



Level of Thought Processes of the RCQ's in the Malaysian University English Test (MUET) Reading Component and Students' Performance : An Analysis

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ABSTRACT

This study concerns the issues of a large number of UiTM, Jengka undergraduates not obtaining strong bands in the MUET paper, which relates to their inability to answer correctly reading comprehension questions in the MUET paper. This research intends to provide educators same information on the level of thought processes of questions designed by the Malaysian Examination Council (Majlis Peperiksaan Malaysia) in the reading comprehension passages of the MUET paper and, therefore, equipping them with the necessary skills to perform tasks with regard to tackling reading comprehension questions. The findings indicate that the level of questions designed according to the level of thought processes advocated by the Bloom taxonomy has a bearing on the performance of the students in the MUET paper. It seems that the students face difficulties when answering higher order questions especially questions at the level of analysis, synthesis and evaluation. It also has an influence on the students' ability to answer higher order questions as compared to lower order questions. The findings conclude that there is a relationship between the level of thought processes on questions formation and the students' ability to answer them correctly. Such findings has provided a common base for further discussions and debate about our undergraduates competence in the English Language as well as the recommendations on the techniques that could be used to handle higher order level questions.

Keywords: *level of thought, MUET, students' performance*

Introduction

MUET is the acronym of the Malaysian University English Test which measures the English language proficiency level of pre-university students. Students who wish to pursue first degree courses in public institutions of higher learning in Malaysia are required to take this test which is administered by the Malaysian Examination Council.

When MUET was first introduced, it was made compulsory for students enrolling in public universities to take the test but they did not have to 'pass' it to gain entry. Students are classified according to six bands or levels of achievement from Very Good User (Band Six) to Extremely Limited User (Band One). Many people assume that Band Three (Modest User) is the passing grade for MUET, but according to Malaysian Examinations Council (MEC) subject officer, Khatija Mohd Tahir, this is not the case. There is no pass or fail mark. MUET is a criterion-referenced test as students' ability is measured against a set of criteria in terms of language proficiency required of university undergraduates' in. "The results show that students who do badly in the test simply do not have the (English) language ability to cope with university-level studies." To be able to use English effectively in university, Khatija says undergraduates should have a minimum Band Four (Competent User) (New Straits Times 26 October 2003).

This study to investigate the level of thought processes (LOTP of the Bloom Taxonomy) of questions designed by the Malaysian Examination Council (MEC) or Majlis Peperiksaan Malaysia (MPM) in the Malaysian University English Test (MUET). It aims to find out the LOTP of question designed in the Reading Comprehension Paper 3 of MUET, May 2004 and the test scores obtained by the Jengka UiTM students.

This study can provide a common base for further discussion and debate about our students' competence in the English Language with reference to their ability to comprehend reading passages in the MUET paper in our effort to produce better results in this principal-level subject for enrolment into public universities. It also seeks to provide recommendations to further improve the students' performance and achievement in this public examination paper.

Literature Review

Good achievement tests are supposed to measure different levels of learning. Bloom (1956), for example, classified six hierarchical categories according to the cognitive process they need. Descriptions of the major categories in the cognitive domain are:

1. knowledge levels in which students are required to memorize facts and knowledge,
2. comprehension levels in which students are required to interpret information their own words,

3. application levels in which students are required to use what they have learned in a new situation,
4. analysis levels in which students are required to break down the instructional task into its components,
5. synthesis levels in which students are required to make some inferences and come up with conclusions, and
6. evaluation levels in which students are required to judge and value the merit of the learned materials and make a decision.

Comprehension scores in a test or an examination paper need interpretation. Various assessment procedures serve as a guideline where the assessment is already worded as an interpretation. It is also interpreted as analysis on the scores whereby each mistake shows something that needs to be relearned. Other interpretations included determining pass or fail, levels of grades or estimates of future language related performance. However, it is difficult to judge the interpretation or analysis of a test score because many factors affect success in a particular course. No one approach establishes validity, which is rather the sum of a number of approaches.

Despite the emphasis on the importance of 'the reader' in recent years, many reading tests still operate on the principle that meaning is text-immanent, and that the reader's job is to find the same meanings that the test designer found. The problem with testing comprehension is that they test only whether students are able to think what we want or expect them to think (i.e. what we ourselves have thought). Yet, they do not lead to an accurate assessment of what students really are thinking as they read. In fact, 'forced choice' item type such as multiple choice usually produce the most problems among the best readers, who invariably find some logical flaw or are confused by the only partial adequacy of the possible answers provided (Horowitz 1991).

Despite what experts have said about the nature of reading, many teachers and assessment administrators' measure comprehension by how well students recall the details of what they have read (Allington 2001). Thus, most students are judged as proficient readers because they can answer questions related to the factual information in the text. For example, the National Assessment of Educational Progress (NAEP) results from 1998 suggest that students in the United States are performing at historically high level in overall reading achievement. However, when the assessment focuses on critical reading and responding to text, only a few students demonstrate even minimal proficiency (Allington 2001).

Questions are usually designed to measure the variation of different cognitive levels. Thus, they vary from simple level such as Remember an Instance (RI) and Remember a Generality (RG) to complex level such as Use a Generality (UG) and Find a Generality (FG) according to the cognitive process the learner employs during answering the required question (Merrill 1983). Low-level questions like remember - an - instance and remember - a - generality have been consistently used in school and teachers' textbooks, but high level questions like apply and find a generality levels are rarely used. Thus, questions which require recall of specific information or facts (RI, RG) may produce a different level of learning from questions which require students to apply (UG) or transfer the learned idea to new situations (FG). In short, low levels questions induce low levels of learning and high levels questions induce high levels of learning (Darwazeh 1982b, 1996 & Martin 1979).

There have been a number of studies conducted to investigate the levels of questions teachers use in evaluating their students' achievements reading. Hoepfel (1981) conducted a study aiming at categorising questions found in reading skills development books used in Maryland Community College Development Remedial Programs via the "Bloom Taxonomy of Educational Objectives Domain". Results showed that 145 questions (26%) were for knowledge, 408 questions (74%) were for comprehension, 2 questions (0.0035%) were for application and no questions were for analysis, synthesis and evaluation. In other words, results showed that (99%) of the questions were categorised within two levels: knowledge and comprehension.

Al-Makzomy (1986) agreed with Hoepfel's results when he analysed the Jordanian secondary school teachers' responses through a questionnaire, on the levels of questions used in teaching reading comprehension. Results showed that 68% of the teachers usually place more emphasis on literal-type questions (remembrance) than on inferential-type questions (application).

Martin et al. (1994) reinforced Harder's (1991) results. Martin and her friends stated that teachers usually use questions which require factual answers and low levels of thinking (i. e. knowledge and comprehension questions) make up at least 70% of the questions, while questions that require application, analysis, synthesis, or evaluation thinking are used much less often (p.156).

Royer and Konold (1984) examined Hunkin's (1969) study in which he investigated the effect of two levels of questions, knowledge (low-level) and evaluative (high-level) on students' achievement in two groups. Results showed that the two groups did not differ on items from the lower taxonomic levels, but they differ on evaluative items. That is, students receiving higher level evaluation during the study phase performed significantly better on high level questions in the post test.

Al-Nayef (1989) also supported Hunkin's results when he conducted a study to investigate the effect of question levels on reading comprehension of the eleventh graders. Al-Nayef used two levels of questions: low level questions (knowledge), and high level ones (i.e. comprehension, application, analysis, synthesis, and evaluation). Results showed that students who were exposed to high level questions (comprehension, analysis, synthesis, evaluation) performed better on the same levels of questions in the post test.

On the other hand, some researchers found that low level questions have a great effect on students' achievement. For example, Felker and Dapra (1975) investigated the effect of different levels of questions on students' learning.

Results showed that subjects who received comprehension post-questions requiring them to recall (remember) the text performed significantly better than those who received application-level questions requiring them to identify new examples of learned concepts or principles on application level post test, and better than the control group which received no questions during instruction.

Sanders (1973) found significant interactions which indicated that low ability students performed better on remember questions; whereas, high ability students performed better on application level. Memory (1983) supported the above result. He used a post test containing 29 questions written on literal (remember) and application levels. Results indicated that there was a significant interaction which indicated that high ability students performed better on the post test when they are written on high levels (application).

Darwazeh (1982) also reached similar results, when she investigated the interaction between students' ability and the position questions. Results showed that high ability students performed better on high level (UG) post-passage questions, while, low ability students performed better on low level pre-passage questions.

As true for the other three language skills such as listening, speaking, and writing, reading is complex information processing skill in which readers interact with text in order to create meaningful discourse. By definition, reading to improve pronunciation, grammatical forms, and vocabulary do not constitute reading at all because reading involves comprehension. When readers do not comprehend, they are not reading.

As reading is an interactive process in which the reader constructs meaning with the text, then we need to help our students learn to do this. This means moving beyond a literal understanding of a text, and allowing our students to use their own knowledge while reading. It may be challenging, however, for beginning and intermediate students to create their own understanding, if they are accustomed to reading word-for-word and focusing on meaning at the word- and sentence-levels.

When questions move beyond a literal understanding, students' answers have to be motivated by information in the text. Inference questions can have clearly correct and incorrect responses. In contrast, prediction, evaluation, and personal response answers are correct as long as they depend primarily on students' reactions to what they read. Evaluative and personal response answers not only depend primarily on students' reactions to what they have read, but they need to reflect a global understanding of the text.

The Study

Objectives

This study attempts to find out the students' ability in this area of linguistic ability, and the sufficient support provided by the English Language teaching and learning environment in UiTM, in preparing the undergraduates with the linguistic competence to carry out tasks effectively, efficiently and productively.

Specifically, this study seeks to find out:

- i. at what level of the thought processes on (based on the Bloom's taxonomy) were asked on the RCQs of the MUET Reading Comprehension Paper 3, May 2004.
- ii. the performance of this test by the BEL 250 students (semester 3, part 3, 2005) of UiTM Jengka, Pahang
- iii. the students' score against each level of thought processes of the RCQs (on questions formation) advocated by the Bloom's taxonomy.

This study may improve students' performance in the MUET reading paper (Paper 3) which is closely associated with the students' ability to answer the higher order questions (critical thinking questions).

The Sampling

The samples chosen for this study were semester 3 students of UiTM Jengka, who were taking Mainstream English II (BEL 250). These students were chosen as they were familiar with the MUET syllabus which is similar to the BEL 250 course outline. Although there were 384 students taking BEL 250 for the current semester, only 300 students were present when the test was conducted. Their English language proficiency level ranges from low intermediate to high intermediate.

The Design of the Study

The design of this study is Content Analysis Research and correlational study of the results between the scores of each item against the level of thought processes of the Bloom Taxonomy. This is a quantitative study; this type of study was chosen because the quantitative data appears to be easier to interpret because it is more specific and explicit rather than implicit in nature (Sulaiman Shamsuri 2004) Descriptive statistics was applied to analyse the data collected i.e. the test scores by all of the students.

Research Instruments

This study employed only one type of data gathering technique, that is, students' answers to a set of question paper which was analysed quantitatively. The quantitative data from this study was analysed using the SPSS window 12.0. It was reported, analyzed and discussed.

The Reading Comprehension Paper 3, May 2004 was tested on all of the part 3 students, Semester 3, 2004 of UiTM Jengka. A teaching period of about 3 months was carried out before the test is administered to all the students. Results of the test were assessed item by item. Itemisation of each answer given was carried out and the scores for the number of correct answers for each question were tallied against the six levels of thought processes of questions formation as suggested by the Bloom Taxonomy.

Findings and Discussion

The data collected from the reading comprehension test was analysed using frequency counts against Bloom's level of thought processes. It was found that out of the 50 multiple choice questions there were 2 (4%) questions on knowledge level (level 1), 15 questions (30%) on comprehension level (level 2), 17 (34%) questions on application level (level 3), 10 (20%) questions on analysis level (level 4), 5 questions (10%) on synthesis level (level 5) and only one question (2%) on evaluation level (Level 6). These six levels of Bloom's Taxonomy can be divided into the higher order (level 4-6) and lower order questions (level 1-3). This distribution of the level of thought processes questions is consistent with Hoeppel's (1981) suggestion on variety of items of different levels in designing an examination.

From the distribution of the questions, the percentage of low order questions (level 1 – level 3) is two times higher than the RCQs high order questions (level 4 – level 6). The percentage score for low order questions is 68% whereas the percentage of high order questions is only 32%. This finding shows that there are more convergent questions than divergent ones. This is inline with Ghazali's (1997; 1998) contention that more than 80% of the RCQs designed by the subjects seemed to fall within the range of 'literal' (knowledge) and 'comprehension' types which were non-inferential or literal in nature. Majority of the RCQs is to test the students' knowledge, literal recall and understanding of the text.

38.85% of students had answered the Knowledge level (level 1) questions correctly. As for the Comprehension level (level 2) 54.96% students gave the correct answers. As compared to the other level of questions, 56.25% of the students were able to answer the Application level (level 3) questions correctly. Only 52.54% of students managed to answer the Analysis level (level 4) questions correctly. As for the level 5 Synthesis questions, 38.6% of the students answered correctly. There was only one question tested on the evaluation level (level 6). Only 29.3% of the students were able to answer this question. It can be concluded from the findings that most of the students had difficulty in answering questions on level 5 (Synthesis) and level 6 (Evaluation).

Cloze Passage

Questions 1 to 15 tested students' knowledge on parts of speech and vocabulary. All the questions in this section were on application level. Question number 8 on vocabulary had only 63 students (21%) with the correct answer. Students might be more familiar with the phrase '... modes of travel' due to the influence of the word 'travel' which appeared many times in the passage and probably they did not understand the meaning of the phrase 'modes of' which actually carries the meaning of 'a formal way of doing something'. Thus, the most appropriate answer for this question was option D- all modes of 'transportation' but the majority of them choose all modes of 'travel'.

About 287 students (95.7%) gave the precise answer on question 10 on conjunctions. Most students probably did not have any problem on using conjunctions. The same can be said for question number 11. 279 students (93.7%) gave the right answer as most of them knew that only option A (also) can be used in the middle of the sentence. The other options can only be used at the beginning of the sentences.

Question number 14 tested the knowledge on parts of speech. 65 students (31.7%) managed to choose the correct option for this question. The question '... passengers should try to walk _____ possible...', students were probably looking for adverbs such as "wherever" or "anywhere". Students probably related the word 'walk' with 'places' and, therefore, chose words ending in "where" as given in option A (somewhere) and C (everywhere) instead of the correct answer B (whenever).

Question number 15 dealt with verbs. "... perform simple in-flight exercises to _____ the foot ..." It can be concluded from the findings that most of the students did not choose option B (exercise) as the answer as the word had appeared in the sentence. Thus, only 96 students (32%) managed to get it right.

Information Transfer

Questions number 16 to 22 tested the students' ability on transferring information; text to graphic or vice versa. These questions ranged from comprehension to synthesis level.

It was not surprising that 274 students (91.3%) did well on question 16 at the comprehension level. However,

only 104 students (34.7%) students were able to answer a high order question which was question number 22 at synthesis level. Critical thinking is needed to choose a suitable title for the charts. Students were probably faced with difficulty in bringing together all the information given in the charts to choose a suitable title which was option A (Carbon Dioxide and Carbon Polluters) as the answer.

Only 32 students (10.7%) managed to answer question 18 on application level correctly. Most students chose the option D instead of option C as the correct answer. This could be due to be their understanding of the word 'cure' as 'recover'. Option D was a very good distracter as it tested the understanding of the word 'cure' in the passage.

Reading Passages

Four different texts of different length, difficulty level and various areas of knowledge were tested on the students. Questions 23 to 50 were based on these texts.

As for question 24 level 2, only 38.7% of students answered this question correctly. Most of the students chose 'B' – 'been satisfactory' instead of 'C' – 'seldom been sufficient' as the answer. This could be due to their understanding of the meaning of the phrase 'have rarely been adequate' (line 6) which they could understand the meaning of the word 'adequate' as 'satisfactory or sufficient' and did not realize that the question was actually testing them on the phrase 'have rarely been adequate.' The phrase 'have rarely' was actually the clue to the answer and not the word 'adequate' as the students thought!

As for Question number 26, which was the only evaluation level question (high order question), only 29.3% of students were able to answer it correctly. The reason could be due to the students' weak understanding of the question where the students were asked to justify the writer's opinion on the phrase given 'every person is born an inferior feeling (line 10) by saying that...'. The students have to make an evaluation and on all the information and ideas given in the text before they could come to a decision on the correct answer. Based on this result, students may lack the evaluating skill needed to answer this type of question.

As for question 37 level 2, another low order question, only 61 students or 20.3% answered it correctly. Most students did not choose the answer "A" – "good fortune lies with the woman." This reflects the poor understanding of the idiom 'the harvest depends not on the hand that holds the plough but on the hand which holds the pot' (lines 9 and 10) among the students or it could be due to the influence of the word "marriage" before the idioms. Therefore, most of them choose D- a successful marriage is dependent on shared responsibility.

Only 29.7% of students answered question number 38 level 4 correctly. Most likely the students were not analytical when faced with superlatives like "strongest" in the question phrase "Of all the reasons given by Ramu's mother's which is considered the strongest?"

For question 45 level 2, the majority of the students did not accept option A – 'bias' as their answer. This is most likely do to their they are weakness in their vocabulary - they might not understand the word prejudices.

However, it was surprising that students did not perform well in the Knowledge level question (low order question) number 46. This probably could be due to the lack of their understanding of the meaning of the word 'defined'. They sub-connected the word 'defined' as definition without actually understanding the definition of the phrase "cultural patterns" which refers to the cultural behaviors of the people from the same country as stated in line 23 paragraph 3.

Only 21.7 % of students answered Question 50, level 4, the analysis question correctly. It is likely that the students were not able to analyse what actually the article was about. Therefore, they could not answer the question on "In this article the writers' main aim is to...". In order to answer this kind of question the students need to possess good analysing skills.

Conclusion

After going through the questions and making a detail analysis of them, we are of the opinion that the Malaysian Examination Council should have put more emphasis on critical and creative type of questions based on the Bloom Taxonomy which is at the Levels of 4, 5 and 6. Thus, when the higher order questions are taken more into consideration, automatically the divergent type of questions would surface and increased (Ghazali 1997; 1998). Convergent questions, on the other hand, will be reduced in view of that when formulating questions which should not only test the students' comprehension ability only.

The findings indicate that the level of questions according to the level of thought processes advocated by the Bloom taxonomy has a bearing on the performance of the students in the MUET paper. It seems that the students face difficulties when answering higher level questions especially questions at level 4, 5 and 6. It also influences the students' ability to answer higher order questions as compared to lower order questions. The findings conclude that there's a relationship between the level of thought processes on questions formation and the students' ability to answer them correctly.

Thus, it can be concluded that the Malaysian University Examination Test (MUET) serves only the general purpose of exposing students to some of the nuances in the English Language. If prediction of academic achievement through MUET is the major goal of testers at institutions of higher learning, it is not likely to succeed. Not being able

to perform efficiently in English affects a substantial number of students in higher institutions, especially when subjects are taught in English using textbooks written in English.

Recommendations

Based on findings, the researchers would like to recommend a few suggestions for the students, teachers and future research.

Students weak in English are also generally not prepared to “perform” in the language because in-depth thinking processes are required in the study of the sciences and arts at the tertiary level. They find it difficult to understand the dense text in books and this will affect their performance in their core subjects. At this level, they need to speak, write and critically analyse in English to be well informed and competent, failing which they will resort to memorizing and copying without fully understanding the contents. In addition, to the formal teaching of English in schools, students should be encouraged to read as much as they can in preparation for tertiary education. Studies have shown that students who read a lot during their primary and secondary school years are more language-savvy than those who went through formal learning of the language as a foreign or second language. Alas, in our present setting, many enter and leave institutions of higher learning with a poor command of the English language. Ironically, after obtaining a degree some will still have to attend English classes and courses to improve their level of competency and proficiency of the language.

The teachers should refer to the Bloom Taxonomy when designing comprehension questions. The Bloom Taxonomy is an excellent measuring tool for all reading comprehension questions. It helps to direct teacher’s attention to students’ behavioural changes due to the well-thought and well-formulated instructions by the teacher. The teacher is able to classify questions to the various levels of the taxonomy.

By using the taxonomy, teachers develop sensitivity to forming different types of convergent and divergent questions to elicit different kinds of thought-processes, lower and higher Levels of Thought Processes (LOTP). If we want students to be able to think creatively and critically, they should be exposed to and taught more about the high-order divergent RCQs. By teaching and exposing them to the different levels of questions, they will undoubtedly use and apply both the lower and higher order LOTPs. The evaluation of instructional materials using the Bloom Taxonomy can help teachers to classify the different types of questions and tasks according to the different levels of thought processes. The ability to select questions can elicit creative and critical thinking among the students. Teachers must employ comprehension strategies to teach reading comprehension. Comprehension monitoring helps students what they understand or do not understand while reading a text. It also helps them to use “fix-up” strategies such as re-reading for a particular purpose or adjusting reading speed as related to text difficulty.

Answering a variety of questions from literal to application types during pre-reading, reading and post reading provides students with a purpose and focus for reading. Asking these questions during the process improves student’s active engagement with text.

As mentioned in chapter one earlier, this research is limited in its scope. The findings and discussion reported here are neither comprehensive nor complete. This attempt to investigate our undergraduates’ competency and performance in their reading comprehension ability requires more in-depth research. This means that the data obtained here can be further expanded and substantiated by doing a more comprehensive gathering of data by enlarging the scale of study such as involving more subjects and more comprehension question papers. The data collected and the findings would be more valid and reliable with respect to the study on the reading comprehension ability of the students.

Lastly, another area that we should look into is to examine thoroughly the English courses for undergraduates of UiTM and whether it has any impact on the level of English competence and proficiency of the undergraduates. Last but not least, comprehensive and in-depth study of the reading culture of the UiTM undergraduates would be more rewarding if vision 2020 is to be realised.

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