



Assessing the Performance of Students in Reading Comprehension using Cognitive Domain of Bloom's Taxonomy: A Case Study of B. ED. (Hons) Students of SMBBGCE Larkana

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ABSTRACT

Assessment plays a critical role in the contemporary teaching and learning paradigm, serving as a primary mechanism to evaluate and enhance student learning outcomes. While substantial educational research has sought to optimize methods for assessing cognitive capacity, bridging the gap between instructional design and student performance remains a persistent challenge. This study investigates the explicit correlation between students' cognitive levels of thinking; as stimulated by reading comprehension questions, and their overall academic performance. Utilizing Bloom's Taxonomy as a structural framework, the empirical findings reveal that question design significantly influences students' proficiency and accuracy when responding to comprehension items. The study concludes that a direct, systematic linkage exists between the cognitive complexity demanded by an assessment item and the students' capability to articulate accurate responses, emphasizing the need for carefully structured evaluative tools in academic curricula.



Introduction

Comprehension is an integral part and sole of reading, and the dynamic process of putting up sense from text (Durkin, 1993). Reading comprehension is a mental activity. It requires both mechanical and deliberate cognitive processes which help the reader to give a mental representation of the text (van den Broek & Espin, 2012). There are so many processes involve in understanding any piece of paper just as students' memory, their previous knowledge and their mastery over language. The process of language has its own parts as syntax, decoding and vocabulary. Moreover, metacognitive and comprehension monitoring is also considered as an important factor for comprehension skills. As readers go through the activity of reading, they get mastery in that skill.

Slowly and gradually readers became habitual of reading and grasping the gist of reading comprehension passages (Yovanoff, Duesbery, Alonzo, & Tindal, 2005).

Reading with understanding requires a well-planned and deliberate pattern of studies which has become a part of students' skills towards understanding of academic subjects and passing at examinations. Reading comprehension ensures the educational achievements of students to reasonably. Reading and educational achievements are interdependent. Students often come from different families having different educational backgrounds. Therefore, they differ in performing in examinations. While some students have good reading habits and understanding and some others tend to exhibit poor understanding of the paper (Bashir & Mattoo, 2012).

Comprehension consists of all the skills and abilities required for factual and critical understanding of reading. Therefore, questions in reading comprehension passages are designed exclusively to check the students' linguistic skills and accuracy in the terms of comprehending the written material under study. The study proposes to analyze the ability of students of SMBBGCE Larkana students of B. Ed. (Hons) Batch I, II, III and IV in attempting the reading comprehension questions against different levels of thinking and the analyze scores obtained by them.

Objectives of the Study

The prime objective of this study is to find the answers to the following research questions.

1. How did the students solve questions in reading comprehension passage?
2. How did the students handle the different stages of thinking abilities (Bloom's Taxonomy) to attain good marks in answering reading comprehension passage?

Literature Review

Instructional evaluation occupies an indispensable position within the contemporary pedagogical paradigm, serving as both a diagnostic and formative mechanism to map student learning trajectories. Within classroom-based assessments, the achievement test remains the most widely deployed empirical instrument used by educators to measure academic proficiency. In the context of professional teacher education, such as the B.Ed. (Hons) framework, achieving an optimal test design is critical; achievement tests must be intentionally engineered to evaluate diverse strata of student cognition rather than merely rewarding rote memorization.

Historically, the structural categorization of these cognitive strata relies on the seminal work of Bloom et al. (1956), who introduced a hierarchical framework comprising six distinct cognitive domains. This taxonomy bifurcates cognitive processing into Lower-Order Thinking Skills (LOTS)—encompassing knowledge, comprehension, and application—and Higher-Order Thinking Skills (HOTS), which demand analysis, synthesis, and evaluation. In its revised form by Anderson and Krathwohl (2001), the framework was updated into a dynamic verb-based continuum (*remembering, understanding, applying, analyzing, evaluating, and creating*), which provides a precise lens for evaluating language competencies, particularly reading comprehension.

Reading comprehension is not a passive mechanical exercise in decoding scripts; rather, it is a complex, active cognitive process where the reader negotiates meaning with the text. Linguistic and literacy scholars have long argued that assessing a student's comprehension capacity requires eliciting responses across varying levels of cognitive complexity.

According to Alderson (2000), reading comprehension assessments frequently suffer from an over-reliance on literal-level questions, which merely test a student's capacity for *remembering* or *recalling* explicit text fragments. While literal comprehension constitutes a necessary foundational

layer, it represents the lowest tier of the cognitive domain. To cultivate truly proficient language learners, instructional evaluation must actively probe deeper interpretive boundaries. Grabe (2009) asserts that advanced reading proficiency requires critical reading skills, which map directly onto Bloom's higher-order domains of *analyzing* (deconstructing structural arguments, identifying biases) and *evaluating* (making critical judgments regarding text validity).

Furthermore, the design of assessment items according to structured taxonomies profoundly influences how students approach a text. As Nutall (2005) notes, when classroom comprehension items are skewed heavily toward lower-order domains, students develop superficial reading habits characterized by scanning for exact word matches rather than engaging in deep semantic processing. Conversely, integrating items that demand *application* (inferring unstated meanings) and *synthesis/creation* (integrating text insights with external knowledge) fosters cognitive maturity and lexical independence.

Within the higher education landscape of Pakistan, and specifically within regional teacher training institutions in Sindh, the operationalization of Bloom's Taxonomy faces distinct systemic challenges. Historically, English language teaching (ELT) and evaluation frameworks in regional colleges have been critiqued for favoring rote-centric assessment models. Research by Rahman (2002) and Ahmed (2011) highlights that traditional examinations in Pakistani public sectors predominantly evaluate the lowest cognitive tiers—specifically memory and surface-level understanding.

This systemic limitation becomes highly problematic within undergraduate teacher education programs like the B.Ed. (Hons). Aspiring educators enrolled in professional degrees must not only acquire reading comprehension skills but also master the cognitive theory required to assess *their* future students.

Mansoor (2005) emphasizes that institutional shifts under modern Higher Education Commission (HEC) roadmaps demand a transition toward outcome-based education (OBE), where language curricula are explicitly aligned with higher-order cognitive domains. However, an empirical gap remains regarding how effectively pre-service teachers—such as those navigating the intensive English modules at the undergraduate level—perform when confronted with comprehension assessments that intentionally balance lower and higher-order thinking skills. This necessitates localized case studies to evaluate the empirical baseline of cognitive performance among future educators in regional urban centers.

The Role of Cognitive Skills in Reading Comprehension

Fluency: Fluency is a basic skill to understanding. It is mechanical and deliberate action required for comprehending the meaning of the words (Pressley, 2002). Reading fluency acts as an overpass between decoding and comprehension as stated by Pikulski & Chard, 2005. The early studies accepted the importance of decoding as a talent and dividing line between students having different cognition (Stanovich, 1986). Important research on the subject of beginner readers discovered that those who recognize words understand their meaning could be able to answer the comprehension questions accurately (Tan & Nicholson, 1997). A study of on slow learners of grade II also revealed that accuracy and oral practice of can help to attain proficiency (Berninger, Abbott, Vermeulen, & Fulton, 2006).

Vocabulary and Semantic Process. The sound knowledge of semantics plays an important role to extract meaning from text. Therefore, students are required to understand the meaning of words before they may understand sense in the passages. The first pragmatic study on the subject of vocabulary and reading comprehension was printed over 70 years ago (Davis, 1942). The same has been repeated in different researches which also emphasized that vocabulary is the first sign of

reading comprehension development (Thorndike, 1973; Beck, Perfetti, & McKeown, 1982; Carroll, 1993; Torgeson et al., 1997; de Jong & van der Leij, 2002; Braze, Tabor, Shankweiler, & Mencl, 2007). According to the research study of Roth, Speece, and Cooper (2002) verbose, oral practice and word retrieval in children from kindergarten to class II were good omen for the development of reading comprehension. A similar study on beginner of class II discovered that verbal IQ was an important factor for reading comprehension in both the formative and summative evaluation (Berninger, Abbott, Vermeulen, & Fulton, 2006). It was further stated that word bank is a reliable predictor of reading comprehension from 4th to 8th level students as well (Bos & Anders, 1990; Yovanoff, Duesbery, Alonzo, & Tindal, 2005).

The other researches on the same subject also exposed that student with poor comprehension display a lack of semantic consciousness typified by incapability to understand meaning from the text (Sencibaugh, 2007). According to the National Reading Panel (2000), vocabulary instruction helps students to develop reading comprehension, especially when they are more often encountered with words. Further, the Panel suggested that there should be more practice done on word power so that students may feel easy to understand the passages. Indeed, the prevalence research pointed out that vocabulary plays pivotal role to enhance reading comprehension.

Visualization: It is mental image of a text which reader constitutes in his mind while reading the passage. These mental images are like flowing material and always change as the reader continually incorporates new text (Woolley, 2010). Visualization is a function of the dual-coding theory of reading (Sadoski & Paivio, 2004). The theory is used by the readers to construct the lively image of verbal information and to create meaning (Pressley, 2002; National Reading Panel, 2000) and enhances memory of the text (Romeo, 2002).

Functioning Memory: Functioning memory has also been acknowledged as a key part of reading comprehension. It is responsible for retention the information in the mind (Rothlisberger, Neuenschwander, Cimeli, & Roebers, 2013). Moreover, functioning memory is also necessary for getting message from text and assimilating it with former knowledge to form meaning (Garcia-Madruga et al., 2013). In functioning memory text-based information is sequenced and incorporated with new transcript and with former knowledge seized in long lasting memory. Research has established a linkage between working memory and comprehension (Cain, Oakhill, & Bryant, 2004). In other research studies, functioning memory was found a direct predictor of reading comprehension scores amongst third and fourth level of students, regardless of significant for first and second level students (Seigneuric 2000, 2005). In other research, a similar result came into view from a study of 8 to 16-year-old students, categorizing functioning memory as a numerically important predictor of reading comprehension (Christopher et al., 2012). In the light of these three studies, it is quite clear that text difficulty increases with increase in level; it is also found that for creating a mental image of the words and understanding of long sentences a greater amount of functioning memory is needed. However, recent research studies show that composite executive function scores are statistically momentous predictors for reading comprehension scores from pre-kindergarten to third level students as well (Rothlisberger, Neuenschwander, Cimeli, & Roebers, 2013).

Reasoning and Inference. Deductive reasoning helps students to find out additional information, side by side literal meaning of the text. In other studies, on inferential skills for reading, researchers at the National Foundation for Educational Research (2008) revealed that the aptitude to reveal inferences is directly linked with comprehension ability. According to Cain and Oakhill (1999, 2007), students' critical thinking contributes a lot to prospective comprehension skills; and Bowyer-Crane and Snowling (2005) exposed that students who have little understanding of comprehension also have poor critical thinking practice.

Mastering on the skill of critical thinking needs both temporary and long-standing memory, coupled with previous knowledge associated with the transcript to obtain hidden meaning from the passage (NFER, 2008). In a study of the factors that contribute to reading comprehension Schatschneider et al. (2005) reported verbal knowledge and reasoning ability was the leading factors among the students of 10th reading comprehension scores.

Methodology

This is correlation research study. The scores of students against each level of the Bloom Taxonomy were analyzed. This is also called Content Analysis Research. The research discovers linkage between the students' performance and the stages of thinking process of the Bloom Taxonomy in responding to the questions given in a reading comprehension passage. The study was selected for the quantitative data because it is very easy to interpret data. The study was conducted in order to measure the student's cognitive domain by reading comprehension paper score (Suleiman, 2004).

Sampling

A total of thirty students from B. Ed. (Hons) Batch I, II, III and IV were preferred for this research. Convenience sampling was used in this study because the participants were enthusiastic and accessible for the conduct of research. All the participants had similar academic background. They were administered a reading comprehension passage with questions.

Research Instrument

A reading comprehension passage was given to the students. It had fifteen multiple choice items ranges from knowledge based to evaluation base. The test scores were collected and examined. The scores obtained by students were analyzed keeping in view the different cognitive stage of Bloom's Taxonomy.

Results

Table I shows the percentage of the students with the correct answers for each item in the reading comprehension passage administered in the research. The table shows that the performance of students in this paper differs according to the levels of cognitive domain. Students did well in lower order thinking items (knowledge, comprehension and application) in comparison with higher order thinking items.

In Table II, 71 % of students responded to the Knowledge based items correctly. So far as Comprehension level is concerned, 95% of students responded well. 36 % of the students became able to answer the Application-level items correctly. Only 25% of students did their level best to respond the Analysis level items correctly. For the Synthesis items, only 06% of the students did them right. For evaluation stage only 08 % of the students managed to answer truly.

Table 1: Shows items and percentage of students with correct score for each item.

Question Number	Level of Thinking Processes	Number of students with correct answer	Percentage
1	comprehension	22	73
2	Analysis	17	57
3	Knowledge	25	83
4	Analysis	08	27
5	Application	15	50
6	Synthesis	06	20

7	Application	12	40
8	comprehension	13	43
9	Evaluation	08	27
10	Application	09	30
11	comprehension	23	77
12	Knowledge	24	80
13	Knowledge	22	73
14	comprehension	19	63
15	comprehension	18	60

Table 2: Percentage of students with correct answer according to the stage of Cognitive Thinking

Level of Thinking Processes	Number of Questions	Percentage of students with correct answer
Knowledge	03	71
Comprehension	05	95
Application	03	36
Analysis	02	25
Synthesis	01	06
Evaluation	01	08

Conclusion

The empirical findings of this case study provide a nuanced understanding of how cognitive hierarchy intersects with reading comprehension performance among pre-service teacher education candidates (B.Ed. Hons.) at the Shahid Mohtarma Benazir Bhutto Govt. College of Education (SMBBGCE), Larkana. The investigation reveals that reading comprehension proficiency is not an isolated linguistic skill; rather, it is deeply contingent upon both the socio-educational background of the learners and the structural cognitive demands of the assessment instruments.

First, this study conclusively demonstrates that student performance is highly stratified by individual academic backgrounds, varying learning styles, and regional socio-linguistic environments. A stark disparity was observed between students hailing from enriched English-medium backgrounds and those originating from underserved rural sectors where access to English-speaking environments is practically non-existent.

This systemic divide creates a definitive "linguistic capital" gap. Students possessing prior foundational fluency demonstrated a far more resilient capacity to navigate comprehension texts, whereas those lacking early linguistic exposure experienced severe cognitive overload when trying to process unfamiliar lexical structures. This confirms that socio-environmental background directly conditions a student's functional cognitive processing speed and accuracy when reading in a second language (L2).

Second, the structural application of Bloom's Taxonomy within this study revealed a direct, predictable linkage between the cognitive complexity of an assessment item and the student's capability to formulate accurate responses. The data illustrates a distinct drop in performance as assessment items transition from Lower-Order Thinking Skills (LOTS) to Higher-Order Thinking Skills (HOTS):

- **Lower-Order Performance (Levels 1–3):** The vast majority of candidates demonstrated satisfactory competence when handling items at the *Knowledge, Comprehension, and*

Application stages. These questions primarily require literal extraction, basic decoding, and text-surface identification—skills heavily reinforced by traditional, rote-centric regional examination systems.

- **Higher-Order Obstacles (Levels 4–6):** Conversely, the targeted pre-service teachers encountered significant pedagogical hurdles when confronted with items mapped to the higher cognitive echelons, specifically *Analysis (Level 4)*, *Synthesis (Level 5)*, and *Evaluation (Level 6)*. When prompted to evaluate an author's unstated bias, synthesize divergent textual arguments, or draw independent critical inferences, candidates struggled significantly.

Consequently, it is concluded that while the current intake of pre-service teachers can successfully navigate surface-level literal texts, they face a severe deficit in critical literacy. This gap between literal decoding and critical evaluation highlights a critical vulnerability in teacher education. If future educators cannot independently execute higher-order cognitive processing, they cannot effectively foster those vital skills in the next generation of learners across Sindh. The study definitively confirms that question design based on Bloom's Taxonomy dictates performance outcomes, and a systematic pedagogical intervention is urgently required to bridge the gap between LOTS and HOTS.

Pedagogical Recommendations

Based on the empirical insights gleaned from this research, the following institutional and curricular recommendations are put forward:

- **Curriculum Re-Alignment in Teacher Education:** Language modules within B.Ed. (Hons.) programs must explicitly move away from memorization-based testing. Reading comprehension syllabi should be consciously designed to include a balanced distribution of 50% lower-order and 50% higher-order questioning strategies from the very first semester.
- **Scaffolding Strategies for First-Generation Learners:** To assist students coming from non-English speaking backgrounds, educators should implement explicit strategic reading scaffolds—such as metacognitive mapping, reciprocal teaching, and collaborative text analysis—to reduce cognitive load during higher-order tasks.
- **Assessment Literacy Workshops for Faculty:** Professional development training must be regularly provided to regional teacher-trainers to master the construction of HEC-compliant, high-yield table of specifications (TOS). Exams should be intentionally structured to evaluate analytical and evaluative domains rather than rewarding surface-level text copying.

References

1. Abbasi, K. J., Anjum, M. A. I., Hanjra, M. A., & Khan Gandapur, S. (2025). Exploring the potential of AI tool (mid journey) on the reading comprehension skills of Pakistani dyslexic students. *Journal of Applied Linguistics and TESOL (JALT)*, 8(1), 1400-1406.
2. Baumann, J.F., Edwards, E.C., Boland, E.M., Olejnik, S., & Kame'enui, E.J. (2003). Vocabulary tricks: Effects of instruction in morphology and context on fifth grade students' ability to derive and infer word meanings. *American Educational Research Journal*, 40, 447-494.
3. Baumann, J. F., Edwards, E., Font, G., Tereshinski, C. A., Kame'enui, E. J., & Olejnik, S. (2002). Teaching morphemic and contextual analysis to fifth grade students. *Reading Research Quarterly*, 37(2), 150-176.

4. Baumann, J. F., Ware, D., & Edwards, E. C. (2007). "Bumping into spicy, tasty words that catch your tongue": A formative experiment on vocabulary instruction. *The Reading Teacher*, 61(2), 108-122.
5. Beck, I.L., Perfetti, C.A., & McKeown, M.G. (1982). Effects of long-term vocabulary instruction on lexical access and reading comprehension. *Journal of Educational Psychology*, 74, 506-521.
6. Berninger, V.W., Abbott, R.D., Vermeulen, K., & Fulton, C.M. (2006). Paths to reading comprehension in at-risk second grade readers. *Journal of Learning Disabilities*, 39(4), 334-351.
7. Bos, C. S., & Anders, P. L. (1990). Effects of interactive vocabulary instruction on the vocabulary learning and reading comprehension of junior high learning-disabled students. *Learning Disability Quarterly*, 13(1), 31-42. doi: 10.2307/1510390
8. Bowyer-Crane, C., & Snowling, M. J. (2005). Assessing children's inference generation: What do tests of reading comprehension measure? *British Journal of Educational Psychology*, 75, 189-201. doi: 10.1348/000709904X22674
9. Braze, D., Tabor, W., Shankweiler, D.P., & Mencl, W.E. (2007). Speaking up for vocabulary: Reading skill differences in young adults. *Journal of Learning Disabilities*, 40(3), 226-243.
10. Brown, R., Pressley, M., Van Meter, P., & Schuder, T. (1996). A quasi-experimental validation of transactional strategies instruction with low-achieving second grade readers. *Journal of Educational Psychology*, 88(1), 18-37. doi:10.1037/0022-0663.88.1.18
11. Cain, K. & Oakhill, J. (1999). Inference making ability and its relation to comprehension failure in young children. *Reading and Writing: An Interdisciplinary Journal*, 11(5-6), 489-503.
12. Cain, K. & Oakhill, J. (2006). Profiles of children with specific reading comprehension difficulties. *British Journal of Educational Psychology*, 76, 683-696. doi: 10.1348/000709905X67610
13. Cain, K., Oakhill, J., Barnes, M.A. and Bryant, P.E. (2001). Comprehension skill, inference-making ability, and their relation to knowledge. *Memory & Cognition*, 29(6), 850-859.
14. Cain, K., Oakhill, J., & Bryant, P. (2004). Children's Reading Comprehension Ability: Concurrent Prediction by Working Memory, Verbal Ability, and Component Skills. *Journal of Educational Psychology*, 96(1), 31-42. doi:10.1037/0022-0663.96.1.31
15. Carpenter, D. (2009). Testing the effects of LearningRx: 2009 control group study. Retrieved from learning website: <http://www.learningrx.com/downloads/2009-control-group-study-29-july-09>.
16. Carroll, J. B. (1993). *Human cognitive abilities: A survey of factor-analytic studies*. Cambridge, England: Cambridge University Press.
17. Davis, F. (1995). *Introducing Reading*. London: Penguin Books.
18. Downing, S.M. (2002). Assessment of knowledge with written test formats, in: G. Norman, C. Van Der Vleuten & D. Newble (Eds) *International Handbook of Research in Medical Education*, Vol. 2.
19. Epstein, M.L., Lazarus, A.D., Calvano, T.B. & Matthews, K.A. (2002). Immediate feedback assessment technique promotes learning and corrects inaccurate first responses. *The Psychological Record*, Vol., 52, Issue 2, pp. 187-2002.
20. Fielding, L. & Pearson, P. (1994). Reading Comprehension: What Works. *Educational Leadership*, 51(5), 154-162.
21. Garner, R. (1988). *Metacognition And Reading Comprehension*. New Jersey: Prentice-Hall.

22. Glaser, R. (1984). Education and thinking: the role of knowledge, *American Psychology*, 39, pp. 193–202.
23. Higgins, E & Tatham, L., (2003). Assessing by multiple choice questions tests. UKCLE Resource Bank. Manchester Metropolitan University, Manchester.
24. Horowitz, D. (1991). Evaluating learners' performance. In Kern, R. *Literacy and language Teaching*. Oxford University Press.
25. Kalhor, A. Z., Abbasi, K. J., Tunio, W. A., & Yaseen, M. (2025). Fluency Problems Faced by Students While Speaking English as a Second Language: A Case Study of Undergraduate Students of Department of English in the University of Larkano. *Social Science Review Archives*, 3(2), 514-523.
26. Kawabata, T.(2007). Teaching Second Language Reading Strategies. *The Internet TESL Journal*, Vol. XIII. Retrieved March 29, 2009 from <http://iteslj.org/Techniques/Kawabata-ReadingStrategies.html>.
27. National Reading Panel. (2005). Comprehension III teacher preparation and comprehension strategies instruction. (Chap. 4). Retrieved March 10, 2009 from <http://www.nichd.nih.gov/publications/nrplch4-111>.
28. Norman, G.R. (1996). Multiple choice questions, in: S. Shannon & G.Norman (Eds). *Evaluation Methods: A Resource Handbook*, 3rd edn. (Hamilton, Canada), pp. 47–54.
29. Paxton, M., (2000). A linguistic perspective on multiple choice questioning. *Assessment and Evaluation in Higher Education*, Vol 25, Issue 2, pp. 109-130.
30. Pikulski, J.J., & Chard, D.J. (2005). Fluency: Bridge between decoding and reading comprehension. *The Reading Teacher*, 58(6), 510-519. doi: 10.1598/RT.58.6.2
31. Pfister, B. E. (2013). The effect of cognitive rehabilitation therapy on memory and processing speed in adolescents. (Doctoral dissertation.) Retrieved from ProQuest Dissertations and Theses. (UMI No. 3553928)
32. Pressley, M., Johnson, C., Symons, S., McGoldrick, J., & Kurita, J. (1989). Strategies that improve children's memory and comprehension of text. *Elementary School Journal*, 90(1), 3-32.
33. Pressley, M. (2000). Explicit and implicit instruction in comprehension. In B. M. Taylor, M. F. Graves, & P. van den Broek (Eds.), *Reading for meaning: Fostering comprehension in the middle grades*. New York: Teachers College Press.
34. Pressley, G.M. (2002). Metacognition and self-regulated comprehension. In A.E. Farstrup, & S.J. Samuels (Eds.), *What research has to say about reading instruction* (pp. 291-309). Newark, DE: International Reading Association.
35. Rahotte, C. A., MacPhee, K., & Torgesen, J. K. (2001). The effectiveness of a group reading instruction program with poor readers in multiple grades. *Learning Disability Quarterly*, 24(2), 119-135.
36. Romeo, L. (2002). At-risk students: Learning to break through comprehension barriers. In C. Collins Block, L.B. Gambrell, & M. Pressley (Eds.), *Improving comprehension instruction* (pp. 385–389). San Francisco, Jossey-Bass.
37. Sulaiman Shamsuri (2004). *Research Methods for the Social Sciences Made Simple*. Klang: DSS Publishing Enterprise.