

ASSESSING THE COGNITIVE LEVELS OF ENGLISH LANGUAGE ESSAY EXAMINATION QUESTIONS AND THE IMPLICATION ON SANDWICH STUDENTS' ACHIEVEMENT.

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Abstract

This study assessed the cognitive levels of English Language essay examination questions and the implication on sandwich students' achievement. Four research questions were developed, and a descriptive analysis design adopted for the study. Anchored on the Cognitive Domain of Bloom's Taxonomy, 79 sandwich students, of 2023/2024 academic session, were purposively selected from Contacts 3, 4 and 5 out of a population of 131 from Joseph Tarka Sarwuan University, Makurdi, Nigeria. The instruments for data collection were six essay questions purposively selected based on the six cognitive levels of Bloom's Taxonomy and past essay questions in English Language from the 2017/2018 to 2023/2024 academic sessions. Findings revealed, among others, that essay examination questions in English Language for sandwich students cut across the six cognitive levels but were predominant at the Knowledge level followed by Comprehension and least at the Synthesis level. The study concluded that cognitive levels of essay questions have direct impact on sandwich students' academic achievement.

Keywords: Cognitive Domain, Bloom's Taxonomy, English language teachers, Sandwich students, Academic achievement.

Introduction

Questions are words, phrases or sentences expressed in ways that demand responses. It is an interrogative sentence that arouses the interest of the learners to the subject matter and fosters the creation of new knowledge for them (Astrid et al, 2019). Good questions are of immense benefits to students. Among a myriad of benefits of questions are stimulation of the cognitive skills of students, provision of teacher feedback on students' level of comprehension after lesson delivery, scoring tools for assessing students' achievement in examination, enhanced classroom interaction, discovery of new knowledge, among others (Wangru, 2016). To every teacher, therefore, construction and presentation of questions both in the classroom and in examination should be done skilfully and effectively.

Effective teaching and administering of examinations to learners of English Language requires the services of professional English Language teachers. English Language teachers are professionals who are deeply conversant with teaching methods and related contents of English Language (Khani & Hajizadeh, 2016). They are experts who specialise in teaching all aspects of the language to include its vocabulary, pronunciation, grammar, and communication skills to English as a Second or Foreign Language learners. Besides lesson planning and delivery, these teachers also periodically assess the learners' performance to measure their overall achievement in the course in tests and examinations using questions, especially questions in the language.

Various types of questions are employed in an English language examination in Nigerian universities. These questions are broadly grouped as objective (example, multiple choice), subjective (example, filling-the-blanks) and essay questions. The essay remains the most popular of all the types (Aalaei et al., 2016; Bulqiyah et al., 2021) and are often employed in English Language examinations in Nigerian universities. The essay questions are sentential interrogative sentences

expressed in ways that demand composed responses which are lengthy, written in paragraphs and later submitted for an expert judgement (Boye, 2019; Nilson, 2017). They are open-ended and demand the creation of responses by the examinee instead of choosing from a set of given responses. A good English Language teacher should be able to skilfully present questions to students – questions that align with students' cognitive levels, teaching objectives and methods (Bibi et al., 2020). Questions should be presented in ways that test not just students' lower cognitive skills (LOCS) but also higher cognitive skills (HOCS).

The sandwich students studying English language in tertiary institutions need a comprehensive exposure to essay questions at all cognitive levels in examinations. The B.Ed. (English Language) sandwich students are university undergraduates who are on a part-time education programme in tertiary institutions to obtain higher certificates and improve on their learning (Agada, 2019). They are prospective teachers, sometimes referred to as students-teachers and some are on the job already. Answering essay questions is part of the curricula items that English Language students are expected to master. Sandwich students, therefore, also partake in the summative assessments in English Language courses. Most of these assessments are conducted using essay questions in English Language courses.

Generally, there has been a record of poor achievement among English Language students in examination (Anyiendah et al., 2020; Ebiunene, 2023). This affects students of all levels of study including the sandwich students. Till date, language researchers are yet to find a lasting solution to mass failure in English Language examinations (Taiwo, 2017). After being exposed to essay writing examinations for some years, therefore, it is needful to assess the cognitive levels of the questions these prospective teachers have been exposed to in the course of their learning as this would have a future implication on their students. This is crucial as no change has been recorded in the rate of

failure in English Language examinations by Nigerian students despite the amount of research on the matter both in external and internal examinations (Taiwo, 2017).

From the foregoing, more research is needed to discover and proffer solution to the negative trend of poor achievement in English Language examinations especially in answering essay questions. Although much research has been undertaken using the Cognitive Domain of Bloom's Taxonomy (Hamad, 2019; Liman & Isma'il, 2025; Prasad, 2021), the cognitive levels of essay questions asked by lecturers in English Language examinations in Joseph Sarwuan Tarka University, Makurdi (JOSTUM) have not been determined. The predominant level at which questions stem from has not yet been established. Also, the cognitive level at which high or low achievement in answering essay questions at the Cognitive Domain has not been established. Consequently, this research assesses types of essay questions asked in English Language based on the six cognitive levels of Bloom's Taxonomy and the implication on students' academic achievement in JOSTUM.

Theoretical Framework

This study anchors on The Taxonomy of Educational Objectives, commonly referred to as Bloom's Taxonomy (BT). It was propounded in 1956 by a committee of educators headed by an American psychologist and educationist, Benjamin Samuel Bloom. It is a hierarchical model that enables the description and classification of cognitive abilities contingent on selected, measurable, action verbs by teachers that measure expected learning outcome or behaviour from students (Stanny, 2016). It has three broad divisions namely: cognitive, psychomotor, and affective domains. The Cognitive Domain (CD) is the most popular. It facilitates alignment of educational goals and objectives with learning outcomes based on its six levels of cognitive skills divided into Lower Order Cognitive (Critical) Skills (LOCS) and

Higher Order Cognitive (Critical) Skills (HOCS). The lower cognitive skills levels are Knowledge (basic facts and knowledge recollection); Comprehension (understanding and interpreting concepts) and Application (using knowledge learnt in novel situations). The higher cognitive levels are Analysis (breaking larger units of information into smaller parts); Synthesis (Assembling fragmented parts into a new whole and proposing alternate solutions to problems); and Evaluation (passing judgment or presenting a defense based on an external criterion or an internal proof). The CD was revised in 2001 by one of Bloom's students, Anderson Krathwohl (Abdulrahman, 2023). The revised taxonomy makes use of verbs instead of nouns to describe each of the six levels as follows: Remembering, Understanding, Applying, Analysing, Evaluating and Creating. Bloom's Taxonomy is preferred for this study because of its wider acceptability by scholars.

Asking Essay Questions in English Language Examinations based on the Cognitive Domain of Bloom's Taxonomy

The Cognitive Domain aids lecturers in asking quality questions in examinations. Asking questions based on the six cognitive levels of BT trains the students in acquiring and applying classroom knowledge in live situations (Fitriani et al., 2021). Also, students can recall and think out answers to questions critically. It helps students to break larger components of questions into smaller units; appraise, synthesis and evaluate different components of questions by themselves especially when tackling essay examination questions. The cognitive levels are arranged hierarchically beginning from the lowest level of Knowledge where simple facts and details are recollected to the highest cognitive level of Evaluation where higher critical skills are demanded of the students in essay writing.

BT advocates for the teaching of Lower Cognitive Skills (LOCS) first as a building block to HOCS (Gardner & Lichtman, 2023), therefore, Armala (2022) declare that students must be well grounded

in LOCS before graduating to HOCS questions. LOCS questions facilitate students' abilities of recalling information and comprehending them while HOCS questions elicit higher skills of argument, synthesis, decision-making, appraisal, valuing, among others. This proves that questions impact on students' cognitive skills (Dos et al., 2016). The questions asked by teachers can be made to align to the levels of cognitive skills on BT depending on the expected learning outcome. Hamad (2019) however decries that English language teachers are not even aware of BT nor its three domains and those who know it use it wrongly when used at all.

Teachers prefer convergent or LOCS questions for some tangible reasons. These reasons include large class size, limited lecture time and more students taking turns to answer LOCS questions, whereas display or referential questions need more time to be answered (Wangru, 2016). These reasons make teachers prefer the "yes"/ "no" or "short answer" questions during lessons and for easy marking in examinations. This attitude has been proven by research that most teachers seemed to set questions that are mostly on LOCS or convergent in nature to the detriment of HOCS questions (Bibi et al., 2020; Wangru, 2016). Meanwhile, research has shown that asking questions at the LOCS level is one of the challenges of poor students' achievement. Research shows that asking questions at LOCS level leads to rote memorisation from lecture notes by students and manipulating their ways through questions to arrive at the correct answers without critical thinking (Fitriani, et. al, 2021). It hampers students' ability to think critically.

Studies have also confirmed that teachers' questioning strategies have significantly positive predictions on students' achievement in English language (Olagbaju, 2020). This means that the strategy of questioning adopted by a teacher impacts on students' achievement. Crisp and Macinska (2020) buttress that the different elements of a question can influence achievement. For example, using

a bold font to highlight a key word in a question can record a higher students' success rate in that question. Questions, therefore, should not be constructed haphazardly by teachers. Before preparing examination or test items, examiners should take cognizance of certain parameters such as question types, difficulty level of the questions, their reliability and validity, table of specification where the level of cognitive skills on BT to be tested are specified, among others (Hamad, 2019). If questions are not planned for and levels of cognitive skills are not clearly specified, the questions may end up stemming from a particular level to the detriment of other levels. Unplanned questions are most likely to stem from the first two levels of LOCS: knowledge and comprehension.

Empirical Studies

Essay questions elicit HOCS from the students because in generating the appropriate and effective responses, the students will need to assemble available facts together mentally before integrating them into a new, coherent piece of write-up. According to Retnawati (2018), some educators prefer HOCS questions and 21st-century classroom teachers are encouraged to employ more HOCS questions than LOCS. Astrid et al., (2019), however, differ on the premise that HOCS questions lead to students' disengagement in the class. They found out that students resort to silence when presented with HOCS questions unknown to them. It could be inferred from this that if students are exposed to LOCS questions more than HOCS, it may exert a significant negative impact on their achievement in examinations. Confirmed by research, Armala (2022) discovered that students are used to answering LOCS questions than HOCS leading to 44% of them being poor in answering HOCS questions.

Further research using the Revised Bloom's Taxonomy was undertaken by Bayaydah and Altweissi in 2020. They assessed 122 final examination questions by 63 English Language teachers in Southern

Maza, Jordan. Findings revealed that questions at the Remembering (i.e., Knowledge) level were the highest at 30.75% followed by the Comprehension level at 28.15% and Application at 17.75%. The lowest frequencies were recorded at the higher cognitive levels with Analysis (4.07%) being the lowest followed by Evaluation (4.20%) and synthesis (15.08%). This is echoed by Koksal and Ulum (2018) who discovered that the most frequently used cognitive level of EFL past examination questions for General English Courses in Turkish universities was the Knowledge level (81.7%). This was followed by the Comprehension level (18.3%) with the rest of the levels at 0%. Out of these questions, only 18% were writing (essay) questions even though 7 out of the 8 English Language teachers interviewed claimed to use BT in their teaching.

Other research on questions alignment to different levels on the Cognitive Domain of BT and question modes cuts across disciplines. For instance, Liman and Isma'il (2025) investigated the relationship among Remembering (Knowledge), Understanding (Comprehension) and Applying (Application) levels on the Revised Bloom's Taxonomy on academic achievement in Mathematics. It was discovered that exposing students to lectures/examinations at these three levels affected students' academic achievement both directly and positively. Prasad (2021) tested 4th semester Master of Computer Application students reading Software Engineering to online questions across the six cognitive levels. Results showed that the students achieved more at the Knowledge and Comprehension levels: very few of them attained the "Excellent" grade at Knowledge level and "Very Good" at Comprehension level. However, the poorest scores were at the Analysis, Synthesis and Evaluation levels. Hamad (2019) examined ten examination papers and discovered that only 27.3% lecturers with 5 to 10 years teaching experience asked questions at the Synthesis level and none at the evaluation level. Bibi et al., (2020) stated that although HOCS were clearly stipulated in the curriculum, teachers' questions

were mostly LOCS. They assessed questions asked by 3000 1st and 2nd degrees lecturers across various courses including English language. These lecturers were from public universities in Khyber Pakhtunkhwa, Pakistan. It was found that questions at the knowledge level ranked highest at 43%, followed by Comprehension at 32% and the least being Synthesis and Evaluation at 1% each. These authors added that no conscious plans were made by the teachers to ask questions.

Conversely, Dos et al. (2016) found out in research that teachers mostly used divergent (HOCS) questions pegged at 67% while convergent (LOCS) was at 33%. The researchers claim that teachers do this to enhance summaries of lessons taught, motivate their learners, and improve on their higher thinking skills. Thus, arguments have been presented both for and against the impact of types of cognitive questions on Bloom's Taxonomy on students' achievement in English language. However, research focuses on questions generally in tests and examinations and not specifically on essay examination questions. Most of the respondents are regular undergraduates and not sandwich students, especially, those studying English Language Education in their first degree. In JOSTUM, no research has established the types of cognitive questions asked in English language essay examinations based on the six cognitive levels of Bloom's Taxonomy. In addition, the implication of continuous exposure of these students to a particular type of cognitive questions in English Language essay examinations has not been assessed. The researcher therefore decided to establish the cognitive level of the essay questions sandwich students of English Language Education of JOSTUM are exposed to in examinations based on the Cognitive Domain of Bloom's Taxonomy and the implication of such exposure on students' academic achievement in English Language.

Aim/Objectives

The main aim of this research was to ascertain if the questions asked in English Language sandwich examinations accommodate all the six cognitive levels of the Cognitive Domain of Bloom's Taxonomy and the implication on students' achievement. The specific objectives that guided this study were:

1. To ascertain the cognitive levels of essay questions asked in English Language sandwich examinations based on the Cognitive Domain of Bloom's Taxonomy.
2. To establish the most frequent and least frequent levels on the Cognitive Domain of Bloom's Taxonomy at which questions in English Language sandwich examinations are asked.
3. To determine students' ability in answering essay questions in English Language based on the Cognitive Domain of Bloom's Taxonomy.
4. To test if there is any significant difference in students' ability in answering essay questions in English Language based on the Cognitive Domain of Bloom's Taxonomy?

Research Question

The following research questions guided the study:

1. What cognitive levels of essay questions are asked in English Language sandwich examinations based on the Cognitive Domain of Bloom's Taxonomy?
2. What are the most frequent and least frequent levels of the Cognitive Domain of Bloom's Taxonomy at which essay questions in English Language sandwich examinations are asked?
3. What is the sandwich students' ability in answering essay questions in English Language based on the Cognitive Domain of Blooms Taxonomy?

4. Is there any significant difference in students' ability in answering essay questions in English Language based on the cognitive domain of Bloom's Taxonomy?

Methodology

This study employed the descriptive analysis design, and it took place in the Department of English Language Education, Sandwich Unit, Joseph Tarka Sarwuan University, Makurdi (JOSTUM), Benue State, Nigeria. The purposive sampling technique was employed to select a sample of 79 Bachelor of Education (English Language) sandwich students from an overall population of 131. The distribution of the sample was as follows: 28 in Contact 3, 22 in Contact 4 and 29 in Contact 5 of 2023/2024 academic session. The basic assumption for their choice was that they have been taking essay examinations for at least two Contacts.

The instruments used for data collection were six essay examination questions and past essay question papers of English Language courses from the Department of English Language Education, JOSTUM. No past question papers or essay questions on education courses were assessed. The six essay questions were purposively selected based on the six cognitive levels across Contacts 3, 4 and 5 English Language courses. These questions had already been vetted by the relevant university authorities and administered in Sandwich English Language examinations from 2017/2018 to 2023/2024 academic sessions. Fifty question papers containing 397 questions were assessed across Contacts as follows: 19 from Contact 3, 22 from Contact 4 and 9 from Contact 5.

Using document analysis, each question on the essay question papers was read. Sub/sub-sub questions of a particular question served as an item. 397 directive words and question stems in the essay questions were extracted from the past question papers of sandwich students from 2017/2018 to 2023/2024 academic sessions. They were

then identified and classified. The classification was done based on how each question was worded and the context in which the theme or subject matter was presented. The directive words/question stems were grouped accordingly under the Knowledge, Comprehension, Application, Analysis, Synthesis and Evaluation levels of Bloom's Taxonomy. The first three levels were further classified as Lower Cognitive Levels and the last three as Higher Cognitive Levels as grouped by Bloom (1956). Then the respective frequency distributions and percentages of each cognitive level were calculated. Furthermore, students' written responses to the six essay questions were marked by their respective lecturers and scored. The scores were then analysed using mean and standard deviation. The Welch Tests of equality of means which is a variant of Analysis of Variance (ANOVA) techniques if group variances are unequal was used to compare mean scores of the various cognitive levels (Delacre et al., 2019). Thereafter, the Tamhene Multiple Comparison post hoc test was deployed to compare all pairs of cognitive domains and the results interpreted accordingly.

Results

Research Question 1

What cognitive levels of essay questions are asked in English Language sandwich examinations based on the Cognitive Domain of Bloom's Taxonomy?

Table 1

Types of Questions asked in Examinations Based on Cognitive Levels on Bloom's Taxonomy

Levels of Bloom's Taxonomy	Frequency	Percentage	Level	Frequency by Level	Percentage by Level
Knowledge	115	26.97	Lower	-	-
Comprehension	223	56.17	Lower	351	88.41

Application	13	3.27	Lower	-	-
Analysis	23	5.79	Higher	-	-
Synthesis	8	2.02	Higher	46	11.59
Evaluation	15	3.78	Higher	-	-
TOTAL	397	100.00	-	397	100

Results from Table 1 indicate that questions in English Language examinations for sandwich students spread across the six cognitive levels on BT as follows: Knowledge (28.97%), Comprehension (56.17%), Application (3.27%), Analysis (5.79%), Synthesis (2.02%) and Evaluation (3.78%).

Research Question 2

What are the most frequent and least frequent levels of the Cognitive Domain of Bloom's Taxonomy at which essay questions in English Language sandwich examinations are asked?

Results from Table 1 reveal that essay examination questions were most frequent at the Comprehension level (56.17%) followed by Knowledge level (28.97%). Grouping the six cognitive levels as lower and higher cognitive levels respectively, results by percentage show that most of the questions stem from the lower cognitive levels (Knowledge, Comprehension and Application) at 88.41%. On the other hand, results from Table 1 indicate that the least cognitive level at which essay examination questions stem from is the Synthesis level pegged at 2.02%. By grouping, questions are least asked at the higher cognitive levels (HOCS) of Analysis, Synthesis and Evaluation at 11.59%.

Research Question 3

What are the sandwich students' ability in answering essay questions in English Language based on the Cognitive Domain of Blooms Taxonomy?

Table 2

Sandwich Students' Ability in Answering Essay Questions in English Language Based on the Cognitive Domain of Bloom's Taxonomy

Level	Sample Size N	Mean %	Std. Deviation
Knowledge	79	71.73	12.76
Comprehension	79	70.24	11.04
Application	79	64.23	12.22
Analysis	79	52.27	9.35
Synthesis	79	46.44	10.93
Evaluation	79	39.76	11.31
Total	474	57.45	16.52

Table 2 presents the mean achievement scores of students in answering essay questions in English Language based on the Cognitive Domain of Bloom's Taxonomy. The mean achievement represents a description of students' ability in answering essay questions in English Language based on the Cognitive Domain of Bloom's Taxonomy. From the results in Table 2, the mean achievement are as follows: Knowledge = 71.73%, Comprehension = 70.24%, Application = 64.23%, Analysis = 52.27%, Synthesis = 46.44% and Evaluation = 39.76% with standard deviations 12.76%, 11.04%, 12.22%, 9.35%, 10.93%, and 11.31% respectively. According to the University (JOSTUM) grading system, the mean achievement indicates that students' ability at Knowledge and Comprehension levels could be graded as A (Excellent), Application level is graded as B (Very Good), Analysis is C (Good), Synthesis is graded D (average) with the least ability demonstrated at the Evaluation level with grade F (Fail).

Research Question 4

Is there any significant difference in students' ability in answering essay questions in English Language based on the Cognitive Domain of Bloom's Taxonomy?

To answer research question 4, the following null hypothesis (H_0) is tested:

H_0 : there is no significant difference in students' abilities in answering essay questions in English Language based on the Cognitive Domain of Bloom's taxonomy.

To make an informed choice of model for comparison of means based on empirical evidence, the Levene's Test of homogeneity of variance was used to test the assumption of equality of variances.

Table 3

Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
4.012	5	468	.001

Levene Test result in Table 3 shows that the significant value = 0.001 is less than the level of significance (α) = 0.05. This implies that the variances of the six groups (Knowledge, Comprehension, Application, Analysis, Synthesis and Evaluation) are significantly different, therefore, the Welch Test of equality of means was selected for the analysis.

Table 4

Welch Tests of Equality of Means

Welch Statistic ^a	df1	df2	Sig.
103.243	5	218.024	.000

a. Asymptotically F distributed.

From the Welch Tests of Equality of Means results in Table 4, since the significant value = 0.000 is less than the level of significance (α) = 0.05, the null hypothesis is rejected. Hence, it is concluded that there is significant difference in students' ability of answering essay questions in English Language based on the Cognitive Domain of

Bloom's Taxonomy. Since there is significant difference in students' ability of answering essay questions in English Language based on the Cognitive Domain of Bloom's Taxonomy, a further check on the pair of Cognitive Domain which differ from each other is required. Table 5 presents the Tamhene Comparisons of all pairs of Cognitive Domain.

Table 5: *Tamhene Multiple Comparisons of all Pairs of Cognitive Domain*

Factor (i) vs Factor (j)	Mean Difference (i-j)	Standard error	Significance
Knowledge - Comprehension	1.494	1.898	1.000
Knowledge - Application	7.506*	1.988	.003
Knowledge - Analysis	19.468*	1.780	.000
Knowledge - Synthesis	25.291*	1.890	.000
Knowledge - Evaluation	31.975*	1.918	.000
Comprehension - Application	6.013*	1.853	.021
Comprehension - Analysis	17.975*	1.629	.000
Comprehension - Synthesis	23.797*	1.749	.000
Comprehension - Evaluation	30.481*	1.779	.000
Application - Analysis	11.962*	1.732	.000
Application - Synthesis	17.785*	1.845	.000
Application - Evaluation	24.468*	1.874	.000
Analysis - Synthesis	5.823*	1.619	.007

*The mean difference is significant at the 0.05 level.

From the results in Table 5, apart from the first pair: Knowledge - Comprehension with significant value 1.000, all other pairs are significantly different from each other since the significant values are all less than $\alpha = 0.05$. In other words, students' abilities in answering essay questions in English Language at Knowledge and Comprehension levels are the same, while their abilities at other cognitive levels are significantly different.

Discussion of Findings

Findings revealed that although questions asked in English Language essay examinations for sandwich students spread across the six cognitive levels of BT, the essay questions these students frequently encounter in English Language examinations are LOCS questions. These questions only test their ability to understand, define and interpret concepts through explanations and general discussions. These questions are lower cognitive questions. This finding invalidates Dos' (2016) findings that teachers mostly used divergent (HOCS) questions but aligns with Armala et al. (2022) who discovered that students are used to answering LOCS than HOCS questions.

The findings reveal that questions at HOCS are relatively less than LOCS. The least asked questions are at the Synthesis level (2.02%) followed by Evaluation (3.78%) which are the last two higher cognitive levels on the CD. The fact that the percentages of questions asked by English Language lecturers are significantly smaller at HOCS than LOCS is collaborated by both students and researchers. For instance, just 1% questions are asked at Synthesis Level (Bibi et al., 2020); only 27.3% teachers asked questions at the Synthesis Level on BT; and 80.2% of students in a study affirmed that their teachers mostly employed display than referential questions (Wangru, 2016). Bayaydah and Altweissi (2020) buttressed that even revision questions in textbooks are predominantly questions at LOCS. This may be due to several factors such as teachers' ignorance of BT and its usage or random setting of examination questions. These factors are verified by scholars. For instance, no conscious plans are made by lecturers to set examination questions (Bibi et al., 2020); teachers are ignorant of BT (Koksals & Ulum, 2018); and teachers do not use BT when setting essay examination questions or use it wrongly when used at all (Hamad, 2019).

The study discovered that constant exposure of sandwich students to LOCS questions in English Language essay examinations

has implications on students' achievement. The question the sandwich students were asked at the Knowledge level was from ENG 531- The English Novel, 2021/2022 academic session. It read: 1(a) *Mention the title of the first English Novel, its author and year of publication (6marks)*. 1(b) *State two major features of the novel that qualified it as an English novel (4marks)*. 1(c) *clearly state the main theme of the novel above that qualified it as an English novel (10marks)*. This question is at the lowest rung of the CD, the Knowledge level which tests simple recollection of facts and details. This is determined by the directive words *mention*, *state*, and *clearly state*. Students' achievement in answering essay questions was excellent with a mean achievement score of 71.73%.

The question selected at the Comprehension level was: *Discuss how the various genres of literature can aid the teaching of language* - ENG 319: Language and Literature Methods II, 2018/1019 academic session. The directive word *discuss* is a predictor of the Comprehension level, a level where basic understanding of concepts is required of students in answering questions. Again, the students recorded a high achievement mean score of 70.24%. The students were able to delve into elaborate presentations of facts and perspectives on how the various genres of literature can aid the teaching of English language.

The third level on the Cognitive Domain, the Application level, demands that candidates should relate what is known or taught to actual/live situations. The selected essay examination question given the sandwich students at this level was: *Write a lesson plan to show how you would teach language using the functional-notional approach* - ENG 319: Language and Literature Methods II, 2019/2020. The students were required to apply the knowledge of the functional-notional approach taught in the class to a real lesson plan they would use to teach any topic in English Language. Their mean achievement score of 64.23% indicate an achievement that was above average. The students' high achievement in answering questions at the lower cognitive levels buttresses the fact

that they are familiar with essay examination questions at the LOCS level. This fact is collaborated by Armala (2022), Bayaydah and Altweissi (2020) and Prasad (2021). Their ability was at the “Good” grade.

An example of an essay question at the fourth level of CD, the sandwich students were asked to: *Analyse the themes of betrayal and traditional life that is uncorrupted by Western civilization in two African novels you have read* – ENG 425, The African Novel, 2021/2022 academic session. “Analyse” is an example of a directive word at the Analysis level of BT. It demands for the breaking of a concept into its component parts to study the relationship(s) between them. This requires for a higher level of critical thinking than the last three levels. Sandwich students’ achievement at this level is only a little above average. It was hard for lots of the students to bring out the required themes that were free from western civilisation and explain them in detail.

A typical question at the Synthesis level asked was: *Construct a sentence each with 10 adjectives derived from adjectives* – ENG 423: Introduction to English Morphology, 2023/2024 academic session. The word “Construct” is an example of a directive at the Synthesis level. At this level, candidates are expected to be able to create new concepts by assembling fragmented pieces together. They were to create new sentences using ten adverbs derived from adjectives which requires a high cognitive level. Most candidates failed this question as evidenced in their mean achievement score of 46.44%. A typical excerpt from students’ booklets (no. 5) is seen below:

<u>Adverb</u>		<u>Adjective</u>
Develop	derived from	developer
Sentence: All my father estate has been developer [sic].		

The above response is wrong. “Develop” is a verb and not an adverb and “developer” is a noun and not an adjective. The sentence would

have read: All my father's estates have been developed. Constructing appropriate new sentences as demanded by this question proved to be difficult to majority of the sandwich students.

At the last level of Evaluation, the sandwich students were asked to: *Assess the major trends in early urban novels* – ENG 425: The African Novel, 2020/2021. To carry out an assessment is at the highest level of the CD of BT. The sandwich students were unable to achieve this feat as depicted by their achievement score of 39.76%. This may be because they are familiar with LOCS questions in their essay examinations. Failing at the HOCS level is a predictor that the students lacked the abilities to tackle questions that demand higher-order thinking skills. This is collaborated by Bayaydah and Altwieissi (2020) and Prasad (2021).

Findings show that sandwich students' abilities to answer essay questions are the same at the first two lower levels but significantly differ at the last three higher levels. This means that they possess the skills needed to tackle LOCS questions but are deficient at HOCS. This is because all three Contacts are exposed to essay questions at the same cognitive levels which are questions at the LOCS. Research has proven that (1) exposing students predominantly to questions at the first three levels has a direct and positive impact on achievement (Liman and Isma'il, 2015); (2) teacher's questions have a significant positive impact on students' achievement in English language (Olagbaju, 2020); (3) also on their cognitive skills (Dos et al., 2016); (4) and further contributes to poor achievement (Fitriani et al., 2021). It appears that the higher the cognitive skills needed to answer an essay question, the poorer the achievement of the sandwich students from JOSTUM. This is validated by the significant differences in their achievement at the higher cognitive levels.

Conclusion

Based on the findings, the study concludes that essay questions presented to B. Ed sandwich students studying English Language in JOSTUM cuts across all the cognitive levels on the Cognitive Domain on Bloom's Taxonomy. Predominantly, essay questions are asked at the LOCS level especially at the Knowledge and Comprehension levels. Students' achievement at HOCS is poor especially at the Synthesis Level. It is believed that if more lectures on how to tackle higher cognitive essay questions are taught the students and more of these questions are presented to them in their examinations, they will achieve better scores. Lecturers should also employ Bloom's Taxonomy in setting essay examination questions for a uniform spread of questions across all cognitive levels.

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