

Increasing Foreign Language Proficiency and Critical Thinking: Based on Bloom's Taxonomy

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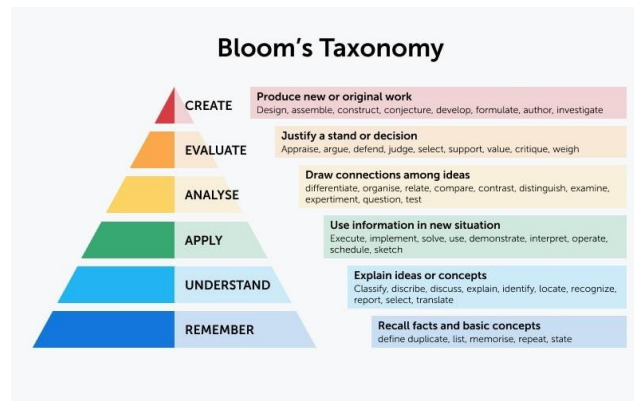
Abstract: This article examines the integration of task-based activities with Bloom's Taxonomy of Educational Objectives (Bloom's Taxonomy) in the context of English as a Foreign Language (EFL). Task-based learning is recognized for its ability to increase student motivation, stimulate critical thinking, and promote learning. By incorporating structure and tangible learning outcomes, even simple tasks can be elevated to create greater academic rigor for students. Educational taxonomies such as Bloom's taxonomy play a critical role in defining and differentiating the cognitive skills required to perform learning activities based on their complexity. Applying the taxonomy to tasks and curriculum provides a framework and establishes clear learning objectives. The purpose of the article is to demonstrate the use of Bloom's Taxonomy to provide structure and pedagogical skills to an English language task.

Keywords: Task-Based Learning, Bloom's Taxonomy, Language Education, Cognitive Skills, Critical Thinking.

Introduction

In the realm of language education, educators and stakeholders bear an escalating responsibility to deliver meticulously targeted curricular instruction that empowers students to apply their target language for real-life tasks or gain a deeper understanding of the world. Within the language classroom, breaking down complex tasks into activities characterized by incrementally heightened cognitive demand and learner autonomy proves instrumental in achieving these objectives. Educational taxonomies provide a platform through which the design of intricate tasks and their associated activities can challenge learners cognitively, fostering language skill acquisition and enhanced cognitive abilities. Bloom's Taxonomy has become highly popular in the field of English as a Foreign Language (EFL) due to its potential to improve language learning outcomes. It provides a framework for stimulating learners' cognitive skills and creating specific learning objectives. The taxonomy concentrates on individuals' intellectual abilities and classifies the learning process into six distinct cognitive processes (Radha et al., 2021). This review article examines existing literature on the advantages, difficulties, and constraints of incorporating the framework for novice EFL teachers.

The structure of Bloom's Taxonomy proposes a step-by-step learning process where foundational theoretical knowledge progresses to more intricate forms of practical learning, including analysis, synthesis, and evaluation (Nentl & Zietlow, 2008). It can aid both inexperienced and experienced teachers in fostering critical reflection on instructional methods and evaluating essential thinking skills. According to Adams (2015), Bloom's taxonomy is a system comprising six categories of cognitive skills that span a spectrum of abilities. "These categories begin with basic skills requiring minimal cognitive effort and advance to more complex skills involving deeper learning and increased cognitive engagement" (p. 152).



Adapted from, Patricia Armstrong at Vanderbilt University Center for Teaching.: <https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/>

Bloom's Taxonomy is organized into a logically structured six-level framework that encompasses various cognitive processes, ranging from critical thinking to concept development. According to Krathwohl (2002), even educators with limited experience can utilize this framework to formulate instructional objectives suitable for their students' developmental stages. Additionally, they can adapt their teaching methods to address the diverse learning needs of students by applying Bloom's taxonomy.

In this context, Marzano (2001) proposes that Bloom's Taxonomy acts as a guide for novice educators to design learning experiences that foster the creation of higher-order questions and tasks. It facilitates a deeper understanding of concepts and provides opportunities for student-led interactions and functions. Similarly, McTighe and Wiggins (2005) emphasize the importance of ensuring that learning objectives align appropriately with the required level of thinking skills.

Riazi et al. (2010) have put forward instructional techniques to promote the implementation of Bloom's Taxonomy in teaching textbook content. This involves creating a comprehensive plan for textbooks with fewer deficiencies that outlines learning and teaching stages. The authors argue that educators in high schools often focus on developing lower-order thinking skills (LOTS) in students, preventing them from examining, evaluating, or applying higher-order cognitive skills (HOTS) when they reach the university level. If proper instructional strategies are applied at each level of the taxonomy, learners have the opportunity to cultivate higher-order thinking abilities (Fadel & Trilling, 2009).

Newly employed teachers often struggle with assessing their students. Bloom's taxonomy can be a valuable tool for novice educators to enhance the authenticity of their assessments by aligning them easily with the students' learning objectives. Integrating Bloom's Taxonomy also assists new educators in gauging the extent to which learners have achieved educational goals based on their cognitive processes.

Materials and methods:

The primary objectives of the study were twofold: firstly, to motivate students to apply language skills acquired in class to real-life tasks, and secondly, to integrate the four key language skills (speaking, listening, reading, and writing) within a structured task. Teacher Observation: The researcher actively observed and documented student engagement, participation, and collaboration during the various stages of the task-based learning activities. Teacher observations provided qualitative insights into the effectiveness of the instructional approach. Unstructured Feedback Session: Following the completion of the project, an unstructured feedback session was conducted in the classroom. Students were encouraged to express their thoughts, opinions, and reflections on the task-based activities, allowing for qualitative feedback. The task development process followed the stages outlined in Bloom's Taxonomy, guiding students through increasingly challenging activities. Activities were designed to equip students with language skills and content knowledge necessary for the creation and presentation of a poster.

Lesson Structure:

1. Remember and Understand: Focus on input, memorization, and comprehension through exercises from the textbook.
2. Apply and Analyze: Students conducted interviews, applying language skills to rank destinations and offer recommendations.
3. Evaluate and Create: Group activities involved reading articles, summarizing, and comparing destinations, leading to the planning and creation of an original poster.
4. Perform: The final task involved presenting posters, engaging in peer interaction, and assessing both individual and group performance.

Integration of Bloom's Taxonomy. Activities were strategically aligned with Bloom's Taxonomy cognitive levels, ensuring a progressive development of cognitive skills throughout the task. The taxonomy served as a framework for defining learning objectives, fostering a structured and coherent language learning experience. Data Analysis: Quantitative data from the pre-task questionnaire and post-task assessments were analyzed using descriptive statistics to identify patterns, preferences, and language proficiency levels. Qualitative data from teacher observations and feedback sessions were thematically analyzed to extract meaningful insights into student engagement, challenges faced, and overall perceptions of the task-based approach.

Results:

Language Proficiency and Skill Integration: Quantitative analysis of post-task assessments indicated a notable improvement in language proficiency across the four key language skills. Participants demonstrated enhanced speaking and listening skills through the poster presentation and peer interaction. Additionally, the integrated nature of the task effectively bridged the gap between reading/writing and oral communication classes, aligning with the study's goal of integrating language skills.

Task-Based Learning Outcomes: The task-based learning approach, guided by Bloom's Taxonomy, facilitated a progressive development of cognitive skills among participants. Students successfully navigated through the cognitive levels, showcasing an understanding of knowledge recall, application, analysis, evaluation, and creation. The task's design effectively encouraged participants to go beyond rote memorization, fostering critical thinking and problem-solving skills.

Student Engagement and Collaboration: Teacher observations documented high levels of student engagement and collaboration throughout the task-based activities. The use of participatory structures, including individual, pair work, and group work, created a dynamic learning environment. Students actively contributed to discussions, shared information, and collaborated effectively during the creation and presentation of their posters.

Challenges and Reflections: Qualitative feedback gathered during the unstructured feedback session highlighted some challenges faced by students. These challenges included the need for clearer task instructions at certain stages and the importance of balancing individual and group contributions. However, the majority of students expressed a positive reflection on the task, emphasizing the real-life application of language skills and the integration of diverse language abilities.

Peer Assessment and Individual Reflections: Post-task assessments involved peer evaluation and individual reflections. The assessment criteria included the quality of poster creation, effective presentation skills, and overall contribution to the group task. Peer assessments provided valuable insights into students' perceptions of their peers' performance, contributing to a comprehensive understanding of individual and group achievements.

Overall Impact on Learning Objectives: The study successfully demonstrated the effective integration of task-based learning with Bloom's Taxonomy in a tertiary EFL setting. Students not only achieved the predefined learning objectives but also surpassed expectations in terms of critical thinking, language proficiency, and collaborative skills. The task's structured design, aligned with

Bloom's Taxonomy, significantly contributed to the overall impact on students' language learning experiences.

Discussion:

Curriculums or learning activities crafted in this manner effectively converge language intake and language production, ultimately addressing the frequently posed learner question, 'How can I use what I have learned?' This paper elucidates the incorporation of Bloom's Taxonomy of Educational Objectives (Bloom's Taxonomy) into the formulation of a task-based activity tailored for first-year students at university. The task required students to create a poster depicting a country relatively unfamiliar to them, presenting it to their peers. Utilizing Bloom's Taxonomy as a framework added structural clarity to the overarching task, guiding the definition of learning objectives for a sequence of higher-order thinking activities designed to prepare students for their final task. The report also delves into student outcomes, teacher observations, and provides recommendations for instructors aiming to integrate similar task-based lessons into their curriculum. The primary focal points of this report include:

1. Types of learning activities aligning with the cognitive stages outlined in Bloom's Taxonomy.
2. Incorporating various participatory structures at different stages of the task.
3. Seamless integration of essential language skills (speaking, listening, reading, and writing) into the learning activities.

2. Theoretical Frameworks

This study amalgamates two primary educational approaches: task-based learning and Bloom's Taxonomy. The task-based approach dictates how learners showcase their knowledge (the final product), while Bloom's Taxonomy provides the roadmap of tasks leading students to their ultimate outcome.

2.1 Learning Taxonomies and their Objectives

Learning taxonomies serve as classification systems that delineate and characterize different stages of learner development. Introduced in 1956 by educational psychologist Dr. Benjamin Bloom, educational taxonomies find extensive applications in curriculum design and implementation across various disciplines. They offer support to educators by:

- Serving as frameworks for developing new course materials and assessments or redesigning existing ones.
- Acting as tools to analyze current learning and assessment materials to gauge the cognitive skill levels they demand.
- Functioning as standalone assessment tools when appropriately implemented.

2.2 Bloom's Taxonomy

Benjamin Bloom's theory posits that logical thinking can be categorized into six levels of cognition, forming a hierarchy from simple and abstract to increasingly complex and concrete. The foundational idea is that learners should master lower levels of cognitive ability (knowledge, comprehension, and application) before progressing to higher-order skills such as analysis, synthesis, and evaluation. Each level employs action verbs to describe cognitive tasks learners should perform. These verbs, combined with the knowledge or content areas being studied, formulate learning outcomes suitable for the specified set of skills students need to master.

Bloom envisioned that his taxonomy would enhance teacher efficiency and effectiveness by aiding instructors in:

- Articulating learning objectives across diverse disciplines.
- Identifying areas where the breadth and depth of a curriculum can be expanded for enhanced learning.

- Unveiling the deeper meaning of broader goals embedded in a curriculum.
- Creating consistency among learning activities, goals, and student assessments for a given course or curriculum.

Since its inception, Bloom's Taxonomy has been a cornerstone in education, applied across disciplines such as biology, engineering, and nursing as a framework for defining learning objectives that stimulate progressively higher levels of critical thinking. The success of Bloom's Taxonomy, like any other taxonomy, hinges on its implementation. Effectively, it works best when referenced first to establish learning objectives, which then guide the creation of classroom activities. A critique of Bloom's approach is the repetition of several verbs at multiple levels, blurring the cognitive complexity demarcation at each stage. To address this concern, the original taxonomy was revised by a team of researchers, notably Anderson and Krathwohl (2001).

Bloom's Taxonomy Revised . In the revised taxonomy, the primary objective of categorizing classroom activities and assessment questions according to their levels of cognitive demand, as in the original taxonomy, persists. While the six cognitive levels are retained in the revised version, they are no longer organized as a cumulative hierarchy, and their placement within the taxonomy has shifted. The revised framework introduces two dimensions: the original cognitive processes and new knowledge categories. This alteration allows for both the processes (the verbs) and the knowledge area (the nouns) to more accurately articulate educational objectives and create congruent assessments.

Task-Based Learning (TBL)

TBL enhances learner capabilities by structuring inquiry processes around tasks, where students actively engage with content to produce a tangible outcome autonomously. Tasks in TBL focus on meaning rather than form, as described by proponents like Nunan (1989), Freedman (1996), and Willis (1996). Despite variations in defining tasks, the consensus is that they provide a purpose for using and learning language, emphasizing real-life application. TBL, aligned with constructivism, positions students at the center of classroom activities, fostering hands-on learning and individual perception. Notably, TBL's integration of multiple language skills enhances language competency and diverges from traditional teacher-centered approaches.

Task Development

Following Bloom's Taxonomy stages, the study structured lessons to align with cognitive levels, emphasizing individual, pair, and group work. Activities aimed to equip students with language skills, leading to the creation and presentation of a poster. The integration of listening, reading, writing, and speaking into the task sought to achieve cohesive language learning.

4. Integrating Bloom's Taxonomy into the Task

The study aligned activities with Bloom's Taxonomy cognitive levels, spanning Remember and Understand, Apply and Analyze, Evaluate and Create, and Perform. The task, an extension of the textbook unit, aimed to offer real-life application, incorporating diverse language skills and participatory structures. Assessments included pre-questionnaires, post-task evaluations, teacher observations, and feedback sessions.

Benefits of integrating Bloom's Taxonomy into education include the ability to adjust instructional methods to cater to different learning requirements (Tomlinson, 2014). Learners have various opportunities to demonstrate their learning through appropriate challenges at each stage of the taxonomy. Sousa and Tomlinson (2011) emphasize that educators can design educational opportunities aligned with students' current cognitive capabilities, using feedback and repetitive instruction to facilitate classroom management and the progression of the learning process.

Another advantage for novice teachers using Bloom's Taxonomy is its promotion of students' critical thinking abilities. Athanasiou et al. (2003) suggest that employing the taxonomy as a teaching method, particularly in creating assessments that analyze, synthesize, and encourage

logical reasoning, enhances student engagement and critical thinking abilities. Bloom's Taxonomy has the potential to aid in the development of learning objectives and assessments that foster critical thinking, better preparing students academically and professionally.

When integrated into classroom instruction, Bloom's Taxonomy can be applied in various approaches, such as inquiry-based learning, project-based learning, or problem-based learning. Inquiry-based learning focuses on engaging learners by fostering curiosity and critical thinking through rapid question-answer and exploration processes (Krathwohl, 2002). Bloom's Taxonomy helps generate educational objectives and suitable assessments that advance students' cognitive skills in these methodologies.

In project-based learning, Sasson et al. (2018) found that employing Bloom's Taxonomy contributes to the development of critical thinking and higher-order thinking skills among students in different educational contexts. Similarly, Wang's study (2022) using Bloom's Taxonomy in Project-Based Learning revealed that learners enhanced analytical skills by comprehending and analyzing real-world reading texts. Integration of Bloom's Taxonomy in project-based teaching requires students to assess the relevance of various credible sources, collaborate with peers, and evaluate the collected sources.

According to Athanasiou et al. (2003), novice teachers can employ Bloom's Taxonomy to effectively guide classroom instruction through methods such as inquiry-based, project-based, or problem-based learning. Educators can boost their students' preparedness for academic and vocational success by creating learning objectives and assessments that encourage students to engage with course material at different cognitive levels.

Bloom's Taxonomy serves as a valuable guide for creating instructional objectives and assessments appropriate for different levels of learners. In the field of English as a Foreign Language (EFL), the taxonomy assists teachers in aligning students' learning outcomes with its hierarchical stages, allowing them to tailor lesson designs accordingly.

According to Gokhale (1995), research indicates that the application of Bloom's Taxonomy in a multi-level classroom setting has a positive impact on students' cognitive skills, fostering language proficiency and creativity.

Novice teachers may encounter challenges in implementing Bloom's Taxonomy without proper training and support, as highlighted by Bloom et al. (1956). Smith and Altieri (2019) recommend that new educators benefit significantly from professional development training to effectively incorporate Bloom's Taxonomy into their lesson planning and assessment, aligning them with the appropriate hierarchical stage.

Mullen (2017) advocates for continuous support and constructive feedback from experienced teachers during the internship years, believing it contributes to the successful integration of Bloom's Taxonomy into the teaching practices of novice teachers. Research by Kencana et al. (2022) emphasizes that aligning activities and tasks with students' learning objectives significantly enhances the learning process, benefiting both student understanding and the professional growth of teachers.

To aid novice teachers in grasping the cognitive skills required for each level of the taxonomy, Bloom (1956) recommends using real-life examples. Seeking guidance from experienced professionals in the teaching field, as suggested by Smith & Altieri (2019), can further help novice teachers develop expertise in understanding the cognitive skills associated with each hierarchical stage of Bloom's Taxonomy. Additionally, creating a collaborative learning environment where teachers exchange feedback can offer valuable insights into various teaching strategies and approaches, according to Onafowora (2005).

Conclusion

In conclusion, this research successfully implemented a task-based learning approach guided by Bloom's Taxonomy in tertiary EFL setting. The integration of these educational methodologies

aimed at enhancing language proficiency, critical thinking, and collaborative skills among first-year students. The study demonstrated notable improvements in language skills, with participants actively engaging in the creation and presentation of posters, aligning with the cognitive levels outlined in Bloom's Taxonomy. The structured design of the task, encompassing Remember and Understand, Apply and Analyze, Evaluate and Create, and Perform stages, facilitated a progressive development of cognitive skills. Students not only met predefined learning objectives but also showcased a deeper understanding of diverse cultures, critical thinking abilities, and effective communication skills. The positive outcomes were further underscored by the seamless integration of language skills (speaking, listening, reading, and writing) and the incorporation of participatory structures, including individual, pair work, and group work. The study's design successfully bridged the gap between oral communication and reading/writing classes, providing a holistic language learning experience. The success of this research contributes to the ongoing discourse on effective language teaching methodologies, emphasizing the importance of task-based learning and the strategic application of educational taxonomies. The positive feedback from students, coupled with improvements in language proficiency and critical thinking skills, provides a foundation for future research and pedagogical enhancements.

In light of the study's outcomes, educators are encouraged to consider the benefits of integrating task-based learning with educational taxonomies, tailoring their approaches to specific cultural and linguistic contexts. This research opens avenues for further exploration, encouraging a continuous evolution of language teaching practices that align with the dynamic needs of diverse learner populations.

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