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## **A Critical Analysis of Learner-Centered Pedagogy and Cognitive Demands in The Khyber Pakhtunkhwa Grade 10th Textbook**

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### **ABSTRACT**

This paper examines the cognitive demand and a shift in pedagogical manner from traditional method to learner-centered pedagogy in 10th grade book of the Khyber Pakhtunkhwa textbook. The cognitive demands are analyzed through six categories of Bloom's taxonomy and through activities in the textbook, the shift from a traditional manner to a learner-centered pedagogy. The data is qualitative and collected through purposive sampling. The exercise of each chapter is coded through thematic analysis to get an in-depth analysis of each chapter. Every chapter has low-order cognitive skills to moderate level, and the traditional method is present in every exercise. The study highlights the need for more learner-centered approaches to inculcate critical thinking and analytical ability in students.

### **Introduction:**

Language pedagogy plays an important role in learning and teaching a language; in modern times, several approaches are used, such as learner-centered, communicative approaches, technology-based, and so forth. Language pedagogy holds an important role in the educational sector. However, importance has been given to the curriculum to be effective and to promote meaningful learning. Despite the use of the English language in textbooks, the center of attention is whether the curriculum follows learner-centered pedagogy or traditional methods. Previous studies show there is a lack of research on how students can develop skills with learner-centered pedagogy, and more importantly, the focus was on evaluations of grammatical activities rather than on developing cognitive skills of individuals. The current study aims to explore the shift from traditional-centered pedagogical methods to learner-centered methods and explain the cognitive demands in the Khyber Pakhtunkhwa 10th-grade book. The findings demonstrate that the curriculum should be designed in such a way that students can present themselves confidently and develop their critical thinking skills; they should be able to debate on topics confidently, thereby enhancing their personalities and growth.

### **Research questions**

What are the cognitive demands that illustrate the exercises in the textbook?

How does the shift in the textbook of grade 10<sup>th</sup> occur from traditional and learner-centered pedagogy?

### **Research objectives**

To analyze the cognitive demands of the exercises in the textbook.

To examine the shift in the textbook from traditional to learner-centered pedagogy



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### **Problem statement:**

The modern education system emphasizes learner-centered education, but traditional methods still exist in textbooks. The school-level books shape the students. However, some textbooks still have rote learning, and students participate passively. The study aims to analyze the cognitive demands through Bloom's taxonomy and pedagogical shift by analyzing the activities in the 10th grade book.

### **Literature review:**

Language pedagogy refers to the way in which languages are taught and learned. Previously, languages were taught in a traditional manner where teachers were the center of knowledge, and there were no class activities that allowed the students to learn critically. With the passage of times everything changes; there is a shift from a traditional manner to learner-centered pedagogy where students learn in active participation and discussions. Curriculum is designed in such a way that it compels the students to think critically and is not wholly dependent on teachers. Textbooks play a key role in implementing these approaches. It is crucially important to understand how language teaching material is presented in these textbooks.

Researchers have explored the learner-centered approaches to implement in learning a foreign language. The research conducted by (Llyina, 2023) emphasizes authorial teaching, where learning is treated as a healthy discussion process rather than just the transfer of a bulk of information, which helps in the development of personal growth, communication skills, motivation, and a better quality of learning processes.

However, despite the emphasis on a learner-centered approach, the study lacks to emphasize the textbook that how textbooks play a major role in forming the skills in students while engaging in classroom. The present study aims to explore that how the exercises and tasks of the books reflect the learner-centered and traditional pedagogical practices.

Teachers play a vital role in implementing learner-centered pedagogy. A systematic review conducted shows that teachers' training should be long enough and in such a way that the teachers are familiar with learner-centered pedagogy. Their training must provide opportunities to inculcate flexibility to adapt in local classroom context.

Prior investigations examined how various teaching approaches in language instruction are reflected in English language textbooks. In order to investigate teaching strategies employed in English language learning, (Chan and Cheuk, 2020) examined activities in ESL textbooks. The results indicated that the four language skills reading, writing, listening, and speaking, were out of balance, the grammar instruction was heavily emphasized, and that pair and group work activities were used frequently. The strong emphasis on grammar demonstrated the continued existence of traditional pedagogy, even while collaborative assignments demonstrated learner-centered methods. Because it emphasizes how instructional tasks and textbook activities can influence classroom teaching and learning practices, this study applies to the current research. In contrast to the earlier study, the current study focuses on learner-centered and conventional pedagogical approaches in the English textbook for Khyber Pakhtunkhwa Grade 10<sup>th</sup>.

Studies have highlighted the importance of cognitive demands and instructional quality in optimizing students' learning performance. In elementary school classrooms, (Prediger et al, 2024) investigated the connection between students' conceptual comprehension, classroom interaction quality, and instructional support. According to the study, students' learning and improvements, particularly those of at-risk learners, were greatly improved by teachers' support of vocabulary and conceptual skills linked to subject matter. The



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results also indicated that instructional support and meaningful learning place more importance on learning than straightforward solo engagement exercises. Because cognitive demands and instructional assistance are key elements of student-driven pedagogy, this study is relevant to current research. Deeper learning and active student participation may be encouraged via textbook activities that foster conceptual comprehension, debate, and meaningful contact.

This research did not attempt to look at how cognitive demands are illustrated in English language textbooks, as we know that it plays a huge role in shaping and enhancing the cognitive ability of students. Although it examined teaching quality and cognitive engagement in classroom interaction. Additionally, the Pakistani secondary-level curriculum paid little attention to learner-centered and conventional pedagogical techniques. In order to close this gap, the current study examines the pedagogical shift and cognitive requirements of the Khyber Pakhtunkhwa grade 10th English textbook.

Instructors agreed favorably to the activities and exercises in the *Mega Goal* textbook series used in Saudi secondary schools; however, the study highlighted that more interactivity and more appropriate tasks were needed to promote enhanced cognitive skills and adapt diverse learning abilities. These findings are relevant to the current study because learner-centered pedagogy emphasizes interactive learning, student engagement, and cognitive development through meaningful classroom instruction. Previous studies have emphasized the importance of textbook evaluation in improving the quality of English language instruction, while (Alshumaimeri & Alharbi, 2024) assessed the efficacy of the *Mega Goal* textbook series used in Saudi secondary schools for teaching English as a foreign language. The results showed that while the textbooks had certain shortcomings in terms of grammatical content and adaptation to various learner levels, they also showed strengths in terms of linguistic content, organization, and practical exercises. Teachers responded well to the exercises and activities in the textbooks; however, the study indicated that more appropriate activities and increased interaction were required to support higher cognitive skills and accommodate a range of learning capacities. Because learner-centered pedagogy focuses on interactive learning, engagement among pupils, and cognitive development by means of purposeful classroom instruction, these findings are relevant to the current study. The study also emphasize the significance of reviewing textbook exercises and tasks in an attempt to establish if instructional materials promote active learning or traditional methods of teaching.

The study did not directly examine learner-centered and traditional pedagogical approaches within textbook content, despite evaluating the efficacy of EFL textbooks and highlighting the value of interactivity and cognitive skills. Moreover, rather than an in-depth pedagogical investigation of textbook activities in the Pakistani educational setting, the study concentrated on Saudi secondary schools and teachers' perspectives. In order to close this gap, the current study looks at how the Khyber Pakhtunkhwa Grade 10th English textbook reflects learner-centered aspects, traditional pedagogical components, and cognitive demands.

### **Methodology**

This study aims to explore the pedagogical methods and cognitive demands used in 10th grade Khyber Pakhtunkhwa textbook. I have used a 10th grade book because it is the last stage of secondary school and has more analytical content related to my research. The approach used is qualitative, whereas the research design is a case study. To ensure generalizability, one book is used to have an in-depth qualitative analysis.

The data is collected from the already existing exercises in the textbook. The textbook is



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currently being studied by the 10th grade students in Khyber Pakhtunkhwa. The 10th-grade book is intentionally chosen because it is widely used in secondary schools and provides insights into learner-centered, traditional pedagogy and cognitive demands. Systematically, each chapter's textual data is coded in a table to classify it and have a detailed analysis.

The data is analyzed through thematic analysis. The textual data requires systematic categorization rather than measurements. Each chapter's exercise is coded and then classified under the pedagogical method, and the cognitive demands of that particular activity.

The study employed the non-probability purposive sampling technique; all 15 units are involved to ensure a comprehensive analysis of the data.

The study is guided by a pedagogical framework that shows how the methods shifted from traditional methods to learner-centered pedagogy. The cognitive demands of the textbook activities are analyzed through Bloom's taxonomy, which classifies thinking skills into six categories, such as understanding, evaluating, remembering, analyzing, creating, and applying.

### Analysis

#### Unit 1 exercise

Activity	Pedagogical method	Cognitive demands	Justification
Comprehension	Learner-centered	Understanding	Recalling the lesson and enhancing critical thinking
MCQs	Traditional method	Remembering	Recalling the facts
Word/Meaning And pronunciation	Traditional method	Applying	Language skills/Pronunciation rules
Group presentation	Learner-centered	Critical-thinking ; evaluating	Group discussion, study circle, presenting opinions
Writing the summary of the text	Learner-centered	Understanding	Remembering and understanding the facts
Writing a paragraph	Learner-centered	Creating	Brainstorming, personal writing expression
Grammar	Traditional method	Applying	Applying rules to justify answers

#### Unit 2 exercise

Activity	Pedagogical method	Cognitive demands	Justification
Comprehension	Learner-centered	Analyzing	Understanding the passage enhances critical thinking
MCQs	Traditional method	Remembering	Keeping in mind the facts from the passage



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Vocabulary activity: finding meaning and identifying the parts of speech	Traditional method	Applying Understanding	+	Applying grammatical rules to identify parts of speech and using a dictionary to understand the meaning of the words
Creative writing i) writing a dialogue between two friends ; ii) writing a paragraph “Is boxing too brutal to be a sport for young people?”	Learner-centered	Creating Analyzing	+	Understanding the passage about boxing and then sharing your opinions
Presenting your POV about the story to the class	Learner-centered	Creating		Gathering your thoughts.
Grammar	Traditional method	Applying		Applying rules to get answers

### Unit 3 exercise

Activity	Pedagogical method	Cognitive demands	Justification
Comprehension	Learner-centered	Understanding /Remembering	Developing critical thinking, recalling, and understanding the passage
MCQs	Traditional method	Remembering	Recalling all the facts from the lesson
Vocabulary activity: denotative and connotative meaning of words	Learner-centered +Traditional method	Analyzing / Understanding	Understanding words and knowing about their literal and intended meaning
Persuasive essay writing	Learner-centered	Analyze/evaluate/create	Building intellectual engagement
Biography of a famous personality, describing their obstacles and how they overcame those obstacles	Learner-centered	Analyze/evaluate	Social and shared learning experience
Talking about	Learner-centered	Creating	Personal relevance



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dreams and taking  
feedback

and interest, and an  
individual grows  
through shared  
experiences

Grammar	Traditional method	Applying	Applying the rules to solve questions
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### Unit 4 exercise

Activity	Pedagogical method	Cognitive demands	Justification
Comprehension	Learner-centered	Understanding	Recalling the passage and thinking critically
MCQs	Traditional method	Applying	Recalling the data
Vocabulary activity ( finding word meaning and using it in your own sentences to clear their meaning	Learner-centered and traditional method	Understanding, Creating	To know about the intended and literal meaning
Essay writing	Learner-centered	Evaluating, creating	Developing writing skill about social experiences
Sharing ideas on the effects of population growth on the environment	Learner-centered	Creating	Discussing different ideas and opinions
Grammar	Traditional method	Applying	Applying rules to get answers

### Unit 5 exercise

Activity	Pedagogical method	Cognitive demand	Justification
Comprehension	Traditional method	Understanding	Understanding and recalling the passage.
Pronunciation of words	Traditional method	Applying	Applying the rules of pronunciation to get the answer
Words and synonyms in context	Traditional method	Analyzing	Applying and recalling the rules
Imagine yourself standing in Masjid of Cordoba now write a paragraph about it	Learner-centered	Creating	Developing imagination and writing about it
Expository essay	Traditional method	Understanding	Fixed answers and memorization
Group discussion	Learner-centered	Creating	Critical thinking and



## Unit 6 exercise

Activity	Pedagogical method	Cognitive demand	Justification
Comprehension	Traditional method	Understanding	Understanding and recalling the passage
MCQs	Traditional method	Applying	Recalling the data
Vocabulary activity: finding the words that evoke positive and negative emotions	Learner-centered	Evaluating	Judgement and decision-making make it a learner-centered task
Summary of the poem	Learner-centered	Understanding	Understanding and explaining
Paraphrase the stanza	Learner-centered	Understanding	Understanding and explaining
Class presentation	Learner-centered	Evaluating	Presenting ideas
Grammar	Traditional method	Applying	Applying rules

## Unit 7 exercise

Activity	Pedagogical method	Cognitive demands	Justification
Comprehension	Traditional method	Understanding	Understanding the passage
Role play activity	Learner-centered	Creating	Organizing activity to produce something
Vocabulary activity: finding guiding and entry words	Learner-centered	Creating	Listing and defining words
Summary of the story	Learner-centered	Understanding	Constructing meaning
Translation of the paragraph	Traditional method	Understanding	Reconstructing
Identification of theme	Learner-centered	Understanding	Organizing and connecting ideas
Discuss the respect for clerks and parents with reference to today's youth	Learner-centered	Creating	Constructing opinions

## Unit 8 exercise

Activity	Pedagogical method	Cognitive demand	Justification
Comprehension	Traditional method	Understanding	Understanding and



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MCQs	Traditional method	Remembering	recalling the passage
Finding meanings based on root words	Traditional method	Analyzing	Recalling the passage and applying rules
Essay writing	Learner-centered	Creating	Presenting and discussing social ideas
Presentation: role of women in society	Learner-centered	Creating	Presenting and discussing ideas
Grammar	Traditional method	Applying	Applying rules to find answers

### Unit 9 exercise

Activity	Pedagogical method	Cognitive demands	Justification
Comprehension	Traditional method	Understanding	Recalling and understanding the passage
MCQs	Traditional method	Remembering	Recalling
Using dictionary to identify pronunciation	Traditional method	Applying	Applying rules
Explaining your point of view about the poem	Learner-centered	Evaluating	Creating and discussing
Paraphrasing	Learner-centered	Creating	Constructing ideas
Grammar	Traditional method	Applying	Applying rules

### Unit 10 exercise

Activity	Justification	Cognitive demands	justification
Comprehension	Traditional method	Understanding	Understanding and recalling the passage
MCQs	Traditional method	Remembering	Recalling the facts
Changing words to adverb and making sentences	Learner-centered	Creating	Creating ideas
Group discussion on water conservation	Learner-centered	Evaluating	Critiquing and constructing ideas
Summary of the passage	Learner-centered	Creating and evaluating	Gathering ideas
Grammar	Traditional method	Applying	Applying rules

### Unit 11 exercise

Activity	Pedagogical method	Cognitive demands	Justification
Comprehension	Traditional method	Understanding	Remembering and



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MCQs	Traditional method	Remembering	recalling the the passage
Connotative and denotative meaning	Traditional Learner-centered	+ Creating applying	and Knowing about the intended and literal meaning of the words
Paragraph writing	Learner-centered	Creating	Organizing and constructing ideas
Argumentative essay	Learner-centered	Evaluating	Organizing and constructing ideas
Group discussion on genetically modified food on the future generation	Learner-centered	Analyzing	Learning and critiquing opinions
Grammar	Traditional method	Applying	Applying rules

### Unit 12 exercise

Activity	Pedagogical method	Cognitive demands	Justification
Comprehension	Traditional method	Understanding	Understanding and recalling the passage
MCQs	Traditional method	Remembering	Recalling the passage
Connotative meaning of words	Learner-centered	Analyzing	Creating meaning
Group presentation on the importance of trees and plantations	Learner-centered	Evaluating	Constructing ideas
Paraphrasing and summary writing	Learner-centered	Understanding and creating	Interpreting and designing ideas
Grammar	Traditional method	Applying	Applying rules

### Unit 13 exercise

Activity	Pedagogical method	Cognitive demands	Justification
Comprehension	Traditional method	Understanding	Understanding and recalling the passage
MCQs	Traditional method	Remembering	Recalling the facts
Vocabulary activity	Learner-centered	Analyzing	Creating new ideas
Summary writing	Learner-centered	Creating	Constructing new ideas
Comparison and contrast of Hazrat Umar (R.A) administration with	Learner-centered	Evaluating	Critiquing and constructing



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present day

administration

Grammar	Traditional method	Applying	Applying rules
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### Unit 14 exercise

Activity	Pedagogical method	Cognitive demands	Justification
Comprehension	Traditional method	Understanding	Understanding and recalling the passage
MCQs	Traditional method	Understanding	Recalling the facts
Denotative meaning	Traditional meaning	Understanding	
Writing book review	Learner-centered	Creating	
Expressing refusal politely	Learner-centered	Evaluating	Developing learner communicative competence

### Unit 15 exercise

Activity	Pedagogical method	Cognitive demands	Justification
Comprehension	Learner-centered + traditional method	Understanding+ Evaluating	Remembering and recalling the passage
MCQs	Traditional method	Remembering	Recalling the passage
Vocabulary activity: Expository paragraph on the effectiveness of the passage	Traditional method + Learner-centered Learner-centered	Remembering + Analyzing Understanding	
Paraphrasing	Learner-centered	Analyzing	Constructing ideas
Persuasive essay on quotes	Learner-centered	Evaluating	Creating social writings
Group discussion	Learner-centered	Evaluating	Critiquing opinions and constructing ideas

### Interpretation

Cognitive demands refers to the mental effort through which a person thinks, from unit 1 to unit 15 we witness different activities such as comprehension, MCQs, vocabulary activities, writing, listening, speaking skills and grammar portion. As far as, comprehension is concerned it has moderate cognitive demands as it allows both learner-centered and traditional-centered pedagogical method, some of the comprehensive questions falls under the traditional method because it demands definitions whereas some demands critical thinking.

MCQs has low cognitive demand because it demands recalling of the facts from the lesson. Each unit has different activities related to vocabulary some of them falls under learner centered it requires high cognitive demands while the others fall under traditional method where the students are supposed to find meaning from the dictionary it requires



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low cognitive demand.

Every unit has writing activity as well it is learner-centered because the students are supposed to think independently and write on a particular category such as paraphrasing, essay writing, paragraph writing, summaries of the text and so forth, here we witness a shift from traditional method to learner-centered approach across the book on the grounds of these activities it compels the students to think and has high cognitive demand.

Students participation and presentation in listening and speaking activities across the book has high cognitive demand and a shift from traditional to learner-centered pedagogy these activities are designed in such a way that they think independently, presenting their opinions, take parts in healthy discussions during study circle it has a huge effect on their personality and boosts their motivation instead of just listening to their instructor. Every unit ends with grammar portion it follows the traditional method where the students have to apply rules to complete the task.

The cognitive demands of the exercises are analyzed by Bloom's taxonomy, it has six categories that is understanding, evaluating, applying, analyzing, creating, and remembering ; with the help of these six categories we coded each activity of the exercise to know about the mental effort a student has to put into and a shift from traditional to learner-centered pedagogy.

Overall, the findings demonstrated that there is a slight shift from traditional to learner-centered pedagogy as the ratio of comprehension, mcqs and grammar portions is repeated in every exercise, whereas each chapter has low-order cognitive demands and has limited opportunities for high-order thinking skills.

### **Conclusion:**

The present study explored the 10th-grade book of Khyber Pakhtunkhwa, examining cognitive demands through Bloom's taxonomy, and the pedagogical shift was analyzed through the activities in the textbook. However, there is a gradual transition, but traditional pedagogy is still there, and we can witness it through comprehension, MCQs, and the grammar portion. The activities that inculcate confidence, critical thinking, and constructing ideas reflect analytical ability and broader educational reforms. The study recommends that teachers should also have proper training so that they can design tasks in such a way that students think critically.

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### **Appendix**

Khyber Pakhtunkhwa 10th grade book