

# Enhancing Learning Outcomes: Lesson Planning, Assessment Tools Development, And Higher-Order Thinking Skills Integration Analysis

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*Abstract- This research explored teachers' approaches to lesson planning, examined how teachers design assessment tools and investigated how teachers incorporate higher-order thinking skills to enhance learning outcomes. The research design of this study was qualitative. This study discovered teachers' approaches to lesson planning, developed assessment tools, and HOTS integration in teaching through interview and document analysis. The main findings of this study are; that the approach in lesson planning was geared towards the attainment of learning objectives and ensure to meet the learning needs of all the students; the assessment tools developed or adapted by teachers to assess higher-order thinking skills among students are peer assessment, performance task that require students to demonstrate their understanding through practical application simulation, role plays, creative projects, accomplishing the force field analysis where they have to identify and defend the driving force and restraining force of a certain community project, and encouraging students to give their reflections or insights after every lesson. The key challenges include student resistance, limited time and resources, poor comprehension skills, and teachers' difficulty on formulating effective HOTS questions. To address these challenges, teachers have implemented a range of strategies. The findings suggest that a holistic approach, which includes well-designed lesson plans, effective assessment tools, and deliberate integration of HOTS, significantly enhances learning outcomes. The study concludes with recommendations for educators and policymakers to implement these strategies to foster an environment that supports deep learning and critical thinking. This research contributes to the*

*field of education by providing actionable insights and practical guidelines for improving teaching practices and student achievement through a structured and comprehensive approach to lesson planning, assessment, and the integration of higher-order thinking skills.*

*Indexed Terms- Integration, Assessment Tool, Lesson Planning, Higher-Order Thinking, Approach*

## I. INTRODUCTION

In today's dynamic educational landscape, the pursuit of effective teaching methodologies and strategies to enhance student learning outcomes is a pivotal goal for educators worldwide. As educators, we are constantly challenged with the responsibility of equipping our students with not only the requisite knowledge but also the critical thinking skills necessary for navigating an increasingly complex world. This research delved into the intricate interplay between lesson planning, the development of assessment tools, and the integration of higher-order thinking skills to foster enhanced student learning outcomes.

The significance of meticulous lesson planning cannot be overstated in the realm of education. A well-crafted lesson plan serves as a roadmap, guiding educators through the intricacies of content delivery, pedagogical approaches, and student engagement strategies. By meticulously outlining the objectives, activities, and assessments, educators can ensure coherence and alignment with curriculum standards while catering to the diverse needs of learners. However, the efficacy of lesson planning extends beyond mere procedural adherence; it lays the

foundation for meaningful learning experiences that transcend the confines of rote memorization.

Complementary to robust lesson planning is the development of assessment tools tailored to measure student learning comprehensively. Assessment serves as a diagnostic tool, offering insights into students' understanding, misconceptions, and areas requiring further reinforcement. Traditional assessment methods often fall short in capturing the multifaceted nature of learning, necessitating the creation of innovative assessment tools that accommodate diverse learning styles and foster deeper levels of comprehension. By leveraging formative and summative assessment strategies, educators can gauge student progress, provide timely feedback, and scaffold learning experiences conducive to academic growth. (Wengrowicz, 2023)

Central to the discourse on enhancing student learning outcomes is the integration of higher-order thinking skills (HOTS) into instructional practices. According to (Huang, 2023) HOTS encompasses critical thinking, problem-solving, creativity, and metacognition, enabling students to analyze, evaluate, and synthesize information to construct meaning actively. Integrating HOTS into lesson planning and assessment design cultivates a learning environment that prioritizes inquiry, exploration, and intellectual rigor. By engaging students in cognitively demanding tasks, educators empower them to become self-directed learners capable of grappling with real-world challenges and adapting to a rapidly evolving knowledge landscape.

This research endeavors to explore the synergistic relationship between lesson planning, assessment tools development, and the integration of higher-order thinking skills in enhancing student learning outcomes. By examining theoretical frameworks, empirical evidence, and best practices, this study seeks to elucidate the mechanisms through which educators can optimize instructional practices to foster deep, enduring learning experiences. Ultimately, the insights gleaned from this research aim to empower educators to design transformative learning experiences that equip students with the skills, competencies, and dispositions essential for success in the 21st century and beyond.

According to (Cheng, 2023) in her study “in today's rapidly evolving educational landscape, there is a growing recognition of the importance of fostering higher-order thinking skills (HOTS) among students. These skills, including critical thinking, problem-solving, and creativity, are essential for success in both academic and real-world contexts.” However, achieving meaningful HOTS development requires a comprehensive approach that integrates lesson planning, assessment tools development, and intentional instructional strategies. This research investigated the effectiveness of such an integrated approach in enhancing student learning outcomes.

## II. LITERATURE REVIEW

Higher-order thinking Skills (HOTS) have been a significant area of focus in education globally for several decades. The concept of HOTS emerged in the 1960s and 1970s, particularly in the United States, as educators recognized the need for students to develop deeper levels of thinking beyond mere memorization and recall. The term "higher-order thinking skills" was coined by Benjamin Bloom in his 1956 book "Taxonomy of Educational Objectives," which categorized learning objectives into six levels of cognitive complexity, including knowledge, comprehension, application, analysis, synthesis, and evaluation.

The significance of HOTS cannot be overstated in the realm of education. These skills are essential for students to analyze, evaluate, and synthesize information to construct meaning actively. Integrating HOTS into instructional practices cultivates a learning environment that prioritizes inquiry, exploration, and intellectual rigor. By engaging students in cognitively demanding tasks, educators empower them to become self-directed learners capable of grappling with real-world challenges and adapting to a rapidly evolving knowledge landscape.

In the Philippines, the importance of HOTS was first recognized in the 1990s, particularly in the context of the Philippine Education Reform Act of 1997. This act emphasized the need for students to develop critical thinking, problem-solving, and analytical skills to prepare them for the challenges of the 21st century.

The Department of Education (DepEd) and the National Educators Academy of the Philippines (NEAP) have since been actively promoting HOTS through various initiatives, including the development of Professional Learning Packages (PLPs) for teachers and the integration of HOTS into the curriculum.

Furthermore, the incorporation of HOTS in lesson planning aligns with the country's educational goals to foster 21st-century skills among students (Teaching English | British Council, 2024). By engaging students in activities that promote higher-order thinking, educators can enhance the quality of education and prepare learners for the demands of the modern world. In different schools where educational practices may vary, the integration of HOTS in lesson planning can have a profound impact on student performance. According to (ThoughtCo, 2019), teachers who explicitly incorporate HOTS in their lesson plans can provide students with opportunities to engage in activities that require analysis, evaluation, and synthesis of information.

**Key Milestones, 2018 PISA Results:** The Philippines participated in the Programme for International Student Assessment (PISA) for the first time in 2018, which highlighted the country's poor performance in Reading, Mathematics, and Science. This led to a renewed focus on improving the quality of education, particularly in developing HOTS among students.

**NEAP and RCTQ Collaboration:** In 2021, the National Educators Academy of the Philippines (NEAP) and the Research Center for Teacher Quality (RCTQ) collaborated to develop PLPs for teachers in grades 7 and 8, and grades 9 and 10. These packages aimed to support teachers in developing HOTS and improving their pedagogy and assessment practices.

**HOTS-PLPs Rollout:** In 2023, NEAP and RCTQ rolled out the HOTS-PLPs nationwide, providing training for over 1,600 school leaders and teachers. This initiative aimed to equip educators with the skills and resources necessary to develop HOTS among their students.

Effective lesson planning is the foundation for HOTS development. Lessons should be designed employing HOTS objectives and paired with activities that

challenge students to analyze, evaluate, and create (Jacobs, 2016). Assessing HOTS requires moving beyond traditional multiple-choice tests to include performance-based assessments, such as projects, presentations, and portfolios (Darling-Hammond et al., 2020). Rubrics can also aid in providing clear criteria for HOTS performance and assessment.

Teachers have an important role in facilitating higher-order thinking skills that can be seen through the lesson plans (Haryati et al., 2021). The lesson plan must describe the development of higher-order thinking skills holistically. Teachers need to review each lesson plan to be coherent in every part and relevant to 21st-century learning. Research by Haryati et al. (2021) highlights the importance of teachers expressing HOTS explicitly in lesson plans. Teachers with extensive teaching experience demonstrate a better ability to incorporate HOTS effectively in their lesson plans, leading to more comprehensive skill development among students.

Effective lesson planning for HOTS involves designing activities that challenge students to analyze, evaluate, and create. For instance, a HOTS-SOLO lesson plan can include activities such as drawing pictures to show a particular event, making up a puzzle or game about the topic of study, writing a biography of a character, dramatizing content, conducting a debate, and writing a different ending to a story. These activities not only enhance critical thinking and problem-solving abilities but also promote creativity, collaboration, and communication skills. Teachers can use various strategies to encourage HOTS, including gamification, role-playing, and project-based learning.

To conclude, the history of HOTS in the world and in the Philippines highlights the growing recognition of the importance of developing critical thinking, problem-solving, and analytical skills among students. The Philippines has made significant strides in promoting HOTS through various initiatives, including the development of PLPs and the integration of HOTS into the curriculum.

Developing HOTS in students requires a comprehensive approach that integrates lesson planning, assessment, and instructional strategies. By aligning these key elements and focusing on

challenging, authentic learning experiences, educators can effectively foster the critical thinking, problem-solving, and creative abilities that are essential for success in the 21st century.

### III. CONCEPTUAL FRAMEWORK

Based on the constructivism theory in learning, Gagne's 9 events of learning and formative assessment, it is easy to design a good lesson plan. Although teaching is regarded as an art, a teacher should have a lesson plan so that he can be on the right track and can deliver a lecture based on learning objectives, making the lesson interesting, attractive, significant, and sustainable and increasing the confidence of the teacher and the learner. Strong association of constructivism theory, Gagne's 9 events of learning and formative assessment is essential for making an effective lesson plan and fulfilling learning outcomes (citing Morkie, Dornan, & Eika, 2013). Proper linkage of these theories in a lesson outline provides a plan to the class teacher to conduct academic sessions within the designated class time. A lesson plan should comprise the course name, name of the topic, learning objectives guided by the Bloom's taxonomy, lesson steps such as icebreaking or introducing session, recalling previous lesson, lesson development (explanation, demonstration, practice, guidance and feedback), and ending session (wrap up, assessment and next step of lesson). (Md. Hafiz Iqbal, 2021)

Teacher knowledge is crucial in the effective integration of HOTS. The findings of this study accentuated the imperative need for comprehensive and continuous professional development programs geared towards enriching teacher knowledge and fostering adept integration of HOTS. These initiatives should explicitly offer practical demonstrations, exemplars of best practices, and strategies for successful integration, thus enabling teachers to acquire precise and comprehensive knowledge. Furthermore, these programs should be designed to identify and address any prevalent misconceptions that teachers may hold regarding the implementation of HOTS. (Shah et al, 2024)

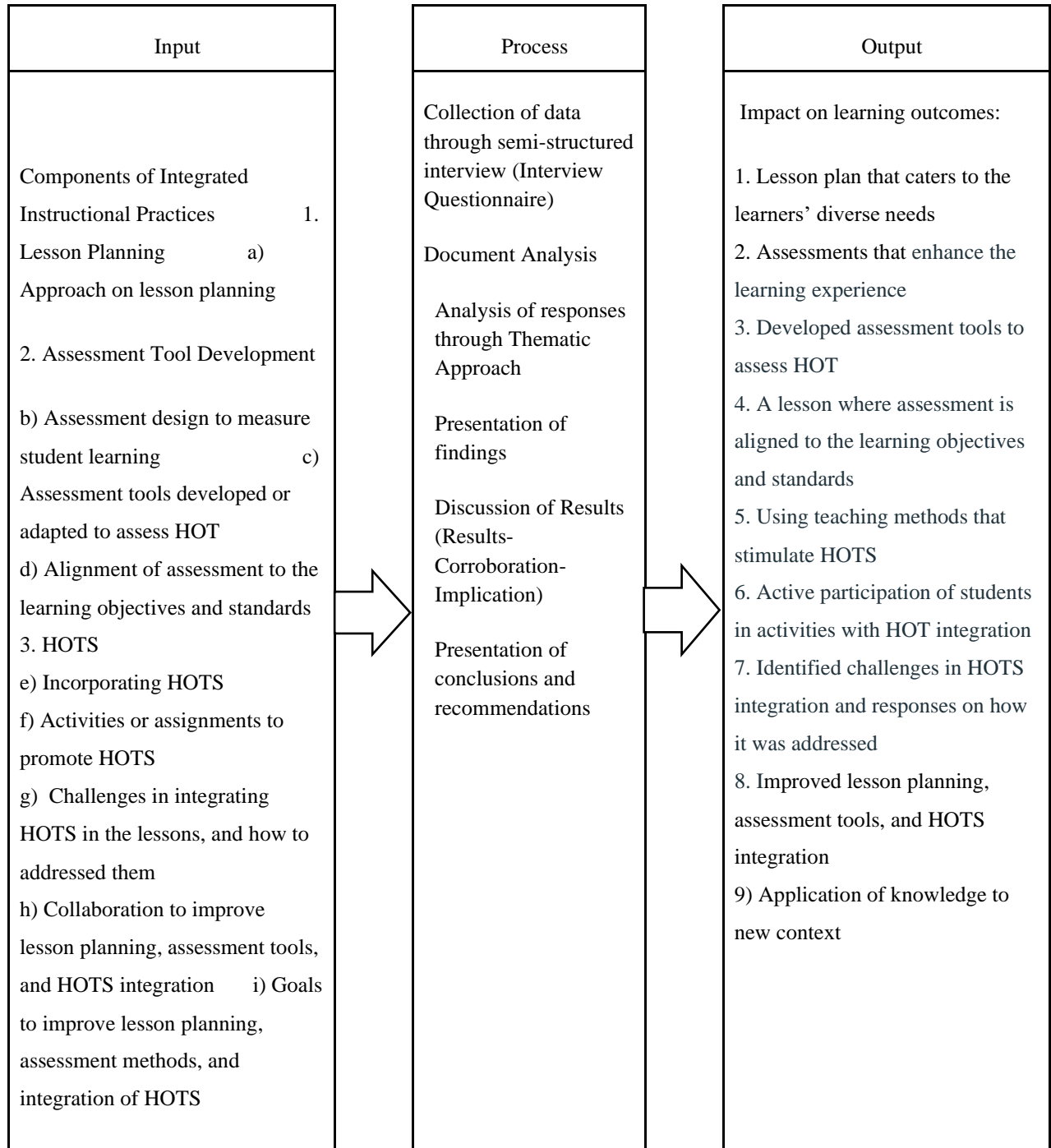


Figure 1. Conceptual Framework

IV. SIGNIFICANCE OF THE STUDY

This research addressed a critical need in education by exploring innovative approaches to fostering higher-order thinking skills among students. By examining the impact of integrated lesson planning, assessment tools development, and HOTS integration, the study

contributed to the ongoing efforts to enhance teaching and learning practices in schools.

The significance of the study lies in its potential to improve educational practices and student achievement. By examining the relationship between detailed lesson planning, the creation of effective

assessment tools, and the integration of higher-order thinking skills, the study provided valuable insights into how teachers can better facilitate learning.

Effective lesson planning ensures that educational objectives are clearly defined and that instructional strategies are aligned with these goals. The development of robust assessment tools allows educators to accurately measure student understanding and progress. Integrating higher-order thinking skills into the curriculum fosters critical thinking, problem-solving, and creativity, which are essential for students to succeed in an increasingly complex world.

Ultimately, this study could lead to the identification of best practices that enhance teaching effectiveness, promote student engagement, and lead to improved academic performance. The findings could inform teacher training programs, curriculum design, and educational policies, making a significant contribution to the field of education.

#### V. OBJECTIVES OF THE STUDY

1. To explore teachers' approach to lesson planning to ensure it meets the learning needs of all students.
2. To examine how teachers design assessments to measure student learning in their lessons.
3. To describe assessment tools or methods developed or adapted by teachers to assess higher-order thinking skills (HOTS) among their students.
4. To examine how teachers ensure that their assessments are aligned with the learning objectives and standards.
5. To investigate how teachers incorporate higher-order thinking skills, such as critical thinking, problem-solving, and creativity in teaching.
6. To provide examples of activities or assignments that teachers are giving to promote HOTS development among their students.
7. To identify challenges encountered by teachers in integrating HOTS in their lessons, and how they addressed them.
8. To explore how teachers collaborate with their colleagues to improve lesson planning, assessment tools, and HOTS integration.
9. To determine the future goals of teachers for further improving their lesson planning, assessment

methods, and integration of higher-order thinking skills.

#### VI. RESEARCH DESIGN

This study employed a qualitative design to investigate and analyze teachers' experiences and practices related to integrated instructional strategies, focusing on lesson planning, assessment tools development, and the integration of higher-order thinking skills (HOTS) in their teaching.

#### VII. POPULATION OF THE STUDY

The participants of this study were 17 teachers from the selected educational institution(s). It utilized purposive sampling to ensure representation from different grade levels, subject areas, and levels of experience.

#### VIII. DATA GATHERING TOOLS

a. Semi-Structured Interviews: Individual semi-structured interviews were conducted to participating teachers to explore their experiences and practices on lesson planning, assessment tools and HOTS integration. Interview questions focused on topics such as approach to lesson planning to ensure it meets the learning needs of all students, how teachers design assessments to measure student learning in their lessons, how to describe assessment tools or methods developed or adapted by teachers to assess higher-order thinking skills (HOTS) among their students, how teachers ensure that their assessments are aligned with the learning objectives and standards, how teachers incorporate higher-order thinking skills, such as critical thinking, problem-solving, and creativity in teaching, what are the examples of activities or assignments that teachers are giving to promote HOTS development among their students, what are the challenges encountered by teachers in integrating HOTS in their lessons, and how they addressed them, how teachers collaborate with their colleagues to improve lesson planning, assessment tools, and HOTS integration, and what are the future goals of teachers for further improving their lesson planning, assessment methods, and integration of higher-order thinking skills.

b. Document Analysis: Relevant documents, such as lesson plans, curriculum materials, assessment tools, and integration of higher-order thinking skills were analyzed to gain insight into teachers' implementation of integrated instructional strategies and alignment with learning objectives and standards.

## IX. DATA GATHERING PROCEDURES

Before gathering data, a letter of request to conduct the study was given to the school head of participating schools. The data gathered was in the form of an interview questionnaire. In gathering responses, the respondents chose to write down their answers in the interview questionnaire. The questionnaires were distributed and retrieved through face-to-face mode.

## X. DATA ANALYSIS

The study utilized thematic analysis. Data from interviews and document analysis were analyzed thematically to identify patterns, themes, and categories related to teachers' experiences with lesson planning, assessment tools and HOTS integration to enhance learning outcomes. Themes were developed iteratively, allowing for in-depth exploration of key issues and insights.

## XI. Ethical Considerations

The ethical considerations of this research included a letter to the school head to conduct research, a letter of permission to use the secondary data needed from the principal's office. A letter to gather information from the respondents was also made. The responses of the respondents were treated with confidentiality. If the research is published, the names of respondents will not be reflected. Furthermore, the researchers ensured that participants' details are kept anonymous and private throughout the study. Also, participants were not forced to participate in this study and the right to withdraw were considered. The researchers also ensured that this study did not hinder their daily lives. All data gathered were treated judiciously.

## XII. RESULTS AND DISCUSSIONS

The primary purpose of this study is to analyze the integration of lesson planning, assessment tools

development, and higher order thinking skills in teaching to enhance learning outcomes. These aims will be discussed concerning nine questions of the study.

### *Lesson Planning*

*1. Approach on lesson planning to ensure that it meets the learning needs of all students.*

Effective lesson planning can contribute to the teacher's own success and well-being. Teachers teach because they want to support students, and effective lesson planning can contribute to job satisfaction when a lesson is successful, or a student does well on an assessment. The following are respondents' approaches in lesson planning to ensure it meets the learning needs of all students.

- (a) Alignment of all lesson plan parts must be specific, measurable, achievable, realistic, and time-bound.
- (b) Set learning objectives that are based on the essential learning competencies, differentiate instruction, incorporate activities that target the needs of the learners, use formative assessments, reflect and adapt to the context of learners.
- (c) Craft a lesson plan that caters to the learners' diverse needs and learning styles by providing a variety of teaching strategies and assessment tools.

Delving into the meaning of lesson planning, Philips (2023) in an article entitled "Creating Effective Lesson Plans: A Guide for Teachers" discussed that "lesson plans serve as a compass that guides teachers in delivering organized and meaningful instruction. They ensure that essential skills, learning objectives, and curriculum components are covered. Moreover, well-structured lesson plans make it seamless for relief teachers to take over the classroom if needed, maintaining instructional continuity." This suggests that teachers' approach in lesson planning should be geared towards the attainment of learning objectives and ensure to meet the learning needs of all the students.

### *Assessment Tools Development*

*2. Assessment design to measure student learning in the lesson.*

Designing assessment tools is necessary in facilitating improved decision-making, and enhancing learning and development among learners. Also, it helps teachers tailor their teaching strategies to meet the

diverse needs of students, thus enhancing the learning experience.

The following themes were summarized from the answers of the respondents on the question of how teachers design assessments to measure student learning in their lessons.

- (a) Align assignments, quizzes, and tests from the lesson and must be achievable. Assessment must also be based on the table of specifications.
- (b) When designing assessments to measure student learning in a lesson, it is important to align the assessment with the learning objectives and ensure that they provide a comprehensive view of student understanding. Start by clearly defining the learning objectives of the lesson, select appropriate assessment methods, include formative and summative assessment, establish clear and specific criteria for evaluating student performance, and develop rubrics to assess student performance consistently and objectively. Diversifying assessment tools also helps to measure student learning.

In the results, teachers focused mostly on testing students' learning outcomes. This contrasts with the study of (Brown, 2022) stating that instead of testing, teachers interacted with students on the fly, in the moment of the classroom through questions and feedback that aimed to help students move towards the intended learning outcomes established at the beginning of lessons or courses. Thus, assessment for learning has become a child-friendly approach (citing Stobart, 2006) to involving learners in their learning and developing rich meaningful outcomes without the onerous pressure of testing. It implies that teachers should also design an assessment that measures the diverse learning of students and not only test what students have learned from the lesson.

### *3. Description of assessment tools developed or adapted by teachers to assess higher-order thinking skills among students.*

The common theme that develops from the description of assessment tools developed or adapted by teachers to assess higher-order thinking skills among students is; peer assessment which provides a structured learning process for learners to critique and provide feedback to each other on their work; performance

task that require students to demonstrate their understanding through practical application; simulation, role plays, creative projects that showcase higher-order thinking; accomplishing the force field analysis where they have to identify and defend the driving force and restraining force of a certain community project; and encouraging students to give their reflections or insights after every lesson.

According to (Hill, 2013), assessment is essential to any learning process, as it helps identify if the learner is on the path to mastery and what areas need more attention and development. However, current output-based assessment approaches are not suitable for assessing HOTS (Fullan & Langworthy, 2013), as they focus on the result (output or outcome) of the learning process. Such focus can be effective for specific and straightforward tasks, but for the assessment of HOTS, observing the learning process itself is required for deeper insight into learners' abilities. This proposes that teachers must consider the kind of assessment before developing a tool to assess higher-order thinking skills among students.

### *4. Alignment of assessment to the learning objectives and standards*

Ensuring alignment between assessments, learning objectives, and standards requires careful planning and ongoing reflection. The following are the common themes to ensure that the assessment is aligned with the learning objectives and standards;

- review the objectives and standards
- make sure that the questions or tasks in the assessment directly address the specific skills and knowledge
- use assessment rubrics or criteria to guide assessment design
- good scores of students in an assessment given
- develop assessments that directly align with the learning objectives, make sure to incorporate a variety of assessments
- choosing an assessment tool that would assess learners' ability aligned to the learning competencies.

The results are supported by the statement of (Cui & Lei, 2015) that “the alignment of teaching objectives with classroom assessments helps reveal important



aspects of a student's learning process, understand students' learning, and promote the achievement of teaching objectives. This suggests that assessments should reveal how well students have learned what we want them to learn while instruction ensures that they learn it. For this to occur, assessments, learning objectives, and learning standards need to be closely aligned so that they reinforce one another.

#### *Higher-order Thinking Skills*

##### *5. Incorporating higher-order thinking skills, such as critical thinking, problem-solving, and creativity in teaching*

In teaching higher-order thinking skills, teachers give students the ability to solve problems, develop creative solutions, make smart choices, and evaluate the validity of information. The following are the responses on how teachers incorporate higher-order thinking skills, such as critical thinking, problem-solving, and creativity in teaching;

- Teach students to infer, analyze situations critically, interview, and encourage them to ask questions
- Ask questions like “How to solve a problem” and WHY questions to check the reasoning ability
- finding practical applications of concepts and skills
- Ask questions on how students apply what they have learned from the lesson to real-life situations and ask them to explain how the lesson affects their daily lives.
- Students are encouraged to explain how they arrived at their answers, especially problem-solving

The study of (Loyens, et al 2023) Situating Higher-Order, Critical, and Critical-Analytic Thinking in Problem- and Project-Based Learning Environments: A Systematic Review, states that “framed in more traditional terms, HOT corresponds with Bloom’s taxonomy, with remembering or recalling facts reflecting lower-order cognitive thinking and comprehending, applying, analyzing, synthesizing, and evaluating as higher-order thinking, referring to more intellectual abilities and skills (citing Lombardi, 2022). This study supports the results on how teachers incorporate higher-order thinking skills, such as critical thinking, problem-solving, and creativity in teaching. Thus, this study suggests that teachers

should incorporate HOT in their teaching to make informed decisions and create new products and processes. It also helps students think critically, something that’s very important in this age of constant information overload.

##### *6. Examples of activities or assignments to promote HOTS development among learners*

The common theme that emerges from the examples is the various activities and assignments that teachers use to promote higher-order thinking Skills (HOTS) among their students. These activities include brainstorming, exploiting pictures, creating new endings for a story, debates, and projects. These activities are designed to engage students in critical thinking, problem-solving, and creativity, which are essential for developing HOTS. The findings corroborate the importance of incorporating HOTS in lesson planning and activities to improve student learning outcomes. The implications suggest that teachers should intentionally include HOTS in their lesson objectives and design tasks and activities that engage students in these higher-order thinking skills.

##### *7. Challenges encountered by teachers in integrating HOTS in their lessons, and how they addressed them*

The respondents encountered several challenges in integrating Higher Order Thinking Skills (HOTS) into their lessons, including: inattentiveness and difficulty understanding, time constraints, poor student cooperation, book dependency, limited resources and materials, student resistance, difficulty in answering HOTS questions, difficulty in integrating HOTS into lesson plans, hesitant to answer orally, poor comprehension skills of students, copying from others, and leaving out the essay part.

To address the challenges encountered, the respondents considered the following: simplifying the questions, citing situations, seeking help from instructional leaders and colleagues, observing Master Teachers in their lessons to learn how they integrate HOTS during lessons execution, integrate frequently HOTS in making assessments, giving rewards, strategic pairing or grouping and constant encouragement.

The study by Ansori et al. (2022) provides insights into the challenges teachers face in integrating Higher Order Thinking Skills (HOTS) into their lessons and the strategies they employ to address these challenges. This study explores the voices of teachers regarding the integration of Higher Order Thinking Skills (HOTS) in teaching reading. These findings show the importance of addressing the practical challenges that teachers face to successfully integrate HOTS into their lessons. The implications suggest that ongoing professional development, collaborative learning, and a growth mindset are crucial for teachers to develop the necessary skills and strategies to foster higher-order thinking among their students.

#### 8. Collaborating with colleagues to improve lesson planning, assessment tools, and HOTS integration

The responses provided highlight the importance of collaboration among colleagues in improving lesson planning, assessment tools, and integration of higher-order thinking Skills (HOTS). Teachers engage in various activities such as sharing best practices, peer review of lesson plans, and collaborative assessment designs to enhance their teaching strategies. This collaboration enhances the quality of lesson planning, assessment tools, and HOTS integration, leading to improved student outcomes.

#### 9. Teachers' future goals for further improving their lesson planning, assessment methods, and integration of higher-order thinking skills.

Advancing lesson planning, assessment methods, and the integration of higher-order thinking skills is significant for designing an effective and engaging learning environment that enhances learning outcomes.

The following are the responses of teachers on their future goals for further improving lesson planning, assessment methods, and integration of higher-order thinking skills;

- Seek help from a knowledgeable person in lesson planning, assessment methods, and integration of higher-order thinking skills
- Attend training that is aligned with lesson planning, assessment methods, and integration of higher-order thinking skills.

- Always prepare a well-planned lesson, assessment tool, and HOTS questions
- Attend conferences on lesson planning, research different assessment methods catering to different levels of learners, assessing the learners using formative assessment
- Align lesson planning with what is required by the Department of Education. In assessing student's learning outcomes, use assessment tools that cater to the diverse learning styles of students and see to it that HOTS is always integrated into the lesson and in the assessment of learning outcomes.

The findings are supported by the study of (Haryati et al, 2021) which states that “the initial stage of developing pedagogical competence is indicated by the lesson plans designed by the teacher. The lesson plan is one of the key learning factors in improving the learning process (citing Jamali Nasari & Heidari, 2014). Lesson plans can be quite effective for students in obtaining learning outcomes (citing Ceylan & Ozdilek, 2015). Therefore, the process of learning higher-order thinking skills must be reflected in the lesson plan. This suggests that teachers should continuously refine their lesson planning, assessment methods, and integration of higher-order thinking skills so that they can create a dynamic and effective learning environment that fosters student growth and achievement.

#### 10. Document Analysis

Based on the documents submitted by the respondents, the following are the notable observations:

In higher-order thinking skills integration, the objectives/ competencies target HOTS, however, the questions within the lessons are mostly LOTS (the ratio of 8 LOTS and 2 HOTS questions). Also, the lessons offer exploratory activities where the students are taught the theories, and they are given situations and activities to apply the learned theories like situational analysis and computations based on the given situation, or by making their own graphical illustrations based on the given data. The arrangement of LOTS and HOTS integration in the lesson is mixed.

In lesson planning, the template prescribed by DepEd was strictly followed. It was observed that broad or compound learning competencies are unpacked and

sub-learning competencies are identified and are aligned with or are targeting the main learning competency. Also, the objectives are specific, measurable, attainable, realistic, time-bound (SMART) and learner-centered

In assessment tool, the activities are clearly stated and aligned with the specific objectives and the strategies and methods used to assess learning are varied. Furthermore, the instructional materials/learning resources are listed, varied, and aligned with the activities. The copy also of the rubric/questionnaire is attached/included in the Daily Lesson Plan.

The results of document analysis are supported by (deped-order-no-42-s-2016) which emphasizes the importance of lesson planning as a reflective practice. It encourages teachers to think critically about learning objectives, student needs, and effective teaching strategies. The policy outlines the structure of a Daily Lesson Log (DLL), a tool that guides lesson development and ensures alignment with the K-12 curriculum. It also discussed the key Components of DO 42, 2016;

Focus on learning competencies: The DLL ensures each lesson targets specific learning outcomes aligned with the K-12 curriculum.

Integration of diverse strategies: DO 42 encourages teachers to use a variety of instructional methods, catering to different learning styles and promoting active participation.

Assessment for learning: The policy highlights the importance of formative assessment, allowing teachers to gauge student understanding and adjust instruction accordingly.

Flexibility and adaptation: DO 42 acknowledges the dynamic nature of classrooms and empowers teachers to adapt lesson plans based on student needs and unforeseen circumstances. This study suggests that teachers must abide with the provisions of DO 42, 2016 on lesson planning to enhance learning outcomes.

## CONCLUSION

This study investigated the integration of lesson planning, assessment tools development, and higher-order thinking skills (HOTS) in teaching to enhance learning outcomes. The findings reveal that teachers employ various strategies to achieve this integration.

In lesson planning, teachers should prioritize through differentiated instructions and a variety of teaching strategies. This strongly suggests that teachers' approach in lesson planning should be geared towards the attainment of learning objectives and ensure to meet the learning needs of all the students.

In assessment tools development, teachers design assessments aligned with learning objectives and utilize formative and summative assessments. However, incorporating more assessment for learning approaches, focusing on the learning process itself, is recommended. Furthermore, teachers utilize various activities like brainstorming, debates, and projects to promote critical thinking, problem-solving, and creativity. This suggests that assessments should reveal how well students have learned what we want them to learn while instruction ensures that they learn it. For this to occur, assessments, learning objectives, and learning standards need to be closely aligned so that they reinforce one another.

On higher-order thinking skills, the importance of intentionally including HOTS in lesson objectives and designing tasks that encourage these skills is also highlighted. The researchers suggest that teachers should incorporate HOTS in their teaching to make informed decisions and create new products and processes. It also helps students think critically, something that's very important in this age of constant information overload.

Teachers face challenges like student resistance, limited time, and difficulty formulating HOTS questions. To address these challenges, ongoing professional development, collaboration among colleagues, and a growth mindset are crucial. Additionally, providing scaffolding and support for students, prioritizing the most relevant HOTS activities, and varying activities to cater to diverse needs are suggested.

## RECOMMENDATIONS

The researchers would like to recommend the following:

1. To educators, strengthen professional development opportunities in incorporating commendable approach in lesson planning, development of assessments to ensure meaningful learning of students, and integration of higher-order thinking skill in activities, assignments and other outputs.
2. To school leaders and mentors, create Professional Learning Communities (PLCs) where teachers can share best practices and resources related to lesson planning, HOTS integration, and assessment tool development. Being the instructional leader, school head should help and support teachers to enhance lesson planning, assessment tool development and integration of HOTS in their teaching.
3. To curriculum developers, create question banks or templates for HOTS questions categorized by learning objectives, or time management techniques specifically for lesson planning that integrates HOTS activities.
4. To teachers, align learning objectives and standard in lesson planning, develop assessment tool that would meaningfully evaluate the learning of students and integrate higher-order thinking questions, assessments and activities in the development of lesson to ensure the honing of students' reasoning capability and deeper analysis of situation that would help them cope with life's challenges.
5. To future researchers, build on the findings for further investigation or it could be further research on the long-term impact of integrating HOTS on student learning outcomes, or the effectiveness of specific strategies for promoting HOTS development.
6. To the researchers, incorporate the best practices on lesson planning, assessment tool development, and higher-order thinking integration in teaching to ensure excellent learning outcomes.

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