025	10	4.80%		DOCUMENT
Barriers	3. FGD MAHES2	When you visit some websites, they won't open. Some require payment.	Admin	30/04/2025	12	5.90%		DOCUMENT
Barriers	1. FGD AH8	There are sites that need payments.	Admin	02/05/2025	6	2.00%		DOCUMENT
Motivational and Cultural Barriers								
Barriers	6. FGD PH85	Maybe they are already tired to explore something new, afraid, or maybe, they do not really want to use it.	Admin	30/04/2025	20	12.40%		DOCUMENT
Barriers	3. FGD MAHES2	And sometimes... laziness. You think, "Oh, I'll download that later." Then you end up not doing it.	Admin	30/04/2025	18	8.00%		DOCUMENT
Barriers	1. FGD AH8	there is the teacher's stigma that goes, "I don't like it. I am still traditional."	Admin	30/04/2025	17	5.70%		DOCUMENT
Pedagogical and Practical Barriers								
Barriers	5. FGD HH85	Because we are doing a lot of things, we just have a little time to integrate OER into our lessons.	Admin	30/04/2025	20	12.20%		DOCUMENT
Barriers	2. FGD JFM8	Sometimes, we have a problem with the time. It's a lot of work. Bringing the kids to the ICT room. Before we knew it, class time had finished.	Admin	30/04/2025	29	16.80%		DOCUMENT
Barriers	2. FGD JFM8	Because almost all OERs are in English. The language. If you use English, it's hard for them.	Admin	30/04/2025	18	18.40%		DOCUMENT
Barriers	4. FGD NDPE8	Our instructional time is short. You have to explain the lesson and use OER within 40 minutes.	Admin	30/04/2025	17	18.10%		DOCUMENT
Technological Barriers								
Barriers	1. FGD AH8	Sometimes, we are lost, and we do not know which site to go.	Admin	30/04/2025	13	4.40%		DOCUMENT
Barriers	4. FGD NDPE8	So, first is the internet.	Admin	30/04/2025	5	3.00%		DOCUMENT
Barriers	4. FGD NDPE8	We don't have a TV in our room.	Admin	30/04/2025	9	5.30%		DOCUMENT
Barriers	3. FGD MAHES2	First, internet connection. You can't access anything without it.	Admin	30/04/2025	10	4.80%		DOCUMENT
Barriers	5. FGD HH85	First, is the Wi-Fi connection.	Admin	30/04/2025	6	3.70%		DOCUMENT
Barriers	5. FGD HH85	We don't have a TV in our room. We just have a hotspot. Cellphones, laptops. That's it, we provide for our own.	Admin	30/04/2025	24	14.70%		DOCUMENT
Barriers	1. FGD AH8	Some repositories are accessible, and there are others that cannot be accessed.	Admin	30/04/2025	12	4.00%		DOCUMENT
Barriers	1. FGD AH8	When you are downloading the resources, and then when you accidentally click on something, there are pop-ups. There are ads.	Admin	30/04/2025	21	7.80%		DOCUMENT
Barriers	1. FGD AH8	If you want to use OER, you should locate a site that is reliable.	Admin	30/04/2025	14	4.70%		DOCUMENT
Barriers	6. FGD PH85	The internet connection is a barrier.	Admin	30/04/2025	6	4.00%		DOCUMENT
Barriers	1. FGD AH8	The information is true and correct. It's better when it's a PDF file.	Admin	30/04/2025	15	5.00%		DOCUMENT
Barriers	2. FGD JFM8	First, is the internet connection.	Admin	30/04/2025	5	2.90%		DOCUMENT

Appendix N

Distribution of Codes



Curriculum Vitae

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0948-158-5570



Employment Record

2017 – Present	Addition Hills Integrated School Mandaluyong City Present Position: Elementary Teacher III/Subject Coordinator Grade Six Subject Teacher in English and GMRC English Coordinator, Elementary Department ICT Coordinator for Data Management, Elementary Department
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Notable Achievements:

- Division Test Writer in English 5
- Division Demonstration Teacher in English 5
- Gawad Teodora Alonso Storybook Writer, “Ang Tatay Kong Sundalo”
- Action Research Completer, “*Utilizing STARS (Student-Led and Teacher-Led Aloud Reading Strategies) to Improve Reading Proficiency of Grade Six Learners*”

Scholastic Record

Postgraduate	Philippine Normal University, Manila Master of Arts in Education – Curriculum and Instruction 2019 – 2025
Undergraduate	Catanduanes State University, Panganiban Campus Bachelor of Elementary Education – General Curriculum 2012-2016^{go}