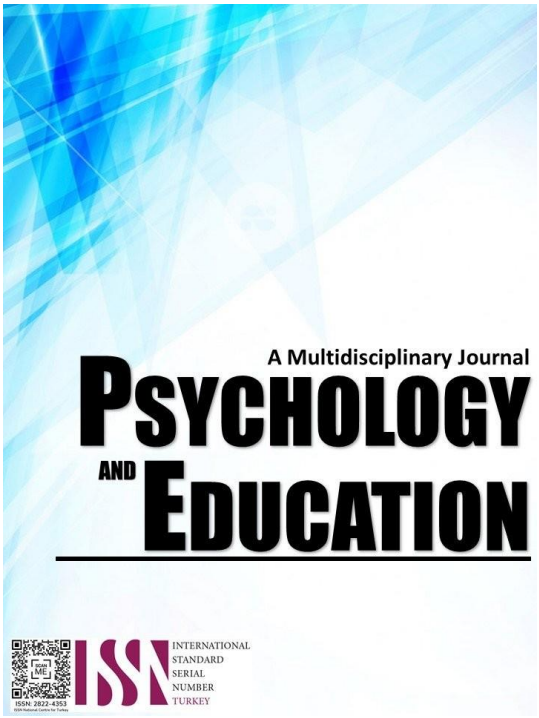
PRACTICES IN INTEGRATING HIGHER-ORDER THINKING SKILLS IN ENGLISH 7 QUARTERLY ASSESSMENT



PSYCHOLOGY AND EDUCATION: A MULTIDISCIPLINARY JOURNAL

Volume: 41
Issue 4
Pages: 476-493
Document ID: 2025PEMJ3972
DOI: 10.70838/pemj.410406
Manuscript Accepted: 05-29-2025

Psych Educ, 2025, **41**(4): 476-493, Document ID:2025PEMJ3972, doi:10.70838/pemj.410406, ISSN 2822-4353

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Research Article

Practices in Integrating Higher-Order Thinking Skills in English 7 Quarterly Assessment

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Abstract

Developing the higher-order thinking skills (HOTS) of learners has been a key focus of current educational goals, aiming to foster students' abilities to analyze, evaluate, and create beyond memorization. Despite this, Filipino learners have scored low in national and international assessments that measure critical and creative thinking. Furthermore, teacher-made assessments have been found to focus primarily on lower-order cognitive skills. This study analyzed fifteen Grade 7 English quarterly assessments using Bloom's two-dimensional taxonomy and explored the practices and challenges encountered by fifteen English teachers in integrating HOTS. The objective was to design a suitable capacity-building program. Using a qualitative case study design, the study collected data from fifteen quarterly assessments and conducted semi-structured interviews with the respective teachers. Content analysis was employed to categorize the assessment items based on Bloom's taxonomy, with frequency and percentage used to quantify HOTS integration. Thematic analysis following Braun and Clarke's approach was used to analyze interview data and identify patterns in teacher practices and challenges. Findings revealed that assessments were largely dominated by the remember cognitive domain and factual knowledge. However, HOTS items were also present in most assessments, most frequently under the analyze cognitive domain and procedural knowledge. Assessments relied heavily on traditional modes, particularly multiple-choice questions. Teachers reported various practices to integrate HOTS, such as using competency-based tools, aligning items with instruction, and structuring questions from simple to complex. Challenges included difficulty in constructing authentic HOTS items, students' low reading and thinking levels, and limited time. The study concluded that some participants have knowledge of creating HOTS items; however, they were more inclined to use traditional modes of assessment. Moreover, despite the different practices employed by the participants to integrate HOTS, notable challenges were still encountered.

Keywords: *challenges, higher-order thinking skills, modes of assessment, practices, quarterly assessment*

Introduction

Higher-order thinking skills (HOTS) are learned abilities that develop the complexity of the thinking prowess of individuals, allowing them to think critically and creatively. From an educational perspective, HOTS are generally and commonly associated with Bloom's taxonomy, which was revised by Anderson and Krathwohl in 2001 (Wilson, 2016). Despite the number of cognitive learning theories, teachers often use the revised taxonomy of Bloom in designing lesson objectives since it offers measurable and diverse verbs that target learners' cognitive development. Analyzing, evaluating, and creating are the HOTS in the taxonomy, and possessing these skills helps learners to ruminate, form connections, and apply the knowledge and skills gained in schools to the real world.

Consequently, HOTS are integrated into the Philippine educational system. The Philippines aims to produce citizens who can design and provide new ideas and think radically and rationally. Republic Act No. 10533, titled "Enhanced Basic Education Act of 2013, "states, "Every graduate of basic education shall be an empowered individual who has learned the capability to engage in autonomous, creative, and critical thinking." Moreover, the Department of Education includes HOTS as one of the criteria for the quarterly classroom observation for teachers.

Teachers need to integrate HOTS through classroom activities and oral questions that test and probe the deep-thinking skills and strategies of the learners, and conduct class observations, LAC sessions, and collegial discussions to assess each other's strategies in developing HOTS to ensure their quality and implementation inside the classroom. Since HOTS are embedded in the Philippine curriculum, it is logical that HOTS are also assessed to ensure their development.

Nonetheless, an assessment addresses the gap and uncertainty in transferring knowledge and skills. It has been an integral part of the teaching and learning process in formal and nonformal schooling platforms. Educators often employ assessment to measure the rate of learning mastered by learners; its data directs educators on the following learning journey to partake: to reteach, enrich, or proceed. Furthermore, assessment is used to evaluate and synthesize the students' learning per quarter as a basis for their grades. Public schools in the Philippines devote two days per quarter to administer quarterly assessments and were given a weight of 20% for Grades 1 to 10 (DepEd Order No. 08, s. 2015).

However, the Philippines still trails behind in the quality of education compared to other countries worldwide, as it placed the sixth-lowest rank in reading and math and third-lowest rank in science out of 81 countries during the Programme for International Student Assessment (PISA) assessment. PISA aims to capture how well 15-year-old learners solve complex problems, think critically, and develop relationships with themselves and others. The Philippines first joined PISA in 2018, and when compared to the 2022 results, there are no significant changes in three areas (OECD.org, 2023). According to PISA 2018, as reported by the World Bank in 2020, there is a need to integrate metacognition skills into the curriculum, as being aware of one's thinking strategies and how to improve is

as important to learning. Since HOTS is a learned ability, learners must be exposed to assessments that probe their critical and creative thinking abilities so that they can utilize them in international assessments and real-life situations.

DepEd Quezon introduced HOTS-based assessment during the in-service training in February 2023 to provide the necessary actions for the PISA results. DepEd Quezon rolled out a set of training and learning packages for HOTS-based assessment to further improve teachers' pedagogy and assessment practices. The training and learning packages are for teachers teaching English, Mathematics, and Science (Division Memorandum No. 535, s. 2023). The training was only available to selected participants and was expected to be echoed through LAC sessions. However, further instructions for its official implementation are yet to be released.

In an attempt to hone the HOTS, it became a trend in educational seminars, training, and studies for years. Different international and local studies suggested that assessment of HOTS must be included during classes, project- or problem-based learning, and in written examinations in every subject area, like Baylon (2014), Mahendra (2020), and Schumacher (2022). However, most of these studies are focused on formative assessments, yet rarely on summative assessments. Nonetheless, most of the summative assessments studied are focused on national standardized assessments and hardly any on classroom assessments. Arguably, Apino and Retnawati (2017), Garillo (2019), and Cruz (2023) concluded that teachers are still confused when it comes to constructing and designing HOTS-based assessments despite the existence of guides, training, and workshops. However, the majority of the studies about HOTS-based assessment were international and were minimally explored locally.

Therefore, there is still a need for an in-depth study on how teachers construct and design HOTS-based quarterly assessments and the challenges entailing their preparation to develop an appropriate capacity-building program centering on integrating HOTS in quarterly assessments for English 7 teachers.

Research Questions

This study aimed to identify the practices of English 7 teachers in the Division of Quezon in constructing HOTS-based quarterly assessments and the challenges encountered in preparing them. The study was primarily designed to address the following questions:

1. How can the English 7 quarterly assessment be categorized in terms of:
    1.1. cognitive taxonomy; and
    1.2. dimensions of knowledge?
2. What modes of assessment do English teachers utilize in English 7 quarterly assessments in terms of:
    2.1. traditional assessment; and
    2.2. performance-based assessment?
3. What are the teachers' practices and challenges in preparing the quarterly assessment?
4. Based on the study's findings, what capacity-building program can be proposed to integrate HOTS in the English 7 quarterly assessment?

Literature Review

Assessment and Revised Bloom's Taxonomy

Assessment of learning is defined as a summative assessment that concludes the achievement of learning at the end of the learning cycle. It relates to the decisions for grading, placement, grade retention, grade promotion, and graduation (Gotch et al., as cited in Nichols & Varier, 2021).

Schools in the Philippines, especially public schools, have been using the term quarterly assessment as the "assessment of learning", which is one of the bases of grades. According to DepEd Order No. 08, s. of 2015, a policy guideline for classroom assessment in the Philippines, a quarterly assessment is given at the end of every quarter. It can be a written-based assessment, a performance-based assessment, or a combination of both. Moreover, the DepEd order suggested aligning Bloom's revised cognitive taxonomy on the activities and instructions and in the assessment since the revised taxonomy offers an array of cognitive abilities, from simple to complex.

The simple to complex concept is one of the concepts in the K to 12 curriculum, which is known as the spiral progression approach. Tirol (2022) conducted a review of spiral progression in the K to 12 Science Curriculum and concluded that the organization of content and topics in the spiral curriculum in the Philippines is not well defined, explained and explored as compared to other countries and that there is a need to explore the structure and arrangement of the content and topics to improve instruction and learning.

Alluding to cognitive taxonomy, Wilson (2016) discussed that Benjamin Bloom developed and popularized cognitive taxonomy, which was used by teachers in devising lessons and assessments. The taxonomy comprises six processes: knowledge, comprehension, application, analysis, synthesis, and evaluation. Later on, Anderson and Krathwohl (2001, as cited in and summarized by Wilson, 2016) studied and revised the work of Bloom, providing notable changes in the processes from nouns into verbs and switching the upper two processes: remember, understand, apply, analyze, evaluate, and create.

In summary, the six cognitive domains are divided into lower-order and higher-order thinking skills. The LOTS refer to the remember,

understand, and apply domains, whereas the HOTS refer to the analyze, evaluate, and create domains (Mishra & Kotecha, 2016). The six domains are further discussed below by using the discussion of Wilson (2016):

The remember domain is the cognitive ability that allows an individual to recall or recognize information utilizing memory. For instance, 'What are the types of external conflict?'. In the example question, the learners are stimulated to merely list or recall the information about the types of external conflict. On the other hand, the 'Understand' domain refers to the cognitive ability of an individual to construct meaning from oral, symbolic, or visual messages. For example, 'What do you think is the main idea of the paragraph?'. However, the apply domain refers to the cognitive ability of an individual to utilize, execute, or carry out a procedure in new situations or to solve real-life problems. For example, 'Dramatize an event where there is a man vs. nature conflict.'

On the other hand, the analyzed domain refers to the cognitive ability of an individual to break down materials or concepts into different parts and relate them to one another. For example, 'Based on the examples provided, differentiate external conflict from internal conflict.' However, the evaluate domain refers to the cognitive ability of an individual to judge information based on criteria and standards. For example, 'Which of the two infographic materials is accurate and truthful? Elaborate your answer by providing justifications.' Lastly, the create domain refers to the cognitive ability of an individual to reorganize, generate, produce, or plan by putting elements together to create a new form. For example, 'How would you improve the pie graph shown?'

Aside from the six cognitive processes, Bloom also developed levels of knowledge. These dimensions of knowledge are factual, conceptual, and procedural, and Anderson and Krathwohl also revised them by adding metacognitive knowledge. Wilson (2016) claimed that these dimensions were neglected and not fully understood and implemented by teachers.

Anderson and Krathwohl (2001, as cited in Wilson, 2016) further define the four knowledge dimensions. Factual knowledge includes "essential facts, terminology, details or elements students must be familiar with to understand a discipline or solve a problem in it." For example, 'Explain why the conflict of the story is external rather than internal.' However, conceptual knowledge refers to the "classifications, principles, generalizations, theories, models, or structures pertinent to a particular disciplinary area." For example, 'Give an example of an internal conflict.'

On the other hand, procedural knowledge refers to the "information or knowledge that helps students to do something specific to a discipline, subject, or area of study such as methods of inquiry, very specific or finite skills, algorithms, techniques, and particular methodologies." For example, 'How to create a pie graph?'.

Lastly, metacognitive knowledge refers to the "awareness of one's own cognition and particular cognitive processes, particularly the strategic or reflective knowledge about how to go about solving problems, cognitive tasks, to include contextual and conditional knowledge and knowledge of self." For example, 'How do you check and verify the information you find in online videos?'

Accordingly, the two major concepts in the revised taxonomy, such as the cognitive domains and the knowledge dimensions, though they can stand alone, work best together. Urgo et al. (2019) emphasized the relationship between these two concepts by analyzing the learning objectives through the "intersection," making it two-dimensional. This intersection refers to the placement of the learning objective within the cognitive domain and knowledge dimension.

Modes of Assessment

As education is aimed at 21st-century learning, assessment and testing are shifting from traditional to performance-based assessments. According to Lund and Kirk (2019), a good assessment must be a combination of different modes in order for it to be fair, valid, and accurate, since one type of assessment cannot capture and synthesize all the different learning and achievements of learners.

Furthermore, it is imperative to select appropriate assessment modes to quantify the achievement of learning outcomes. These assessment methods include but are not limited to essays, reports, journals, letters, case studies, book reviews, problem scenarios, group work, work-based problems, research, demonstration, role-play, poster making, journal, portfolio, project-based tasks, written examination, oral examination, performance, and short answer questions (Armstrong et al., 2015).

In addition, quarterly assessment is a combination of different learning outcomes; hence, diverse learning objectives require an array of modes of assessment. These modes of assessment should include interesting and challenging tasks that expose students to different assessment opportunities (Armstrong et al., 2015).

In this study, the modes of assessment are generalized into two categories: traditional and performance-based. According to Mohamed and Lebar (2021), traditional assessment measures the content standards or the knowledge gained by the learners. This type of assessment stimulates learners to supply or choose the answers merely, and it is objectively measured. Moreover, this type of assessment typically refers to the different modes of pen-and-paper assessments and tests, such as but not limited to multiple choice questions, short answers, identification, and true or false.

However, as education focuses on the outcomes and life-long learning, performance standards were given attention. According to the discussion of Frey et al. (2012, as cited in Aziz et al., 2020), performance-based assessments refer to tasks requiring learners to showcase a combination of skills measured through scoring rubrics or standards. These assessments do not have to be in real-world contexts since objectives are appropriate in school contexts.

However, performance-based assessments are considered authentic because they are reliable, meaningful, engaging, and interesting to students. Some modes of assessments under performance-based assessment include role-playing, portfolio, demonstration, oral presentation, and debate. These modes of assessment need rubrics in order to be graded and measured. Armstrong et al. (2015) explained that quality assessments are based on standards and criteria. These standards and criteria must provide direction and support for effective student learning, ensure equitable, accurate, and consistent assessment of student achievement of desired learning outcomes, and establish and uphold academic criteria and benchmarks.

Moreover, these assessment criteria or standards are either a holistic standard or an analytic standard. Holistic standards measure the whole performance of the students rather than individual components. Holistic standards are practical for complex HOT tasks.

Meanwhile, analytic standards measured the individual parts of the student's performance. Analytic standards are practical for formative assessments since they provide detailed student achievement feedback (Armstrong et al., 2015). Teachers utilized either of the two assessment standards based on different circumstances and assessment scenarios.

Consequently, Khaled and Khatib (2020) reviewed the summative assessment in higher education, detailing the formative and summative assessments, as well as the advantages and disadvantages of assessment modes using Miller's level of competence. The review concluded that formative assessment significantly affects the student's learning progress, but the summative assessment provides a final touch. Moreover, the study also concluded that it is imperative to consider the level and ability of the learners because it gives a fuller view of the learning progress and achievement. Aside from that, activities that engage the learners can aid in developing the mind and the learning process.

Teachers' Practices and Challenges in Integrating HOTS in Assessment

Teachers greatly influence the direction of the educational outcome because they are the main facilitators of learning. According to OECD (Organisation for Economic Co-operation and Development (2009, as cited in Chin et al., 2022), investigating and understanding teachers' teaching practices can pave the way for improving educational processes because they are closely related to the challenges experienced by teachers. These practices can tell the story, explain the whys of the outcomes, and provide the whats for professional development. In this study, the researcher investigated teachers' practices, including the challenges, in terms of the preparation of HOTS-based quarterly assessments in order to provide a capacity-building program for teachers.

According to Astrid et al. (2022), while teachers asserted that they utilized HOTS in every lesson and that their students did not experience any confusion during the implementation process, the interviews revealed five challenges teachers experienced in integrating and implementing HOTS: time limitation, supplementing HOTS-based learning materials, choosing an effective teaching technique to stimulate HOTS, the mixed ability of the students, and big class size. Moreover, the majority of teachers also claimed that they implemented HOTS in all learning stages.

However, in the study of Ansori et al. (2019), the triangulation of the interviews, classroom observations, and review of documents revealed that while teachers held strong beliefs about the integration of HOTS in terms of its conception, importance, role of teachers, strategies to promote it, and assessment, it is not fully reflected in practice, particularly in assessing HOTS. The researchers added that these factors influence teachers' beliefs in integrating HOTS: training received, learning and teaching experiences, institution, students, and availability of learning support. Aside from this, it was found that the teachers' beliefs influence their classroom practices and align with the different theories. Additionally, the researchers concluded that the teachers need more training and professional development support.

Furthermore, Garillo (2019) found that teachers often used traditional assessments compared to authentic assessments. Aside from this, the study also revealed a mismatch in the classification of test items; teachers claimed that they employed HOTS in their assessment questions, specifically analyzing, applying, and creating, but later found that those questions were only under the level of remembering and understanding.

The study concluded that the classroom practices of the teachers fell short when compared to the standards set by the Department of Education, such as the frequent implementation of formative assessment (before the lesson, during the lesson, after the lesson), the inclusion of performance-based assessment in summative assessments, and the inclusion of a wide variety of assessment methods other than traditional assessments. The researcher concluded that the teachers need intensive training, seminars, and workshops to improve their classroom assessment practices.

Similarly, Cruz (2023) discovered some inconsistencies between the teachers' beliefs about classroom assessment and actual classroom assessment practices; teachers viewed assessment as testing instead of a way to develop the students' skills. The study concluded that while there is a significant relationship between classroom assessment skills and teachers' thoughts, there is no significant relationship between the thoughts and practices, or between the skills and practices.

Moreover, Tyas et al. (2019) found that the teachers experienced challenges in understanding HOTS, limited sources of materials to guide teachers about HOTS, the students' reading comprehension, and the difficulty and suitability of the materials. Hence, the study concluded that teachers' "basic weapon" in effectively integrating HOTS in the teaching and learning process is the knowledge of HOTS; therefore, teachers need to master the integration of HOTS, especially in constructing HOTS-based questions.

Nonetheless, one of the reasons for the need for teachers to implement HOTS in teaching and learning processes and assessments is the high number of LOTS found in the formative and summative assessments. Abosalem (2016) revealed that most of the teacher-made tests measure the lower levels of cognitive taxonomy, with the majority of the test items under applying and remembering. As such, school assessment methods do not help develop HOTS because they ask students to "recall information or to do routine questions." Also, Ennis (1993, as cited in Abosalem, 2016) considered HOTS to be "measured by different assessment methods such as performance tests, portfolios, projects, and multiple-choice items with justification". Abosalem (2016) concluded that though the effectiveness of traditional tests cannot be ruled out because of their objective measurement, they cannot assess the skills the learners need to function well in real-life situations.

Capacity-Building Program

According to Bakić (2024), capacity building is a process that investigates the needs and gaps of an agency or organization to provide a suitable action, maximizing available resources to address the identified gaps. Moreover, it involves a roadmap that starts with assessing the needs and gaps. Then, these identified needs and gaps were the basis for determining which skills and knowledge should be further improved. After that, the objectives and strategies for the identified skills and knowledge should be developed to ensure the alignment of the content to the purpose of the capacity building. Then, the process for monitoring and evaluating the progress of the capacity building should be developed and elaborated, including the outputs and targets to ensure the program's direction. Lastly, once the capacity-building program is implemented, reviewing and revising the plan is vital to maintain its relevance and effectiveness.

According to the innovative capacity-building framework developed by Brix (2019), organizational capacity-building needs a context that supports the improvement of the employee's knowledge, skills, and decision-making ability based on the intended purpose. Moreover, the "context" must be continuously adjusted by analyzing participant feedback and the program results.

The aforementioned concepts and frameworks served as a guide to craft the capacity-building program. The results of the study, especially the challenges, served as the assessment of needs and gaps for the capacity-building program. Currently, the DepEd Division of Quezon conducted a training centering on HOTS specifically for Grade 7 and Grade 8 teachers in English, Science, and Mathematics on July 22-26, 2024. So far, this is the only training set within the division for HOTS that targets a specific audience. However, this training is limited to 627 participants with only three representatives (one English, one Science, and one Math) per secondary school.

In synthesis, the literature established the HOTS within the cognitive domain (analyze, evaluate, and create) and knowledge dimension (conceptual, procedural, and metacognitive). Moreover, it presented the importance of selecting appropriate modes of assessment for establishing a good, reliable, and valid assessment. Aside from this, there is a current trend and need for upskilling teachers about HOTS, but there is a current paucity and limited training within the locale.

However, it is noteworthy to emphasize the different research gaps found to support the study. First, most of the cited studies were focused on formative assessments. While some studies targeted summative assessments, they were in the form of national and standardized assessments and not so much in classroom contexts. Hence, this study focuses on summative assessment in a classroom setting called a quarterly assessment. Another gap found is that most studies only evaluated the assessments according to the cognitive domain.

In contrast, some of the studies were focused on the modes of assessment or the practices and challenges experienced by teachers. Hence, this study targeted the two dimensions of Bloom's taxonomy: the cognitive domains and knowledge dimensions, including the modes of assessment and the practices and challenges. Aside from this, the local studies focused on Mathematics and Science; hence, a study in the context of assessing English assessments is needed. Lastly, most of the studies recommended that appropriate professional development regarding HOTS should be conducted.

With these identified gaps, the present study thus aimed to fill the gaps by: focusing on the summative assessment under the area of classroom assessment utilized by public schools (quarterly assessment), evaluating the quarterly assessments through two dimensions: cognitive domain and knowledge dimensions; evaluating the common traditional and performance-based modes of assessment utilized by teachers in designing QAs, further investigating the practices and challenges experienced by teachers in designing HOTS-based assessments; and developing a specific capacity-building program for HOTS-based quarterly assessment construction rather than merely suggesting more professional development training.

Methodology

Research Design

This study employed a qualitative case study research design to gain an in-depth understanding of how higher-order thinking skills (HOTS) are integrated into teacher-made quarterly assessments. A case study design is particularly suited for exploring real-life contexts and complex processes, allowing researchers to generate new insights from rich, holistic data (Creswell & Poth, 2018). Two primary data sources were utilized: document analysis of fifteen Grade 7 English quarterly assessments and one-on-one semi-structured interviews with the teachers who produced them.

Document analysis was used to meticulously review and evaluate the assessments, which are stable and unobtrusive data sources

(Bowen, 2009, as cited in Morgan, 2022). Content analysis was applied to these documents to categorize assessment items according to Bloom's two-dimensional taxonomy, calculating frequency and percentage to provide a descriptive overview. Although these numerical indicators were used, they function solely to support the qualitative interpretation of data rather than to test hypotheses or generalize findings; thus, the study remains qualitative.

Complementing the document analysis, semi-structured interviews were conducted to capture teachers' practices and challenges in integrating HOTS. Interview transcripts were thoroughly reviewed, coded, and analyzed thematically (Braun & Clarke, 2006), yielding nuanced themes that enriched the understanding of the assessment practices. Triangulation was achieved by comparing themes emerging from the interviews with patterns identified in the assessments, ensuring the alignment and veracity of results. Additionally, insights from the literature review were integrated to explore alternative meanings and emerging themes relevant to developing a capacity-building program.

Participants

The research participants were 15 public secondary English teachers from selected public secondary high schools in the 4th District of Quezon. The participants were chosen purposively to accumulate the experiences directly from the English teachers since they were the primary focus of the study and were selected using the following criteria: (1) they are permanent public English teachers; (2) they handle grade 7 English; (3) they handled grade 7 English in the academic year 2023-2024; they can be in any designation such as Teacher I, Teacher II, Teacher III, Master Teacher I or Master Teacher II.

Instrument

The researcher used an interview guide for semi-structured interviews. Semi-structured interviews consist of open-ended questions designed to elicit in-depth responses from the participants. Moreover, it directs the interview to the direction of the topic of the study, and researchers can still ask additional questions without straying from the intended topic (Ruslin et al., 2022). Using content validity, the researcher sought three experts from the field to validate the interview guide, and it was further validated and approved by the research adviser and three research panelists.

Procedure

The researcher crafted an interview guide designed to determine the practices of the research participants in the preparation and integration of HOTS in quarterly assessments. The research adviser checked the interview guide for suggestions and further revisions. Upon the approval of the research adviser, the researcher sought out three experts in the field for validation and further revision of the instrument. Upon the validation of the research instrument, the researcher sought permission from the research panel to conduct the study.

Upon the approval of the research panel, the researcher secured permission to conduct the study from the Division of Quezon Office of DepEd, the school heads, the head teachers, and the English 7 teachers. The researcher conducted face-to-face interviews with the participants. However, virtual interviews served as an alternative in cases of time availability of the participants, distance constraints, and follow-up interviews. The audio recordings of the interview were transcribed and analyzed through coding and decoding of emergent themes and sub-themes.

Afterward, the researcher secured hard or soft copies of the quarterly assessments crafted and utilized during the fourth quarter of the school year 2023-2024 from the participants. The research participants received a letter of consent allowing the researcher to use the quarterly assessment for the study. Upon the agreement of research participants to use the quarterly assessment, the researcher analyzed and categorized the quarterly assessments through cognitive taxonomy, dimensions of knowledge, and modes of assessment using frequency and percentage. The interview and the collection period were conducted from June to the last week of July 2024.

Lastly, the researcher analyzed the findings of the study by determining the emergent themes and sub-themes found in the categorization of the material. To further guarantee the validity and accuracy of categorized, coded, and thematized data, it was re-evaluated and validated by the three intercoder.

Data Analysis

Once the researcher secured a maximum of 15 quarterly assessments, the researcher analyzed and coded the retrieved quarterly assessments through content and thematic analyses. Quarterly assessments, as discussed in the DepEd Order No. 08, series of 2015, can come in various formats. It can be in the form of assessments, such as but not limited to written examinations, pen-and-paper tests, debates, role-playing interviews, or oral presentations. Moreover, the quarterly assessments can also combine written examinations and performance-based assessments.

The researcher rigorously analyzed and categorized the items in the quarterly assessments and did not collect the Table of Specification, even though it can initially provide the same data. It was because the TOS may also come in different formats; hence, the researcher opted to personally categorize the items in the quarterly assessments to achieve unanimity in the data categorization standards and process.

First, the quarterly assessments were categorized through the cognitive domain. The six cognitive domains are remember, understand, apply, analyze, evaluate, and create. The first three domains are lower-order thinking skills, whereas the latter are higher-order thinking skills (Mishra & Kotecha, 2016). The descriptors for cognitive domains in DepEd Order No. 08, series of 2015, and the work of Wilson (2016) were utilized to serve as guides.

After that, the quarterly assessments were categorized through the four dimensions of knowledge: factual, conceptual, procedural, and metacognitive. This study utilized the descriptors found in the work of Wilson (2016) and the assessment criteria of Urgo et al. (2019). Lastly, the work of Pratama and Retnawati (2018) was utilized to categorize which cognitive domain and which knowledge dimension were included as HOTS.

Aside from this, the researcher also identified and determined the commonly used modes of assessment of English 7 teachers in quarterly assessments. This study employed the two categorized modes of assessment of Garillo (2019): traditional and performance-based. Then, the categorized data was quantified through frequency and percentage. The researcher identified the common and least utilized cognitive domain, dimension of knowledge, and modes of assessment.

Meanwhile, the researcher also conducted one-on-one semi-structured interviews with the research participants. After that, the audio recordings were transcribed through non-verbatim transcription. Once transcribed, the researcher gave each research participant a copy of the non-verbatim transcription for them to validate and verify the authenticity of the transcription.

Once the content analysis of the quarterly assessments and the non-verbatim transcriptions were validated and verified, the researcher determined the emergent themes and sub-themes employed by English 7 teachers in integrating HOTS in quarterly assessments through an inductive thematic approach. The researcher also utilized the six-step method of Braun and Clarke (2013): (1) familiarization, (2) coding, (3) constructing themes, (4) reviewing themes, (5) defining themes, and (6) writing a thematic analysis (Stolle, n.d.; Majumdar, 2022).

The first step is familiarization; the researcher read and reread the content analysis of the collected quarterly assessments and the non-verbatim transcriptions with an analytical perspective and took down important notes throughout the reading process to be familiarized with the data. These notes were a big help in evaluating the data later on.

After that, the researcher started coding the data from the content analysis of the quarterly assessment and the non-verbatim transcriptions, focusing on similarities among the data relevant to the research questions in the study. The initial codes gave the researcher the ideas present in the data.

Once the initial codes were finalized, the researcher generated and developed the themes and subthemes among and between the identified codes in the data. Once the themes and subthemes were finalized, it was imperative to review the developed themes and subthemes to ensure they were coherent and relevant to the research questions. Moreover, the further review of the themes helped eliminate the risks and issues of overlapping and vague ideas. Once the themes were finalized, the researcher provided a detailed description. Then, the researcher related and discussed the themes of the research questions and the existing literature in the study.

Finally, the written and developed thematic analysis from the content analysis of the quarterly assessments and the non-verbatim transcriptions were the basis for crafting the research output of the study: the capacity-building program for HOTS-based quarterly assessment, specifically designed for the English 7 teachers.

Ethical Considerations

Limpiado (2021) wrote that ethics is one of the many factors to consider in conducting qualitative research. Moreover, this study utilized the 2023 version of the Revised Guide to Thesis Writing of Sacred Heart College of Lucena City, Inc.

This research was grounded on the ethical principles of Polit and Beck (2017), which are to maximize benefits and limit harm, respect human dignity through self-determination and full disclosure, and the right to fair treatment and privacy.

First, the researcher briefly introduced the purpose and risks of the study and provided a disclaimer, ensuring that the participating schools have the freedom to continue or discontinue their involvement in the study.

To limit the risks and protect the identity of the locale, the researcher did not ask or collect the names of the schools and did not attach or leak the original copies of the quarterly assessments. For the collection of the quarterly assessments, the researcher sought permission to use the quarterly assessment in the study through a letter of consent with details on how the quarterly assessment would be used in the study. The researcher ensured that the retrieved quarterly assessments were objectively analyzed.

In addition, the identity of the quarterly assessment (e.g., name of the school, logo, name of the teacher) was deleted or highlighted in black if it was collected through soft copies to ensure confidentiality. However, if the quarterly assessments were retrieved through hard copies, the researcher hid the identity of the material by covering it with black paper.

Moreover, each quarterly assessment was given an alias following the format QA_01. The QA stands for Quarterly Assessment, and the number 01 is based on the order of retrieval. Since this study needed 15 quarterly assessments, the number was from 01 to 15.

Aside from this, each research participant was given an assigned codename used in the filename for their audio recording files and in the presentation of the results and discussions of the study. The codename was in this format: ETP#(number). The ETP stands for English Teacher Participant, and the number is the number of participants based on the order of the interview. The number ranged from 1 to 15 since there were only 15 research participants.

Furthermore, the study's results were specifically used to develop a capacity-building program that benefits the field of education when it comes to crafting HOTS-based assessment, and it in no way criticizes, harms, or targets the participating English teachers and schools.

Results and Discussion

This section presents the findings according to the study's research questions. The results are divided into four parts.

Part 1. Categorizing Quarterly Assessment Items through Cognitive Lenses

Table 1. *Frequency and Percentage of Quarterly Assessment Items in Terms of Lower-Order Thinking Skills and Higher-Order Thinking Skills According to Cognitive Domains*

Level	*Cognitive Domains*	*Frequency*	*Percentage (Cognitive Domain)*	*Percentage (Level)*
	Remember	410	60.29	
LOTS	Understand	88	12.94	81.91
	Apply	59	8.68	
	Analyze	63	9.26	
HOTS	Evaluate	24	3.53	18.09
	Create	36	5.29	
	Total	680	100.00	100.00

Table 1 presents the frequency and corresponding percentage of quarterly assessment items regarding cognitive domains such as remember, understand, apply, analyze, evaluate, and create. The fifteen quarterly assessments analyzed contain a total number of 680 items. Based on the result, the majority of these items (60.29%) are categorized under the Remember domain. The Understand and Analyze domains followed with 12.94% and 9.26%, respectively. On the other hand, the least used domain was Evaluate, which was only 3.53% out of 680 items. Moreover, the Create and Apply domains were less utilized by grade 7 teachers, with percentages of 5.29% and 8.68%, respectively. The result clearly shows that questions under the Remembering domain dominate the quarterly assessments of teachers. Moreover, the results also reveal that the majority of the items in the quarterly assessment of the ETPs fall under the LOTS (remember, understand, apply) level with a percentage of 81.91% (557 items) whereas, the remaining 18.09% of the items (123 items) are categorized as HOTS (analyze, evaluate, create).

Table 2. *Frequency and Percentage of Quarterly Assessment Items in Terms of LOTS and HOTS According to Knowledge Dimensions*

Level	*Knowledge Dimensions*	*Frequency*	*Percentage (Knowledge Dimension)*	*Percentage (Level)*
LOTS	Factual	607	89.26	89.26
	Conceptual	15	2.21	
HOTS	Procedural	34	5.00	10.74
	Metacognitive	24	3.53	
	Total	680	100.00	100.00

Table 2 summarizes the frequency and percentage of quarterly assessment items regarding Knowledge Dimensions. Based on the result, the majority of the items (89.26%) are under Factual Knowledge. Meanwhile, only a few items are under Procedural Knowledge (5%) and Metacognitive Knowledge (3.53%). The data also shows that the least utilized knowledge dimension is Conceptual, with only 2.21%.

Moreover, the results reveal that the majority of the items in quarterly assessments belong to LOTS (factual), with 89.26%. On the other hand, fewer items belong to HOTS (conceptual, procedural, and metacognitive), with only 10.74%.

To summarize, the result shows fewer HOTS items when the data were categorized in knowledge dimensions. Previously, there were 123 items under HOTS in the cognitive domain, but when categorized into knowledge dimensions, there were only 73 items classified as HOTS. Specifically, this means that even though the 50 items were HOTS in the cognitive domain, they fell short in the criteria of knowledge dimensions to become HOTS.

Table 3 presents the summary of the frequency and percentage of the intersection of HOTS between cognitive domains and knowledge dimensions. The data shows that when the items are categorized in both perspectives of cognitive domains and knowledge dimensions, only 60 items (8.82%) are under HOTS, and most of these questions (3.53%) are in create/procedural. It was followed by evaluate/metacognitive with 1.91%, analyze/conceptual with 1.18%, analyze/metacognitive and create/metacognitive with 0.59%, analyze/procedural and evaluate/conceptual with 0.44% and create/conceptual with only 0.15%. However, there were no items under

evaluate/ procedural. The number of HOTS items further decreased to 60 from 123 in the cognitive domain and 73 in the knowledge dimension.

Table 3. *Frequency and Percentage of Intersection of HOTS Within Cognitive Domains and Knowledge Dimensions*

Knowledge Dimensions / *Cognitive Domains*	*Conceptual*		*Procedural*		*Metacognitive*	
Analyze	8	1.18%	3	0.44%	4	0.59%
Evaluate	3	0.44%	0	0.00%	13	1.91%
Create	1	0.15%	24	3.53%	4	0.59%
Total	12		27		21	
Overall Total					60	8.82%

Part 2. Preferred Modes of Assessment of the Participants in English 7 Quarterly Assessment

The table below was presented to show the frequencies of each of the seven traditional modes of assessment to give a complete rundown of the result of the interview based on the common traditional modes of assessment utilized by the ETPs in the quarterly assessment:

Table 4. *Summary of Traditional Modes of Assessment Utilized by the English 7 Teachers in Quarterly Assessment*

Summary of the Traditional Modes of Assessment (Presented as individual item)			
Mode	*Frequency*	*Mode*	*Frequency*
Multiple Choice	15	Enumeration	1
Matching Type	5	Fill-in-the-blanks	1
Identification	4	Essay	1
True or False	2		

Table 4 summarizes the frequency of the traditional modes of assessment utilized by the ETPs in quarterly assessments. The modes are presented as individual items, meaning each mode under combination was counted as one. Based on the result, multiple choice is the most common mode of traditional assessment utilized by the ETPs. It was followed by Matching Type (5), Identification (4), and True or False (2). Lastly, the least utilized modes of traditional assessment are enumeration, fill-in-the-blanks, and essay.

To cross-check, here is a summary of the traditional modes of assessment utilized by the ETPs in the Fourth Quarterly Assessment:

Table 5. *Summary of Traditional Modes in the Fourth Quarterly Assessment*

Summary of the Traditional Modes of Assessment in the Fourth Quarterly Assessment			
Mode	*Frequency*	*Mode*	*Frequency*
Multiple Choice	15	True or False	3
Identification	8	Enumeration	2
Short supply answer	3	Matching Type	2

Table 5 summarizes the traditional modes of assessment based on the fourth quarterly assessment retrieved from the ETPs. Significantly, the Multiple Choice was the most common and prominently used by the ETPs. It was followed by Identification (8), Short Supply Answer (3), True or False (3), Enumeration (2), and Matching Type (2).

Table 6 was provided to show the actual summary of the modes of assessment under performance-based assessment that were utilized by the participants in the quarterly assessment based on the one-on-one interview:

Table 6. *Summary of Performance-based Modes of Assessment Utilized by the English 7 Teachers in Quarterly Assessment*

Summary of Performance-Based Mode of Assessment			
Mode	*Frequency*	*Mode*	*Frequency*
Essay Writing	4	Giving an Ending to a Story	1
Reporting	3	Paragraph Writing	1
Role Play	2	Oral Quiz / Recitation	1
Sentence Construction	2	Poetry Writing	1
Debate	1	Short Film Making	1
Choral Reading	1		

Table 6 summarizes the common performance-based mode of assessment utilized by the ETPs in quarterly assessments. Most of them use Essay Writing (4). It was followed by Reporting (3), Role Play (2), and Sentence Construction (2). Aside from these modes, ETPs also use Debate, Choral Reading, Giving an Ending, Paragraph Writing, Oral Quiz/ Recitation, Poetry Writing, and Short Film Making.

Additionally, the results of the interviews revealed that the ETPs commonly utilized essays and other group activities like reporting, role-playing, choral reading, and other group performances in performance-based assessment. To cross-check the data from the interview about the utilization of PBA, here is the summary of the performance-based mode of assessment utilized by the ETPs in the

fourth quarterly assessment:

Table 7. *Summary of Performance-Based Modes of Assessment in the Fourth Quarterly Assessment*

Summary of Performance-Based Modes of Assessment in the Fourth Quarterly Assessment	
Mode	*Frequency*
Essay	3
Output	2
Choral Reading Performance	1

Table 7 summarizes the performance-based mode of assessment based on the fourth quarterly assessment retrieved from the ETPs. There are only three modes that are present in the QAs: Essay (3), Creating an Output (2), and Choral Reading Performance (1). Comparably, the Essay is the most common performance-based mode of assessment utilized by the ETPs both in the interview and in the retrieved quarterly assessments.

Part 3. Practices and Challenges in Preparing and Integrating HOTS in Quarterly Assessment

Table 8. *Practices of the Participants in Preparing and Integrating HOTS in Quarterly Assessment*

Practices	*Description*	*Exemplars*
Using Competency-Based Tools	Using any tools or instruments that are anchored on learning competencies, learning objectives, and lesson topics	ETP12 *"We have the Budget of Work and TOS. We multiply and divide it for us to come up with the number of questions to be given by its cognitive level. Knowledge is 60%, comprehension is 30%, and application is 10%.* ETP3 *"May sinusunod na TOS; merong knowledge, comprehension, and application, so titingnan mo dun yung level ng questions mo."* *[We are adhering to the TOS; it has knowledge, comprehension, and application, so you will consider the level of your questions there.]*
Gauging Learners' Thinking Ability	Considering the thinking ability and capability of the learners	ETP5 *"Make them familiar with the particular HOTS that you are using... Another challenge is to give a question is a minimal or less words so that the learners can decipher and understand the question fully. Less words matters."* ETP6 *"I always ensure that it is within their capabilities. After all, they must be familiar with the type of questions since it is implied during lessons. I also ensure that the learners are familiar with the words in the questions. I tend to avoid highfalutin words and give direct questions."*
Standardized Spiral Questions	Considering the arrangement of the questions from simple to complex	ETP6 *"I also consider the order of the questions from simple to complex."* ETP11 *"Yung transition niya from the simple to difficult, foundational to transactional, something like that."*
Inclusion of Selected HOTS	Selecting any HOTS level based on the instruction	ETP3 *"Hindi naman lagi makukuha ng mga bata yung lahat ng levels. So pag may hindi kami nakuhang level, then sa next."* *[Students do not always master all the levels, so if there is a level that we did not attain, then next time, we will achieve it.]* ETP8 "*Hindi naman necessary na araw-araw mahi-hit mo yung anim na domains na meron sa Bloom's kasi for as long as may learning naman kahit siguro sa understanding, sa analyzing, evaluating, ma-alin dun sa isang araw. Saka marami pa namang araw bakit kailagan mong ma-hit mo siya araw-araw?"* *[It is unnecessary to hit the six domains in Bloom's every day, as long as the learning is there regardless of whether you use understanding, analyzing, or evaluating daily. After all, more days are available, so why must you hit it daily?]*

Table 8 presents the practices utilized by the participants in preparing and integrating HOTS in quarterly assessments, such as using tools anchored on learning competencies, considering the level of the learners, considering the sequence of the questions from simple to complex, and selecting only the HOTS integrated during the delivery of the lesson.

Table 9. *Challenges Experienced by the Participants in Preparing and Integrating HOTS in Quarterly Assessment*

Challenges	*Description*	*Exemplars*
Crafting HOTS Questions is Complicated	HOTS questions are difficult to craft.	ETP1 *"Medyo mahirap siya kasi pumapasok dun o nagiging situational. Mahirap mag-isip ng mga questions na i-coconnect mo dun sa topic mo then gagawan mo ng situation. Yun yung challenge – mahirap mag-create."* *[It is not easy because it comes situational. It is a challenge to create and think of the questions connected to your topic, and then you will create a situation based on it.]* ETP13 *"Parang hindi ako masyadong familiar sa analyze and evaluate. Sa create lang ako naka-focus."* *[I am not that familiar with analyze and evaluate. I am only focused on create.]*
Gap Between HOTS and Students' Level	The level of thinking ability or learning ability of the learners is low.	ETP5 *"It is because you need to think about the differences of your learners. "Is this question fits the ability of my learners?" It's different from science-oriented classes and regular classes. The time element includes the crafting of questions and how students adapt and decipher the question. What is important is that the question is understandable. Another challenge is to give a question is a minimal or less words so that the learners can decipher and understand the question fully. Less words matters."* ETP8 *"Difficult challenges I have encountered in forming HOTS questions with regards with assessment, one challenge I have encountered is that I have to think of a personalized question that is out of box and beyond the box. Kasi most of the questions from the textbook are not classified under the HOTS, so kailangan mo namang i-modify. Medyo i-aayon mo siya sa level of understanding ng learner."* *[Difficult challenges I have encountered in forming HOTS questions regarding assessment; one challenge I have encountered is to think of a personalized question that is out of the box and beyond the box. It is because most of the questions from the textbook are not classified under HOTS, so you need to modify them. You will align it with the learners' level of understanding.]*
Pressure of Time Constraint	The time given is limited.	ETP2 *"I found it difficult if there are limited lessons or time given to them. For example, two days then, there's no HOTS"* ETP13 *"Yung pag manage lang ng time kung kelan mo siya gagawin."* *[The management of time if when you need to craft it.]*

Table 9 presents the different challenges faced by the participants when preparing and integrating higher-order thinking skills in quarterly assessments. Based on the results of interviews, the teachers find it challenging to create and construct HOTS items. Moreover, the participants find it challenging to integrate HOTS because of the gap between the HOTS and the thinking level of the students. Lastly, due to time constraints, the participants find it challenging to integrate HOTS.

Part 4. The Output of the Study: Beyond the Basics Program - Designing a HOTS-based Quarterly Assessment for Grade 7 English (Capacity-Building Program)

To recapitulate, three Teacher I, five Teacher II, and seven Teacher III agreed to partake in the study. The participants are all licensed public secondary teachers within the 4th district of Quezon. The participants who are Teacher I are ETP 4, 9, and 12. On the other hand, ETP 1, 6, 7, 11, and 14 are Teacher II. Lastly, Teacher III are ETP 2, 3, 5, 8, 10, 13, and 15. The position of the ETPs was gathered to shed light on the specific challenges teachers encounter in integrating HOTS while preparing quarterly assessments to tailor a capacity-building program specified to each teaching position.

However, the challenges mentioned in the second part of the analysis were experienced by the ETPs regardless of their teaching position. Though ETPs whose positions are in Teacher II and Teacher III provided a more detailed and more elaborated discussion on their practices in integrating HOTS in QA, all teaching positions (TI to TIII) experienced exactly or more likely the same challenges.

To specify, one out of three Teacher I, three out of five Teacher II, and four out of seven Teacher III experienced difficulty in constructing HOTS-based questions or assessment tasks in varying domains of analyzing, evaluating, and creating, especially in constructing situational questions. Besides, two out of three TI, two out of five TII, and four out of seven TIII experienced challenges

relating to the learners' low-order thinking and low reading ability, which hindered the integration of HOTS in the quarterly assessment. Lastly, one out of three TI, two out of five TII, and five out of seven TIII experienced difficulty integrating HOTS in quarterly assessments because of time constraints in preparation and instruction.

As such, the teachers need a more comprehensive capacity-building program based on the level of their understanding of HOTS and quarterly assessment rather than their teaching positions. The proposed capacity-building program is titled "Beyond the Basics: Designing a HOTS-based Quarterly Assessment for Grade 7 English". It is a year-long program that aims to be sustainable. The program aims to evaluate the assessment questions and tasks based on the criteria given and design and craft a quarterly assessment with HOTS integration. The Beyond the Basics Program has seven stages: Beyond the Basics Program Orientation, Pre-Assessment, Training and Workshops for HOTS-based Quarterly Assessment, Post-Assessment, LAC Sessions for Job-Embedded Learning Component, Focus Group Discussion or Needs Analysis, and Create New Program Content Framework.

The program starts with an orientation about what the program is, the process of the program, and the aims and objectives of the program. Then, a pre-assessment must be conducted. It is needed to gauge teachers' current knowledge about HOTS, assessment modes, and quarterly assessments.

After that, training and workshop sessions must be held. The sessions are designed via face-to-face training sessions or LAC sessions. Schools with a high number of grade 7 English teachers can conduct LAC sessions, while schools with fewer grade 7 English teachers can conduct cluster-level face-to-face training sessions. Furthermore, the training and workshops can be held on four Saturdays or during in-service training to avoid disruptions of classes and maintain and encourage focus for the participants. The first week of the training and workshops lasts three hours, including discussions of the quarterly assessment and modes of assessment. Moreover, a discussion about quarterly assessment is needed to solidify and establish its general structure and characteristics. Apart from that, based on the findings of the study, there were no particular guidelines on the selection of assessment modes; hence, a discussion of criteria for selecting appropriate assessment modes should be prioritized.

Further, the second week lasts seven hours, including the discussion of HOTS, the two-dimensional taxonomy of Bloom, and the crafting and designing of questions or assessment tasks with the integration of HOTS and appropriate modes of assessment. The inclusion of the aforementioned topics stemmed from the results of this study, when it was found that teachers encountered problems in framing and constructing HOTS questions.

Meanwhile, the third week lasts seven hours, including discussing strategies for efficiently and effectively designing and crafting a quarterly assessment with HOTS integration. The discussions of different strategies for constructing and integrating HOTS in quarterly assessments for academically challenged learners, for mixed-ability learners, and for efficiently constructing quarterly assessments aim to address the challenges found in this study, which are the difficulty in crafting QA due to different levels of students, low-level thinking and reading ability of learners, and as well as time limitation.

Then, the post-assessment must be administered. The participants are expected to get a rating of 85% for the post-assessment to pass the program. If not, the participant must review and retake the sessions before retaking the post-assessment.

Lastly, the fourth week contains the final output of the training and workshop of the program. Each participant must create one quarterly assessment. Then, it must be evaluated based on the given topics, criteria, and scenarios.

After the training and workshops, a series of LAC sessions for the Job-Embedded Learning component of the program must be conducted for one school year. Specifically, a minimum of nine (9) LAC sessions must be held. At the beginning of the school year, the participants, spearheaded by the LAC leader, shall convene to design and propose a comprehensive plan for the year to design and construct HOTS-based quarterly assessments efficiently. Then, another LAC session must be held before the scheduled quarterly assessment to design, construct, and evaluate (through peer review or mentoring and coaching) the quarterly assessment. Once the QA is approved and administered to the learners, another LAC session must be held to evaluate the QA result and determine the learners' strengths and weaknesses in terms of cognitive domains and knowledge dimensions. After that, another LAC session must be conducted to design and construct QA for the next quarter, and it must be evaluated using the competencies, LOTS, HOTS, and the summary of the strengths and weaknesses discovered during the previous quarter. This continuous process must be utilized until the last quarter of the school year.

The implementation of the capacity-building program shall be monitored through narrative reports during the orientation, pre-assessment, training, workshop sessions, post-assessment, and LAC sessions during the job-embedded learning. After that, the program must be evaluated through focus group discussions and needs analysis to determine and evaluate its results and the challenges experienced by the participants during the implementation stage to improve the program. The evaluation stage of the program must be conducted after receiving the fourth quarter reports and minutes of the meeting.

After the evaluation stage, a new framework for the program training, workshops, and job-embedded learning must be crafted and developed based on the focus group discussion results and the needs analysis. Then, this newly crafted program framework shall be discussed in the second orientation, and the program cycle shall continue.

To conclude, the proposed capacity-building program targets Grade 7 English teachers to develop their skills and knowledge by

integrating HOTS in quarterly assessments. The proposed program was designed and crafted using the findings of the study in order to provide a comprehensive program suited to the current needs of Grade 7 English teachers.

The collected quarterly assessments from the participants are dominated by lower-order thinking skills with a percentage of 81.91%, whereas the higher-order thinking skills have 18.09%. In terms of the cognitive domain, the majority of the assessment items in the quarterly assessment are in the Remember domain, with 60.29%. Moreover, the result of the study showed that the Analyze domain was more utilized in quarterly assessments than the Evaluate and Create domains. In terms of knowledge dimensions, the majority of assessment items in quarterly assessments are in Factual knowledge with a percentage of 89.26%, and the HOTS consisting of Conceptual knowledge, Procedural knowledge, and Metacognitive knowledge have a percentage of 10.74%. Moreover, the categorization results revealed that Procedural knowledge was mainly utilized by the participants in quarterly assessments compared to Metacognitive and Conceptual knowledge.

In terms of cognitive domains, there are 123 assessment items categorized under HOTS. However, when the assessment items were analyzed through knowledge dimensions, it was revealed that the number of items under HOTS decreased from 123 items to 73 items. Nevertheless, when the assessment items were further analyzed and categorized through the perspective of a two-dimensional revised Bloom's taxonomy (cognitive domain and knowledge dimensions), the number of items under HOTS went down to 60.

Moreover, Baylon (2014) found that teachers often utilize remembering and understanding domains compared to applying, analyzing, evaluating, and creating domains, which is similar to the result of this study. Comparably, Utami et al. (2019) analyzed multiple-choice assessment materials and found that remembering, understanding, and applying domains also have the highest number of items. However, Utami et al. (2019) also revealed that the analyzing domain is the only HOTS found in the assessment material, and according to the result of this study, the analyzing domain has the highest number of items under HOTS compared to evaluating and creating domains.

Nevertheless, when the curriculum guide under Regional Memo No. 306, series of 2020, was revisited, it was found that the fourth quarter has eight (8) most essential learning competencies (MELCs) and seven (7) of them are classified as HOTS. Despite that, it is important to note that teachers evaluate the mastery of the competencies after quarterly assessments. The least mastered competencies will likely be retaught in the following quarter. Therefore, evaluating the MELCs in the first three quarters was essential. Upon classifying the MELCS from the first quarter to the fourth quarter, it was found that fifteen (15) out of 29 MELCs are classified as LOTS, and the remaining 14 MELCs are classified as HOTS. Moreover, most of the LOTS can be found in the first and second quarters, while most of the HOTS can be found in the third and fourth quarters. If the teachers were following the reteaching strategy, it may be one of the contributing factors why LOTS dominated the analyzed quarterly assessments.

The most common traditional mode of assessment utilized by the English teacher participants in quarterly assessments is multiple choice. However, some participants combined different traditional modes of assessment when creating quarterly assessments, such as multiple choice, matching type, identification, true or false, enumeration, and fill-in-the-blanks. On the other hand, the most common performance-based mode of assessment utilized by the participants in quarterly assessment is essay. The result of the study revealed that nine (9) out of fifteen (15) English teacher participants use performance-based assessment in varied modes, including essay, reporting, role play, sentence construction, debate, and paragraph.

Based on the interviews, the selection of traditional modes of assessment to be utilized in quarterly assessment stemmed from the following reasons: ease and convenience, administrative influence, learning objectives and competencies, engaging and interesting, and opportunity to apply Bloom's taxonomy. Meanwhile, the selection of performance-based modes of assessment in quarterly assessment stemmed from the following reasons: application and measurement of learning gained and reliability.

Aside from this, the result of the study shows that the participants are more inclined to use traditional assessment modes than performance-based assessments when crafting quarterly assessments.

The English teacher participants employ different practices in preparing and integrating HOTS in quarterly assessments. These practices include using competency-based tools such as TOS and BOW, gauging the learners' thinking ability and level of the arrangement of assessment items from simple to complex, and including only selected HOTS based on what was integrated during the lessons/ instruction. On the other hand, the result of the study revealed that the English teacher participants encountered several challenges during the preparation and integration of HOTS in quarterly assessments.

One of these challenges includes the difficulty of crafting HOTS questions because the participants are not that familiar with it, little knowledge of HOTS questions, and the complexity of the level, especially in the create domain, when the mode of assessment is limited to multiple choice, and the tendency of HOTS questions to become situational questions. Moreover, other challenges experienced by the participants are the low level of thinking ability and the low level of reading ability of the learner, which hinders the integration of HOTS, and the time limitations experienced by the participants in conducting lessons that affect the quarterly assessment and in managing time in creating quarterly assessments.

A capacity-building program centering on the construction of HOTS items in quarterly assessments has been designed based on the study results, especially the challenges experienced by the participants.

Conclusions

Analysis of both quarterly assessments and interviews revealed that while some teachers demonstrated awareness of HOTS, the assessments were still largely dominated by lower-order thinking skills (LOTS), particularly in the "Remember" domain and within factual knowledge. Traditional assessment modes, especially multiple-choice items, were predominantly used, though a variety of performance-based assessments, such as essays and role plays, were also employed by some teachers. The preference for traditional assessments was driven by practicality, while performance-based assessments were selected for their ability to measure learning application. Teachers adopted several strategies for HOTS integration, such as using Tables of Specification (TOS), but faced significant challenges, including limited familiarity with HOTS, complexity of question construction (especially in the Create domain), mismatched student readiness levels, and time constraints. Despite these challenges, the study culminated in the development of a capacity-building program specifically aimed at equipping Grade 7 English teachers with the skills needed to effectively construct and integrate HOTS into assessments.

The study proposed the following recommendations: The Department of Education Division of Quezon is encouraged to standardize the Table of Specification format to ensure consistent cognitive level distribution in quarterly assessments. School administrators and the National Educators Academy of the Philippines (NEAP) should implement comprehensive training programs focusing on HOTS integration for diverse learners and on selecting appropriate assessment modes. Moreover, the proposed capacity-building program should be evaluated and utilized as an additional training tool. Grade 7 English teachers are advised to consider adopting effective practices identified in this study to enhance assessment quality. Future researchers are encouraged to evaluate the implementation of the proposed capacity-building program, replicate the study in different contexts or grade levels, and conduct further investigations into HOTS integration in both classroom instruction and assessment, including the administration and post-assessment phases.

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