Questions Analysis of the General English language Exam for the Sixth Vocational Grade in Light of Bloom’s Taxonomy

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Abstract

The present study aims at identify the dominant cognitive six levels emphasized in the general English language exams for sixth vocational grade students. It also explores the potential implications of the exam question types for effective teaching practices in the sixth vocational grade English language context. To achieve the purpose of the study adopted a qualitative approach, utilizing document analysis (exam questions). Tools of the study includes a content analysis form designed in the light of six levels of Bloom taxonomies (remembering-understanding-applying-analysis-evaluating-creating). The study is limited on the exam of general English in 5 vocational departments in three academic years (2020-2021, 2021-2022, 2022-2023). Results revealed the increase of questions that assess lower cognitive levels of Bloom's taxonomies in all the academic years of all branches and the scarcity of the questions that assess high cognitive levels; one or two at most in each year. More questions needed for each branch to assess analyzing, critical and interpretive levels of comprehension. Creativity and more writing tasks needed based on the curriculum objectives in each branch.

Keywords: Questions Analysis, General English Language Exam, Sixth Vocational Grade, Bloom’s Taxonomy

INTRODUCTION

In today's globalized world, vocational and technical training has become increasingly vital for equipping individuals with the necessary skills to enter and thrive in the workforce. Within this context, proficiency in English language has emerged as a crucial asset, enabling effective communication, collaboration, and access to information across diverse fields. Sixth vocational grade marks a critical juncture in students' development, where foundational English language skills are solidified and applied to specific vocational contexts.

Testing is a crucial component of the process of instruction and learning. De Dan Douglas (2004) defines a test as a tool for measurement and states that a linguistic test specifically is an instrument used to measure language skills. Language proficiency can be assessed by several sorts of tests, chosen based on the specific purpose or measurement desired. Effective design plays a crucial function in classrooms, as it has a significant impact on its influence. Purpura (2004) suggests that language examiners can use empirical evidence to create exams that take into consideration the natural variation in a learner's interlanguage communication. Teachers employ examinations to assess the degree to which pupils accurately apply the principles of a particular language, employing various question formats to evaluate different abilities.

English is a compulsory subject in all fields of study due to its status as the predominant tongue and its necessity as a global medium for interpersonal interaction, science, technology, enterprise, and culture. Teachers utilize achievement tests to assess students' acquisition of knowledge and experiences, hence enhancing the learning process (Abu Hwaij& et.al, 2002). Therefore, it is important to meticulously plan and construct the examinations in order to assist both the educators and the students. However, the majority of designers lack proper training, resulting in incomplete examinations that fail to achieve the desired objectives (Adas, 1999).

In order to enhance students' critical thinking and decision-making skills, it is advisable to incorporate a variety of questions sourced from the textbook. One method of enhancing performance is by utilizing the examination questions as a means of improvement (Franklin, 1982). Nevertheless, there exist other categorizations within the domain of assessing and scrutinizing exam questions. One often used classification of cognitive capabilities is Bloom's Taxonomy, developed by Benjamin Bloom. The Bloom's Taxonomy of the cognitive domain is a...

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useful tool for arranging exam questions. Marzano & Kindall (2007, p.02) assert that Bloom's Taxonomy has had a substantial impact on educational theory and practice. Furthermore, it has been demonstrated to be a useful instrument for those who adhere to the assessment paradigm. Utilizing the Bloom's Taxonomy of cognitive abilities can assist educators in categorizing the skills of learners and taking them into account while creating examination inquiries.

Considering the significance of assessments in general, and the significance of examinations and manual questions as assessment tools, it is rationally crucial to anticipate the impact they have on enhancing pupil performance and cultivating a positive mentality. Therefore, it is imperative to verify that learners are assessed across different categories of acquiring knowledge, while keeping in consideration that instructional and educational goals are primarily aligned with Bloom's taxonomy. The purpose of the Bloom taxonomy is to assess the compatibility between the objectives of exam questions and the topics given in the textbook, as utilized in curriculum development.

Nevertheless, researchers have observed a significant deficiency in the development of final exam questions based on their practical experience. This observation is further supported by similar observations made by specialized instructive administrators. The findings highlighted the insufficiency of the tests in accurately reflecting the intended goals for learning. Simultaneously, it is worthwhile to analyses the pertinence and sufficiency of revision inquiries. This assertion might be substantiated by multiple investigations. Geoffrey et al. (2003) identified incorrect examination as a significant factor contributing to low level of English proficiency. Therefore, it is the responsibility for scholars to demonstrate through the examination of school assessments the degree to which the questions in final examinations and revision resources are accurately aligned with Bloom's taxonomy.

Questions of the Study

This study aims to answer the following question:

"To what extent do the general English language exams for sixth vocational grade students focus on the different cognitive levels of Bloom's Revised Taxonomy (Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating)?

Objectives of the Study

The Present Study Aimed to

identify the dominant cognitive six levels emphasized in the general English language exams for sixth vocational grade students.

assess the alignment between the skills assessed in the exams and the learning objectives of the sixth vocational grade English language curriculum.

explore the potential implications of the exam question types for effective teaching practices in the sixth vocational grade English language context.

Significance of the Study

This study can contribute to a deeper understanding of the strengths and weaknesses of the current assessment practices in sixth vocational grade English language education.

By identifying the dominant cognitive levels and question types, the study can guide teachers and curriculum developers to design more effective assessment tools and learning activities.

The analysis of alignment with curriculum objectives can ensure that assessments accurately measure the intended learning outcomes.
METHODOLOGY OF THE STUDY

Study Design

This study adopted a qualitative approach, utilizing document analysis, and observation (Yıldırım & Şimşek, 2011). Document analysis, a well-established qualitative technique, was chosen specifically because it allows for in-depth examination of existing materials like documents, a strategy commonly employed in educational research to analyze curricula, textbooks, assignments, and written exams (Bowen, 2009).

Sample of the Study

General English Language exams administered to sixth grade of vocational department (agriculture, industry, computer science, commerce, tourism, applied arts) from 2020 to 2023. Each consisted of five main questions in. Three exams were selected from each vocational department: agriculture, computer science, commerce, tourism, applied arts; the general exam of 2020-2021, the general exam of 2021-2022, and the general exam of 2022-2023. Those were applied by six different department supervisors, one for each department. The following table (1) describes the content and number of questions for each exam:

<table>
<thead>
<tr>
<th>Year</th>
<th>Main questions</th>
<th>Subquestions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020-2021</td>
<td>56</td>
<td>206</td>
</tr>
<tr>
<td>2021-2022</td>
<td>57</td>
<td>211</td>
</tr>
<tr>
<td>2022-2023</td>
<td>53</td>
<td>206</td>
</tr>
<tr>
<td></td>
<td>166</td>
<td>623</td>
</tr>
</tbody>
</table>

Research Tools

Bloom's Taxonomy Checklist for Data Collection

Checklist Design and Content

The checklist aims at stating the various categories of Bloom taxonomies addressed in each question of the general English exam specialized to vocational departments. The research limited on the six cognitive levels of the revised Bloom's taxonomy. The checklist includes the following three sections:

Domain: This section lists the four main language domains assessed in the exam: Reading Comprehension, Vocabulary, Grammar, and Pronunciation & Oral Component.

Items of Domain: This section further breaks down each domain into specific skills or sub-skills presumably tested within the exam questions. For example, Reading Comprehension is divided into "Read the passage and answer the following questions" and "Read the passage and complete the following questions."

Bloom's Taxonomy Levels: This section has a checkbox for each of the following six levels of the revised Bloom's taxonomy:

- Remembering
- Understanding
- Applying
- Analyzing
- Evaluating
- Creating

Inter-Rater Reliability

To ensure the reliability and objectivity of the categorization process, an inter-rater reliability test will be conducted.
The researcher, familiar with the revised Bloom’s taxonomy, will independently categorize a randomly selected subset of questions (approximately 10%) from the exam.

The supervisors’ and the research’s versions will then compare their categorizations for each question. Cohen’s Kappa coefficient (κ) will be calculated to assess the level of agreement between the two coders.

A κ value of 0.70 or higher will be considered acceptable, indicating substantial agreement (Landis & Koch, 1977).

If the κ value falls below the acceptable threshold, discrepancies will be discussed, and the coding scheme might be refined for consistency.

Table (2) displays the correlation coefficients between the raters.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.87**</td>
</tr>
<tr>
<td>2</td>
<td>0.88**</td>
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<tr>
<td>3</td>
<td>0.94**</td>
</tr>
<tr>
<td>4</td>
<td>0.81**</td>
</tr>
<tr>
<td>5</td>
<td>0.79**</td>
</tr>
</tbody>
</table>

The table reveals that all correlation coefficients between the raters applications ranged between (0.79-0.94), indicating high reliability for the instrument.

Using the Checklist for Data Collection

Following these steps teachers and supervisors will utilize the checklist to evaluate the exam questions in the lens of Bloom’s Taxonomies:

Reviewing the Exam: They begin by thoroughly reviewing the entire English language exam for the sixth vocational grade.

Analyzing Each Domain: For each domain (Reading Comprehension, Vocabulary, Grammar, and Pronunciation & Oral Component), they identify the specific skills or sub-skills listed under "Items of Domain."

Examining Individual Questions: They analyze each question within a specific skill or sub-skill. Pay close attention to the key verbs, tasks, and overall demands placed on students to answer the question.

Matching Cognitive Levels: Based on the analysis in step 3, they select the most appropriate Bloom’s taxonomy level that aligns with the cognitive demands of the question. The following are indicators of each level of Bloom’s taxonomies:

**Remembering**: (They select if the question requires recalling facts, definitions, or basic concepts.)
- Recalls and recognizes factual knowledge.
- Identifies previously learned information.
- Defines vocabulary terms or grammatical rules.

**Understanding**: (They select if the question demands interpreting information, explaining concepts in their own words, or making simple inferences.)
- Explains information in their own words.
- Restates concepts in a different way.
- Identifies main ideas and supporting details.
- Makes simple inferences based on the text.
Applying: (They select if the question asks students to use learned knowledge in new situations, solve problems following a known procedure, or apply concepts to real-world examples.)

- Applies learned concepts to new situations.
- Uses knowledge to solve routine problems.
- Follows instructions to complete a task.
- Identifies relevant information and applies it to the question.

Analyzing: (They select if the question requires breaking down information into parts, identifying relationships between concepts, or drawing conclusions based on evidence.)

- Breaks down information into its parts.
- Identifies relationships between ideas or concepts.
- Draws conclusions based on evidence presented.
- Analyzes different perspectives or interpretations.

Evaluating: (They select if the question asks students to make judgments based on criteria, compare and contrast different viewpoints, or assess the validity of arguments.)

- Makes judgments based on specific criteria.
- Compares and contrasts different viewpoints.
- Evaluates the strength of evidence or arguments.
- Identifies potential biases or limitations.

Creating: (They select if the question demands generating new ideas, solutions, or products, designing original plans, or proposing alternative interpretations.)

- Generates original ideas or solutions.
- Designs new plans or approaches.
- Proposes alternative interpretations or viewpoints.
- Creates original text formats like poems, dialogues, or essays.

Procedures of administering and applying the study tools

Once the final categorization of all questions is complete, descriptive statistics will be used to summarize the distribution of questions across the six Bloom's taxonomy levels.

The percentage of questions categorized at each level will be calculated and presented in tables or figures.

Additionally, the distribution of questions across different domains and skill/sub-skills will be analyzed to identify any potential variations in the emphasis on different cognitive levels.

The results of the analysis will be interpreted in light of the research objectives and existing literature. The emphasis will be on understanding the extent to which the exam questions align with the revised Bloom's taxonomy and exploring potential implications for curriculum design and assessment practices in vocational education.

THEORETICAL BACKGROUND

The evaluation of language proficiency in vocational education holds immense significance, shaping students' future careers and their ability to navigate increasingly complex professional landscapes. Among the core skills assessed, English language proficiency stands paramount, enabling effective communication, critical thinking, and problem-solving - facets crucial for success in diverse vocational fields. Within this critical realm, evaluating
student learning through standardized exams plays a pivotal role. However, ensuring these exams effectively assess the intended skills and promote desired learning outcomes necessitates closer examination (Sarawati, 2015)

Section 1: Bloom’s Taxonomy

Historical context of Bloom’s revised taxonomy:

In 1956, Benjamin Bloom and a group of educational psychologists published a framework for classifying educational objectives known as "Bloom's Taxonomy." This original taxonomy categorized learning objectives into six cognitive levels: Remembering, Understanding, Applying, Analyzing, Synthesizing, and Evaluating (Bumen, 2007; Grounlund, 1998; Lipscomb, 2001; Kropp, Stoker, & Bashaw, 1966; McBain, 2011; Oermann & Kathleen, 2013; Ozden, 2011; Poole, 2006)

While highly influential, the taxonomy faced criticism for focusing solely on cognitive skills and neglecting emotions, values, and psychomotor skills. Enter the 2001 revision led by Lorin Anderson and David Krathwohl. Recognizing the limitations of the original, they:

- Shifted the focus: From nouns (like "knowledge") to action verbs (like "remembering"), emphasizing cognitive processes over static states.
- Introduced two new dimensions: Knowledge Dimension (factual, conceptual, procedural, and metacognitive) and Process Dimension (remembering, understanding, applying, analyzing, evaluating, and creating). This allowed for more nuanced classification and analysis of learning objectives.
- Made the taxonomy bidirectional: Moving between the Knowledge and Process Dimensions became possible, reflecting the dynamic nature of learning.
- Emphasized higher-order thinking: The revised taxonomy placed greater weight on skills like analysis, synthesis, and evaluation, encouraging deeper understanding and application of knowledge.

This revision significantly impacted educational practices worldwide, including language assessment. Educators began using the revised taxonomy to: (Omar, et al 2011).

- Design more engaging and effective assessments: Focusing on higher-order thinking skills led to tasks that demanded deeper understanding and analysis, not just rote memorization.
- Improve the alignment between learning objectives and assessment: By using the taxonomy's framework, educators could ensure that assessments accurately measured what students were supposed to learn.
- Promote learning across diverse contexts: The revised taxonomy's emphasis on different knowledge and process types encouraged assessments that catered to various learning styles and abilities.
Theoretical Foundations for the revised bloom's taxonomy

Cognitive load theory

Cognitive Load Theory (CLT) explores the limitations of human working memory and how instructional design can optimize learning. It posits that working memory, the space for actively processing information, has limited capacity. When overloaded, learning suffers. CLT provides guidelines for minimizing this load and maximizing learning effectiveness. (Tayeh et al., 2021)

Key tenets of CLT:

Working memory is limited: Focus on essential information and avoid cognitive overload.

Different types of load exist: Manage intrinsic (difficulty of material) and extraneous (design distractions) load.

Reduce extraneous load: Simplify instructions, use clear visuals, and avoid unnecessary complexity.

Leverage germane load: Encourage active processing, like using examples and practice exercises.

Constructivism

Constructivism theory, a cornerstone of educational philosophy, posits that individuals actively construct their knowledge and understanding through interaction with the world and social experiences. Here's a breakdown through the core principles of the theory.

Core Principles:

Knowledge is actively constructed: Learners aren't passive recipients; they build understanding through exploration, experimentation, and reflection.

Prior knowledge plays a crucial role: New information is integrated with existing knowledge, shaping how individuals learn and interpret new experiences.

Social interaction is essential: Learning is enhanced through collaboration, discussion, and sharing perspectives with others.

Meaningful contexts matter: Engaging activities and real-world connections promote deeper understanding and knowledge retention.
Information process theories

Information processing theories aim to understand how humans take in information, encode it in memory, and use it to think and solve problems. These theories view the mind as an information processor, similar to a computer, with various stages involved in handling external stimuli.

**Key Concepts**

- **Sensory register:** Our environment constantly bombards us with sights, sounds, smells, etc. Sensory registers briefly hold this raw information before it moves on.
- **Short-term memory:** Information deemed relevant passes to short-term memory, where it can be actively manipulated and processed for a brief period.
- **Long-term memory:** If information is rehearsed or encoded meaningfully, it gets transferred to long-term memory for storage and future retrieval.
- **Encoding:** Transforming information into a format suitable for long-term storage, like using imagery, mnemonics, or connecting to existing knowledge.
- **Retrieval:** Accessing stored information when needed, influenced by factors like encoding strength, context, and emotional associations.

**Multiple Intelligences Theory**

Howard Gardner's Multiple Intelligences (MI) theory challenges the traditional view of intelligence as a singular, measurable entity. Instead, it proposes that individuals possess nine distinct intelligences, each with unique strengths and learning styles. Understanding these intelligences can revolutionize education by catering to diverse learners.

The Nine Intelligences:

- **Linguistic:** Facility with language, communication, and storytelling.
- **Logical-mathematical:** Ability to analyze, categorize, and solve problems logically.
- **Spatial:** Talent for perceiving spatial relationships and visualizing objects and environments.
- **Bodily-kinesthetic:** Skill in coordinating body movements, expressing oneself physically.
- **Musical:** Sensitivity and aptitude for music, rhythm, and melody.
- **Interpersonal:** Ability to understand and connect with others, fostering positive relationships.
- **Intrapersonal:** Capacity for self-reflection, understanding one's emotions and motivations.
- **Naturalistic:** Strong connection with nature and its diverse life forms.
- **Existential:** Ability to ask profound questions about meaning and purpose in life (added later by Gardner).

**Levels of Revised Bloom’s Taxonomy**

The revised Bloom's taxonomy, stands as a cornerstone for designing learning experiences and assessments that promote diverse cognitive skills. Unlike the original six-level structure, the revised framework introduces two intersecting dimensions, each showcasing varying levels of complexity: Krathwohl (2002)

**Dimension 1: Knowledge**

This dimension categorizes the type of knowledge learners acquire:

- **Factual:** Basic facts, principles, definitions, names, dates, symbols (e.g., recalling the capital of France).
- **Conceptual:** Relationships, patterns, classifications, principles, theories (e.g., explaining the water cycle).
Questions Analysis of the General English language Exam for the Sixth Vocational Grade in Light of Bloom's Taxonomy

Procedural: How-to knowledge, algorithms, methods, techniques, strategies (e.g., describing how to conduct an experiment).

Metacognitive: Knowledge about thinking and learning, self-awareness, monitoring strategies (e.g., reflecting on one’s understanding of a new concept).

Dimension 2: Cognitive Process

This dimension outlines the thinking skills learners use to engage with knowledge:

Remembering: Retrieving and recalling knowledge from long-term memory (e.g., identifying the main character in a story).

Understanding: Interpreting and making sense of information (e.g., summarizing the main points of an article).

Applying: Using knowledge in new situations and contexts (e.g., applying a mathematical formula to solve a real-world problem).

Analyzing: Breaking down information into its parts and examining relationships (e.g., identifying different perspectives in a historical event).

Evaluating: Making judgments about the value, authenticity, or usefulness of information (e.g., critiquing the arguments presented in a debate).

Creating: Generating new ideas, products, or solutions (e.g., writing a creative story based on a historical period).

Each knowledge type can be engaged with through various cognitive processes, creating a matrix of learning objectives. For example, a student can remember a factual date (Remembering + Factual), apply a scientific principle to solve a problem (Applying + Procedural), or analyze the different characters in a literary work (Analyzing + Conceptual). This intersection allows for nuanced categorization and analysis of learning objectives and assessments. (Cotton, 1991; Ighbaria, 2013; Riazi & Mosalaejad, 2010).

3.4. The importance of Bloom’s taxonomy of the cognitive domain:

Bloom's Revised Taxonomy (2001) stands as a powerful tool for designing and evaluating assessments that go beyond mere recall and promote diverse cognitive skills. Examining its benefits within the field of exam assessment reveals its transformative potential for educational practice.

1. Encouraging Higher-Order Thinking Skills:

The traditional focus on memorization and factual recall often leaves students ill-equipped for real-world challenges. The revised taxonomy shifts the emphasis towards higher-order thinking skills like analysis, evaluation, and creation. By incorporating tasks that require students to analyze historical sources, evaluate scientific arguments, or create solutions to complex problems, exams can better assess and promote these crucial skills. (Duc, 2008)

2. Catering to Diverse Learning Styles:

The taxonomy recognizes that learners acquire knowledge and engage with information in various ways. By encompassing different knowledge types (factual, conceptual, procedural, and metacognitive) and cognitive processes, assessments can cater to individual strengths and preferences. This allows students to demonstrate their understanding through diverse means, fostering a more inclusive and equitable assessment environment. (Amer, 2006)

3. Designing Meaningful Learning Experiences:

Exams play a critical role in shaping learning experiences. When aligned with the revised taxonomy, they can encourage active engagement with knowledge, not just passive memorization. This shift leads to learning experiences that are more stimulating, relevant, and ultimately enhance student motivation and engagement.

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4. Providing Precise Feedback for Improvement:

The detailed levels of the taxonomy guide instructors in crafting clear and specific feedback on student performance. By pinpointing the exact knowledge type or cognitive process where a student struggles, instructors can provide targeted guidance and support for improvement, fostering self-awareness and growth.

5. Promoting Collaborative Learning and Assessment:

The framework encourages tasks that involve analysis, evaluation, and creation, which often benefit from collaborative approaches. Group projects or peer review activities aligned with the taxonomy can cultivate valuable communication, critical thinking, and problem-solving skills within a collaborative learning environment. (Munzenmaier & Rubin, 2013)

6. Facilitating Curriculum Development:

The taxonomy serves as a bridge between learning objectives and assessments, informing curriculum design. By aligning curriculum content and activities with the desired cognitive skills, educators can ensure that assessment tasks truly measure what students are learning, contributing to a more coherent and effective learning journey.

7. Enhancing Validity and Reliability of Assessments:

When assessments are based on clear learning objectives derived from the taxonomy, they become more valid and reliable. This ensures that they accurately measure the intended skills and knowledge, minimizing ambiguity and promoting fairness for all students.

8. Supporting Differentiated Instruction:

The taxonomy's flexibility allows educators to adapt assessments to diverse student needs and learning styles. By offering tasks at different levels of complexity and addressing various knowledge types, teachers can cater to individual strengths and learning gaps, fostering personalized learning experiences.


The skills emphasized by the revised taxonomy, such as critical thinking, problem-solving, and creative thinking, are essential not only for academic success but also for lifelong learning and adaptation in a rapidly changing world. Assessments aligned with the framework can empower students to become independent learners and critical thinkers, prepared to navigate the challenges and opportunities of the future.

10. Promoting Transparency and Communication:

By employing a widely recognized framework like the revised taxonomy, educators can communicate learning objectives and assessment expectations more effectively to students, parents, and stakeholders. This transparency fosters trust and understanding, promoting positive collaboration in the learning process.

In conclusion, the revised Bloom’s taxonomy offers a valuable framework for transforming exam assessment in education. By promoting higher-order thinking skills, catering to diverse learning styles, and guiding meaningful learning experiences, it empowers educators to create assessments that truly serve their intended purpose: measuring student learning, providing valuable feedback, and ultimately preparing students for success in an ever-evolving world.

**Language Assessment in Vocational Education**

By applying the revised taxonomy to your analysis of English language exams, you can examine:

- The balance and emphasis placed on different cognitive skills: Are exams adequately assessing higher-order thinking skills like analysis, evaluation, and creation, or are they mainly focused on lower-order recall and comprehension? This aligns with concerns about preparing students for complex vocational demands beyond rote memorization (Rychen & Salganik, 2001).
The alignment between knowledge types and assessed skills: Do exams require students to use different types of knowledge (factual, conceptual, procedural) effectively? This is crucial for vocational settings where applying theoretical knowledge to practical situations is essential.

The opportunities for active engagement and application: Do exams encourage students to process information actively and apply their knowledge in vocational contexts? This aligns with principles of situated learning, where knowledge is best acquired and applied in relevant contexts (Lave & Wenger, 1991).

This analysis can reveal gaps in the exams' ability to promote diverse cognitive skills and prepare students for the demands of vocational settings. Ultimately, understanding the theoretical foundations of Bloom's revised taxonomy empowers you to conduct a more nuanced and meaningful examination of English language exams, contributing to their improvement and promoting effective learning in vocational education.

**Principles for establishing a reliable taxonomy: (Hadil & Maissa, 2022)**

Crafting robust taxonomies requires adhering to specific principles that ensure clarity, consistency, and usefulness. Here are five key principles for a reliable taxonomy development:

1. Clarity and Specificity: Define terms and categories precisely, avoiding ambiguity and ensuring clear boundaries between them. Each term should have a distinct meaning and purpose within the overall structure.

2. Consistency: Establishing clear rules for categorizing items and maintain these rules throughout the taxonomy. Inconsistency leads to confusion and hinders usability.

3. Parsimony: Aiming for a well-structured and organized taxonomy that is efficient and easy to navigate. Avoid unnecessary complexity and redundancy.

4. Objectivity: Basing the taxonomy on objective criteria and evidence, minimizing personal biases and subjective interpretations. Ensure the structure reflects the inherent characteristics of the subject matter.

5. Usable and Adaptable: Designing the taxonomy with its intended users in mind. Consider how they will access and utilize it, ensuring ease of use and potential for adaptations to various contexts.

**Conclusion:**

Effective assessment in VET is a dynamic process, requiring careful consideration of the unique needs and context of this educational pathway. By employing appropriate frameworks, diverse assessment methods, and ongoing collaboration among stakeholders, VET programs can ensure their graduates are equipped with the skills and competencies required to succeed in the ever-evolving world of work.

**STUDY RESULTS**

After analyzing the questions of the general English Language exams administered to sixth grade of vocational department (agriculture, computer science, commerce, tourism and industry, applied arts) from 2020 to 2023 academic years. Each consisted of five main questions. The researcher analyzed the questions in the light of six cognitive levels of Bloom's taxonomies which are remembering, understanding, applying (low ordered cognitive levels) and analyzing, evaluating and creating (high ordered cognitive levels). The following is a detailed results and findings of the analysis..
Results of analyzing the questions of general English exams in the light of Bloom's taxonomies

Analyzing the questions of the general English exams of the academic years 2020-2021, 2021-2022, 2022-2023 in the Computer and It Branch

Table (3) Question analysis computer and It branch

<table>
<thead>
<tr>
<th>years</th>
<th>Sum of questions</th>
<th>Remembering</th>
<th>understanding</th>
<th>applying</th>
<th>Analysis</th>
<th>evaluating</th>
<th>creating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>frequencies</td>
<td>%</td>
<td>frequencies</td>
<td>%</td>
<td>frequencies</td>
<td>%</td>
</tr>
<tr>
<td>2020-2021</td>
<td>44</td>
<td>15</td>
<td>34.1</td>
<td>11</td>
<td>25</td>
<td>10</td>
<td>22.72</td>
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<td>15.9</td>
<td>1</td>
<td>2.27</td>
</tr>
<tr>
<td>2021-2022</td>
<td>44</td>
<td>15</td>
<td>34.1</td>
<td>14</td>
<td>31.8</td>
<td>9</td>
<td>20.5</td>
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<tr>
<td>2022-2023</td>
<td>42</td>
<td>14</td>
<td>33.3</td>
<td>11</td>
<td>26.2</td>
<td>9</td>
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<td>33.3</td>
<td>5</td>
<td>11.9</td>
<td>2</td>
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<tr>
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<td>33.8</td>
<td>36</td>
<td>27.7</td>
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<td>18</td>
<td>13.8</td>
<td>3</td>
<td>2.30</td>
</tr>
</tbody>
</table>

Table (8) showed that the sum of questions over the three academic years are (130). Analyzing these questions in the light of six of Bloom's taxonomies in the three academic years of computer and IT branch revealed that Remembering level has 33.8% of the total percentage, understanding has 27.7%, applying: 21.5%, analyzing: 13.8%, evaluating: 2.3%, creating: 0.76%. More specifically: analyzing the questions of general English exam in the academic Year 2020-2021 in the light of Bloom's Taxonomies revealed that: Total Questions: 44; remembering has (34.1%), understanding has (25%) Applying has (22.72%) Analyzing (15.9%), evaluating has (2.27%) and Creating has (0%). In the academic year 2021-2022: Total Questions are 44; remembering has (34.1%), understanding has (31.8%) applying has (20.5%), analyzing has (13.6%), evaluating has (0%) , while as creating has (0%). In the academic year 2022-2023: the total Questions is 42. Analyzing the questions revealed that remembering level has (33.3%), understanding has (26.2%), applying has (21.4%) analyzing has (11.9) , evaluating has (4.8%) while as creating has(2.38%).

DISCUSSION

Based on the previous data analysis, it is observed that Remembering has the first rank of Bloom taxonomies as many questions in various language domains in the exam require mere recall of facts. Thus, Remembering has fairly one-third of the total questions each year. Questions aimed at testing understanding showed slight variations, with the highest percentage in 2021-2022 (31.8%) and the lowest in 2020-2021 (25%). Thus, The exams heavily emphasize lower-order thinking skills (Remembering and Understanding), comprising over 60% of the questions each year. The applying taxonomy, consistently hovered around 21-22%, indicating a moderate emphasis on application of language skills. The analyzing level has a gradual decline from 15.9% in 2020-2021 to 11.9% in 2022-2023, suggesting a reduced focus on breaking information into parts to explore understandings and relationships. Evaluating, involving making judgments based on criteria and standards, was scarcely represented, peaking at 4.8% in 2022-2023 and absent in 2021-2022. Questions encouraging the creation of new or original work (Creating) were almost negligible, appearing only in 2022-2023 at a minimal 2.38%. Overall, Higher-order thinking skills (Analyzing, Evaluating, and Creating) are significantly underrepresented. There is a need for more questions that promote critical thinking, problem-solving, and creative skills.
Questions Analysis of the General English language Exam for the Sixth Vocational Grade in Light of Bloom's Taxonomy

Analyzing the questions of the general English exams of the academic years 2020-2021, 2021-2022, 2022-2023 in the Commercial Branch

Table (4) Question analysis of the general English Exams in the commercial branch

<table>
<thead>
<tr>
<th>years</th>
<th>Sum of questions</th>
<th>Remembering</th>
<th>Understanding</th>
<th>applying</th>
<th>analysis</th>
<th>evaluating</th>
<th>Creating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>frequencies</td>
<td>%</td>
<td>frequencies</td>
<td>%</td>
<td>frequencies</td>
<td>%</td>
<td>Sum</td>
</tr>
<tr>
<td>2020-2021</td>
<td>39</td>
<td>10</td>
<td>25.6%</td>
<td>9</td>
<td>23.08</td>
<td>14</td>
<td>35.9%</td>
</tr>
<tr>
<td>2021-2022</td>
<td>37</td>
<td>11</td>
<td>29.7%</td>
<td>8</td>
<td>21.62</td>
<td>12</td>
<td>32.43</td>
</tr>
<tr>
<td>2022-2023</td>
<td>37</td>
<td>11</td>
<td>29.7%</td>
<td>10</td>
<td>27.03</td>
<td>12</td>
<td>32.43</td>
</tr>
<tr>
<td>Total</td>
<td>113</td>
<td>32</td>
<td>28.3%</td>
<td>27</td>
<td>23.9%</td>
<td>38</td>
<td>33.6%</td>
</tr>
</tbody>
</table>

Table (4) showed the analysis of the general English exam questions across six cognitive levels (remembering, understanding, applying, analyzing, evaluating, and creating) over three academic years (2020-2021, 2021-2022, and 2022-2023). Total Questions Analyzed are (113) questions over three years. Bloom's Levels Distribution includes: Applying in the first rank with a percentage (33.6%), remembering in the second rank with a percentage (28.3%), followed by understanding with a percentage (23.9%), then analyzing level with percentage (8.8%), Creating level with percentage (4.4%) and lastly, evaluating level with percentage (0.8%).

More specifically, in the Academic Year 2020-2021, the total questions are (39) and question analysis revealed that from Bloom's level, Applying is the first with percentage (35.9%) then remembering level with percentage (25.6%), understanding at the third rank with percentage (23.08%) followed by Analyzing (7.7%) and creating with (5.12%), at last evaluating level has a percentage of (2.6%). Question analysis of the academic year 2021-2022: Total Questions is 37. Bloom's taxonomies distribution is as follows: Applying level at first with percentage (32.43%) then remembering with (29.7%), understanding with (21.62%), analyzing with percentage (13.5%) and lastly, Creating with percentage (2.7%) while as Evaluating level was not handled in any questions (0%). Question analysis of the academic year 2022-2023: Total Questions are (37) Bloom's taxonomies distribution is as follows: Applying level at first with percentage (32.43%) then remembering with (29.7%), understanding with (21.62%), analyzing with percentage (13.5%) and lastly, Creating with percentage (2.7%) at last, no questions handled evaluating level.

DISCUSSION

Based on data analysis, it is observed that the percentage of questions aimed at testing memory recall (Remembering) ranges from 25.6% to 29.7%, showing a slight increase over the years. Questions designed to assess comprehension (Understanding) are relatively stable, with slight increases and decreases over the years, ranging from 21.62% to 27.03%. Additionally, the highest percentage of questions falls under Applying, ranging from 32.43% to 35.9%, indicating a strong emphasis on practical application of knowledge. Questions that require analysis (Analyzing) vary from 5.4% to 13.5%, with a notable decrease in the 2022-2023 academic year. There are few questions at evaluation level, with only one question in 2020-2021 and none in the preceding years. Questions that handle creating level are minimal, appearing in 2020-2021, with percentage (5.12%), in 2021-2022 with percentage (2.7%), and a percentage (5.4%) in 2022-2023.

Thus, data indicates a significant focus on applying knowledge, which suggests that the exams are designed to test students' ability to use what they have learned of language skills, grammar, vocabulary usage. The scarcity of questions in the Evaluating and Creating levels highlights a gap in promoting higher-order thinking skills. It is observed that reading questions assess literal and inferential levels of comprehension or low thinking skills. While the distribution of questions across different cognitive levels is somewhat balanced, there is room for improvement in incorporating more higher-order cognitive tasks to provide a comprehensive assessment of students' abilities.
Analyzing the questions of the general English exams of the academic years 2020-2021, 2021-2022, 2022-2023 in the agriculture branch

Table (5) Question analysis of agriculture branch

<table>
<thead>
<tr>
<th>Years</th>
<th>Sum of questions</th>
<th>Remembering</th>
<th>Understanding</th>
<th>Applying</th>
<th>Analysis</th>
<th>Evaluating</th>
<th>Creating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>frequencies %</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>2020-2021</td>
<td>38</td>
<td>15</td>
<td>39.5</td>
<td>11</td>
<td>28.9</td>
<td>10</td>
<td>26.3</td>
</tr>
<tr>
<td>2021-2022</td>
<td>38</td>
<td>15</td>
<td>39.5</td>
<td>11</td>
<td>28.9</td>
<td>9</td>
<td>23.7</td>
</tr>
<tr>
<td>2022-2023</td>
<td>42</td>
<td>16</td>
<td>38.1</td>
<td>11</td>
<td>26.19</td>
<td>12</td>
<td>28.6</td>
</tr>
<tr>
<td>Total</td>
<td>118</td>
<td>46</td>
<td>38.9</td>
<td>33</td>
<td>27.97</td>
<td>31</td>
<td>26.3</td>
</tr>
</tbody>
</table>

Table (5) showed that the sum of questions over the three academic years are (118). Analyzing these questions in the light of six Bloom's taxonomies in the three academic years of agriculture branch revealed that remembering level has 38.9% of the total percentage, understanding has 27.97%, applying has a percentage of 26.3%, creating has a percentage of 6.8%, no question assesses evaluating or analyzing levels. More specifically: analyzing the questions of general English exam in the academic Year 2020-2021 in the light of Bloom's Taxonomies revealed that total questions is (38); remembering level has (39.5%), understanding has (28.9%), applying has (26.3 %) Analyzing (0%), evaluating has (0%) and Creating has (5.3%). In the academic year 2021-2022, total questions are (38); remembering has (39.5%), understanding has (28.9%) applying has (23.7%), creating has (7.9%), at last analyzing and evaluating has (0%). In the academic year 2022-2023: the total Questions is 42. Analyzing the questions revealed that remembering level has (38.9%), understanding has (27.97%), applying has (28.6%) analyzing and evaluating levels are not assessed, while as creating has(7.1%).

Discussion

Based on the previous data analysis, it is observed that Remembering has the first rank of Bloom taxonomies as many questions in various language domains in the exam require recalling of information. Thus, remembering has fairly one-third of the total questions each year. Questions aimed at assessing Understanding level showed slight variations, with the highest percentage in academic years 2020-2021 and 2021-2022 (28.9%) and the lowest in 2020-2021 (25%). Thus, The exams heavily emphasize lower-order thinking skills (remembering and understanding). The Applying taxonomy, ranked highest in the academic year 2022-2023%, indicating a moderate emphasis on application of language skills. The creating level a gradual increase. Evaluating, involving making judgments based on criteria and standards, was scarcely represented, peaking at 4.8% in 2022-2023 and absent in 2021-2022. Questions encouraging creating level or generating new information from the existing ones were almost negligible, appearing only in 2022-2023 at a minimal 2.38%. Overall, Higher-order thinking skills (Analyzing, Evaluating, and Creating) are significantly negligible in the general exams. There is a need for more questions that promote critical thinking, analysis, problem-solving, and creative skills.
Analyzing the questions of the general English exams of the academic years 2020-2021, 2021-2022, 2022-2023 in the Tourism Branch

Table (6) Question analysis of general English exams in tourism branch

<table>
<thead>
<tr>
<th>years</th>
<th>Sum of questions</th>
<th>Remembering</th>
<th>Understanding</th>
<th>Applying</th>
<th>analysis</th>
<th>evaluating</th>
<th>Creating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>frequencies</td>
<td>%</td>
<td>frequencies</td>
<td>%</td>
<td>frequencies</td>
<td>%</td>
<td>Sum</td>
</tr>
<tr>
<td>2020-2021</td>
<td>44</td>
<td>16</td>
<td>36.4</td>
<td>14</td>
<td>31.8</td>
<td>12</td>
<td>27.3</td>
</tr>
<tr>
<td>2021-2022</td>
<td>51</td>
<td>16</td>
<td>31.4</td>
<td>15</td>
<td>29.4</td>
<td>18</td>
<td>35.3</td>
</tr>
<tr>
<td>2022-2023</td>
<td>44</td>
<td>15</td>
<td>34.1</td>
<td>14</td>
<td>31.8</td>
<td>13</td>
<td>29.5</td>
</tr>
<tr>
<td>Total</td>
<td>139</td>
<td>47</td>
<td>33.8</td>
<td>43</td>
<td>30.9</td>
<td>43</td>
<td>30.9</td>
</tr>
</tbody>
</table>

Table (6) showed that the sum of questions over the three academic years are (139). Analyzing these questions in the light of six Bloom's Taxonomies in the three academic years of tourism branch revealed that remembering level has 33.8% of the total percentage, understanding and applying levels have 30.9% of the whole questions, creating has a percentage of 4.31%, no question assesses evaluating or analyzing levels. More specifically: analyzing the questions of general English exam in the academic Year 2020-2021 in the light of Bloom’s Taxonomies revealed that total questions is (44); remembering level has (36.4%), understanding has (31.8%) , applying has (27.3%) Analyzing (0%), evaluating has (0%) and Creating has (4.5%). In the academic year 2021-2022, total questions are (51); applying level is at first place with a percentage (35.3%) followed by remembering level which has (31.4%), understanding has (29.4%) creating has (3.9%), at last analyzing and evaluating has (0%). In the academic year 2022-2023: the total Questions is 44. Analyzing the questions revealed that remembering level has (34.1%), understanding has (31.8%), applying has (29.5%) analyzing and evaluating levels are not assessed , while as creating has(4.5%).

Discussion

The previous data indicates a significant emphasis on lower-order thinking skills in the questions of the general English exams over the three academic years. There is a notable absence of questions aimed at assessing higher-order thinking skills such as analyzing and evaluating. It could be observed also that the majority of the questions across all three years assess the lower-order thinking skills: remembering, understanding, and applying. Thus, those three levels account for over 90% of the questions each year. Additionally, analyzing and evaluating levels have 0 questions across all three years, indicating no focus on these higher-order cognitive skills. The Creating category is also underrepresented, with only 2 questions each year, making up around 4-5% of the total questions. The distribution of the three levels of remembering, understanding, and applying is somewhat balanced, with each level contributing approximately a third of the total questions.

Analyzing the questions of the general English exams of the academic years 2020-2021, 2021- 2022, 2022-2023 in the AppliedArts Branch

Table (7) Question analysis of general English exams of Applied Arts Branch

<table>
<thead>
<tr>
<th>years</th>
<th>Sum of questions</th>
<th>remembering</th>
<th>Understanding</th>
<th>Applying</th>
<th>analysis</th>
<th>Evaluating</th>
<th>Creating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>frequencies</td>
<td>%</td>
<td>frequencies</td>
<td>%</td>
<td>frequencies</td>
<td>%</td>
<td>Sum</td>
</tr>
<tr>
<td>2020-2021</td>
<td>41</td>
<td>17</td>
<td>41.5</td>
<td>11</td>
<td>26.8</td>
<td>11</td>
<td>26.8</td>
</tr>
<tr>
<td>2021-2022</td>
<td>41</td>
<td>16</td>
<td>39.02</td>
<td>12</td>
<td>29.3</td>
<td>11</td>
<td>26.8</td>
</tr>
<tr>
<td>2022-2023</td>
<td>41</td>
<td>15</td>
<td>36.6</td>
<td>13</td>
<td>31.7</td>
<td>11</td>
<td>26.8</td>
</tr>
</tbody>
</table>
Table (7) showed that the sum of questions over the three academic years are (123). Analyzing these questions in the light of six Bloom's taxonomies in the three academic years of Applied Arts branch revealed that remembering level has (39.02%) of the total percentage, understanding has 29.3%, applying levels has 26.8% of the whole questions, creating has a percentage of 4.9%, no question assesses evaluating or analyzing levels. More specifically: analyzing the questions of general English exam in the academic Year 2020-2021 in the light of Bloom's Taxonomies revealed that total questions is (41); remembering level has (41.5%), understanding and applying levels have the same percentage (26.8%), analyzing (0%), evaluating has (0%) and Creating has (4.9%). In the academic year 2021-2022, total questions are (41); remembering level is at first place with a percentage (39.02%) followed by understanding level which has (29.3%), applying has (26.8%) creating has (4.9%), at last analyzing and evaluating has (0%). In the academic year 2022-2023: the total Questions is 41. Analyzing the questions revealed that remembering level has (36.6%), understanding has (31.7%), applying has (26.8%) analyzing and evaluating levels are not assessed, while as creating has(4.9%).

Discussion

A deeper review on the previous data revealed that the majority of questions assess the lower-order cognitive skills(remembering, understanding, and applying).all these three levels consistently account for over 90% of the questions each year. There are no questions assess analysis or evaluating for any of the three years. The Creating level assessed with only 2 questions each year, maintaining a steady 4.9% of the total questions. Additionally, each year, remembering level tends to have the highest percentage, followed by understanding and applying. Applying level has a steady number of questions and percentage each year.

CONCLUSIONS

Based on the previous results and findings, the following conclusions could be drawn:

The exam questions heavily assess lower-order cognitive levels (remembering, applying and understanding), which together account for over 60% of the questions each year. This suggests that the exams are primarily focused on assessing basic knowledge and understanding levels.

Higher-order cognitive taxonomies (analyzing, evaluating, and creating) are significantly underrepresented. This highlights a need to incorporate more questions that assess high levels of comprehension, problem-solving, and creativity. Specifically, the exams should include more questions that require analysis, evaluation, and creating to provide a more comprehensive assessment of students' language skills.

There should be an Increase of questions in the analyzing, creating and evaluating levels.

Ensure a balanced representation of all levels of Bloom’s Taxonomy to foster a well-rounded language education.

REFERENCES

Questions Analysis of the General English language Exam for the Sixth Vocational Grade in Light of Bloom’s Taxonomy


Mousa, M. (2000). The extent to which evaluative and educational activities in Arabic language textbooks for elementary higher grades in the UAE in developing creative thinking skills. Reading and Knowledge Journal, 2, 17-63


