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An Investigation of the High Schools Teachers' Perceptions of the Levels of the Cognitive Questions in ESL Classes in the UAE

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ABSTRACT

This study investigated English language teachers' perceptions of the levels of the cognitive questions in the UAE high school. A survey was randomly distributed to the English language teachers in AL-Ain high schools to find out their perceptions of the levels of the cognitive questions they ask in the classrooms. From a population of 250 English language teachers in AL-Ain, 128 teachers participated in filling the survey. The survey is based on Bloom's Cognitive Levels Taxonomy and includes thirty statements representing the six cognitive levels of questions. In the study, the levels of cognitive questions of the entire sample were investigated using quantitative means. Then, the entire sample was classified into groups according to teaching experience and the levels of cognitive questions for each group were investigated accordingly. Group one, two, three and four with one to five, six to ten, eleven to fifteen and more than fifteen teaching years of experience respectively.

Results generated from the entire sample indicate that more focus was on questions that address the low cognitive levels including knowledge and comprehension and less focus was on the higher levels including application, analysis, synthesis and evaluation. In comparison, results gleaned from the groups similarly indicate no major differences in teachers' levels of cognitive questions in terms of teaching experience. The four groups reported more occurrences of the lower cognitive questions than the higher cognitive questions. The knowledge level had the most occurrences contrasted with the application cognitive level which was the least in prevalence. This indicates that teaching experience was not a tangible factor in determining cognitive levels of teachers' questions.

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Dedication

I lovingly dedicate this work to the soul of my father, my mother, wife and children, who supported me each step of the way.

CHAPTER I

Introduction

This chapter gives a general introduction to the study with sub-titles demonstrating the key issues underpinning the issue of questioning in general and the cognitive levels of teachers' questions in classrooms in particular. The chapter includes problem statement, purpose of the study, research questions, definition of key terms, and significance of the study in addition to its limitations.

Importance of questions

Teachers ask questions for a wide variety of reasons. A question is used as a stimulation device to get information, check understanding, review learnt materials, collect information and assess learning of a subject (Som & Dahalan, 1998). Having this wide-ranging of reasons for questions in addition to the great deal of time spent by teachers asking questions, researchers have been tempted to investigate teachers' questions from different perspectives. For example, Stevens (2001) noticed that roughly eighty percent of a teacher's school day was allocated for asking students questions. Indeed, the purpose of teachers' questions covers a wide range of areas. Morgan and Saxton (1998) pointed out that there are many reasons for teachers' questions. For example, questions can help teachers keep students actively involved in lessons. In addition to that, questions increase interaction between the teacher and students. Rosenshine (1999) stated that large proportions of student-teacher interaction foster student achievement. Therefore, one can assume that good questions promote students' understanding, improve their creativity and enhance their critical thinking skills. Besides, through answering questions, students have the opportunity to openly express themselves

and interact with others. In addition to that, teachers' questions help them pace their lessons and manage students' behaviors which are very crucial for creating a successful learning environment. Questions are also a valuable help to a teacher so as to evaluate students' learning and revise their lessons as necessary.

Goals of questions

Wolfinger (1994) suggested three general goals for questioning. The first goal is to help students gather and organize information based on an activity. Teachers' questions can stimulate students to continue an investigation. In addition to that questions can help students to develop a concept or carry out an investigation. By careful and purposeful questioning, a teacher can assist students to understand, analyze, apply, synthesize, evaluate what they learn and so involve them in critical thinking and problem solving. The second goal for questioning is to strengthen a particular concept and skills. To accomplish that, teachers can use questions to review the concepts taught or skills that have been demonstrated. Besides, teachers pose questions to help students recall a certain procedure that was previously used to solve a problem. Teachers also use questions to recall past information, link previously taught material to new situations, link an issue to students' experience or comprehend a new lesson. Finally, the third goal of questioning is to help students develop their own concepts and skills. Furthermore, Som and Dahalan (1998) proposed other general reasons for questioning. For example; questioning assists students in developing their critical thinking, collecting and analyzing information. They also added that questioning encourages students to increase their metacognitive levels and motivate them to participate interactively in the teaching and learning process. Moreover, they pointed out that questioning encourages creativity and productivity

through creating new ideas and manipulating existing ideas. In addition, questioning is used to measure students' abilities, assess performance and progress through summative and formative assessment. The authors also elaborated that questioning also helps teachers reflect on their teaching and learning objectives and find out how far those objectives have been realized. More to the point, questioning motivates students by attracting their attention and raising their curiosity.

Levels of cognitive questions

Having in mind the diverse purposes and the great deal of time spent on questioning, it is very crucial for teachers to handle questioning adequately and effectively. Unfortunately, teachers spend most of their time asking low-level cognitive questions (Wilen and Clegg, 2005). These questions focus on factual or recall information that can be memorized. It is broadly supposed that this type of question can limit students by not helping them to acquire a deep, elaborate understanding of the subject matter.

On the other hand, high-level-cognitive questions require students to use higher order thinking or reasoning skills. By using these skills, students not only remember factual knowledge, but they also use their knowledge to solve problems, to analyze material and evaluate things. Unluckily, teachers do not use high-level-cognitive questions with the same amount of frequency as they do with low-level-cognitive questions. For example, Palmer (2003) points out that many teachers rely on low-level cognitive questions in order to avoid a slow-paced lesson, keep the attention of the students, and maintain control of the classroom.

Arends (2004) argued that many of the findings regarding the impacts of manipulating lower-level-cognitive versus higher-level-cognitive questions have been questionable. He suggested that some studies and widespread beliefs favor asking high-level-cognitive questions. Yet, other studies pointed out to positive effects of asking low-level cognitive questions. For example, Gall (2000) suggests that emphasis on fact questions is more effective for fostering young disadvantaged children's achievement, which basically involves mastery of basic skills , whereas the emphasis on higher cognitive questions are more effective for students of average and high ability. Nonetheless, other studies do not reveal any difference in achievement between students whose teachers use mostly high level questions and those whose teachers ask mainly low level questions (Arends; 2001; Wilen and Clegg, 2005). Thus, despite the fact that teachers should ask a combination of low-level-cognitive and high-level-cognitive questions, they have to determine the needs of their students so as to decide which sort of balance between the two types of questions is needed to foster student understanding and achievement.

Strategies to improve teachers' questions

To foster students' achievement, Wilen and Clegg (2005) proposed that teachers are recommended to implement the following research supported practices to promote higher student achievement. First, teachers have to phrase questions clearly, ask questions of primarily academic nature, allow three to five seconds of wait time after asking a question before requesting a student's response, particularly when high-cognitive level questions were asked. Then, teachers should encourage students to respond to each question in various fashions and balance responses from volunteering and non-

volunteering students. Next teachers seek to elicit as many correct responses as possible from students and assist with incorrect responses. Besides, teachers investigate students' responses to have them clarify ideas, support a point of view, or extend their thinking. In addition to that teachers should acknowledge correct responses from students and use praise objectively and discriminately.

In addition to the recommended strategies to increase students' achievement, teachers must insure that questions are adequately sequenced to initiate an effective teaching process. In this regard, Wolfinger (1994) stated three sequences in questioning ranging from simple to complex questioning sequence, the questioning suitability level and the diverse questioning level. During the simple to complex questioning sequence, the teacher is recommended to begin with a low level question that prompts students to recall information and then to check their comprehension through questions based on the information attained. Then the teacher proceeds to high level application and synthesis questions. The adequacy of a questioning approach should take into consideration the appropriate levels of students' capabilities and individual differences. As posing high cognitive questions might be very challenging for less talented students, so it is better to direct low cognitive questions at that stage. Meanwhile, other talented students might be ready for more challenging questions at the high levels of cognition. Therefore, a teacher has to plan carefully and tailor questions that take into regard different learning levels and capabilities.

The diverse questioning sequence is the last approach of questioning through which questions are organized to enable gifted students answer high cognitive questions first. Later, low cognitive questions are first asked to involve less gifted students and then

shifting back to high cognitive questions. For example, Gega (1994) suggested steps on how questions can be developed to encourage investigation-based activities in the classroom. According to Gega (1994) these steps include: a) Teacher starts the lesson by asking divergent questions to enable students to have a general idea on the investigation they are going to conduct. This requires students to bring facts and data together from various sources and then apply logic and knowledge to solve problems, achieve objectives or to make informed decisions b) Convergent questions are asked enable students develop original and unique ideas and then come up with a problem solution or achieve an objective

Low or high cognitive questions

Based on all the tackled arguments and suggestions, it is obvious that posing questions, though a challenging endeavor, has a decisive role in the teaching process. A good teacher has to develop and customize his questions according to the diverse needs, interests and capabilities of his students. Thus, focusing attention on the different cognitive levels of questions helps teachers to shift their emphasis from the lower cognitive levels of questions to the higher cognitive levels. High cognitive levels of questions help promote students' achievements, improve their learning outcomes and hone their critical skills.

Responding to educational reforms in the UAE

The study was inspired by the current changes in the educational system in the UAE. The educational system has been subject to criticism. AL-Nahyan (2005) complained that the "exam and teaching system education system were appalling." This gloomy picture of education in the UAE augmented the calls for reform in education.

These calls generated a lot of debate among UAE intellectuals and decision-makers. They resulted in initiatives and polices of which the first most noteworthy was Dr. Abdelaziz AL-Sharhan vision for 2020. The 2020 vision stressed the necessity that schools should foster creativity rather than memorization. (AL-Sharhan, 2000). Later in 2006, the Abu Dhabi Education Council (ADEC) launched its public-private partnership programs in which private-sector education specialists were brought in to help revive government schools, repairing teaching methods and curricula. A year later, the Ministry of Education introduced the Madares al Ghad, or Schools of the Future, in which experts from many western countries, attempted to introduce reforms. The poor learning outcomes in the UAE have been attributed to many factors, particularly to rote-learning and memorization. School graduates join the colleges and universities unprepared to peruse their higher education. Thus, the universities strive to improve and qualify their students for the challenges of the job market which is rapidly changing and technologically-oriented. In fact, education in the UAE is unsatisfactory in terms of both quality and quantity. Al-Mahmood (2009) claimed that "many companies in the UAE recruit expatriates or perhaps UAE nationals who studied abroad because there is a lack of local qualified staff."

In view of improving the quality of education and developing it, the UAE launched an ambitious program to improve the education system in the first two decades of the coming century. It comprises a comprehensive plan of action that prepares the qualified national forces to respond to the global development's needs. This plan of continuous improvement and development is based on a series of strategic goals representing the national ambitions to upgrade the whole education system. The latter

goal is achieved through the implementation of projects for the development of policies. curricula, and national capacities; in addition to the mobilization of the necessary resources, and the development of the information and communication systems to make a quantum leap in the various components of the educational process (AL-Qutami, 2011).

Later, the efforts for reform continued and eventually culminated with the establishment of Abu Dhabi Education Council (ADEC).The core philosophy of ADEC is based on shifting the focus from rote-learning and memorization towards skills and enquiry. Thus, teachers currently have been challenged to change their instructional practices. They are assumed to abandon traditional instruction and adopt critical thinking and problem-solving to equip the students with essential skills which they can hold them accountable for their own learning (AL-Khaili, 2009).

Bearing this in mind, teachers must be certain that they have a patent purpose for their questions rather than they determine what kind of knowledge should be learnt. For example, Rosenshine (1999) pointed out that teachers' questions must be tailored to expand students' knowledge and inspire them to think creatively. Creative thinking and critical skills are the cores of quality education which is the conduit for comprehensive development. AL-Qutami (2011) emphasized that strong education systems would bring economic and social benefits that the country needed. In addition to that, the changing patterns of classroom discourse will help to create an education system that supports all learners in reaching their full potential to compete in a global market. It will support the efforts to produce world-class learners who embody a strong sense of culture and heritage and are prepared to meet global challenges (Al-Khaili, 2009). The awareness of the

paramount importance of questioning with the view of initiating such changes in the educational system is the driving force behind this research.

The relevance of the study to the UAE context

Therefore, this study (an attempt amidst calls for change and reform in education) investigated the cognitive levels of questions as an important part of the teaching and learning process. The study examined the perceived use of the levels of cognitive questions by teachers of English in the UAE high schools. The assumption is that teachers place great emphasis on questioning techniques to promote students' thinking, develop their critical thinking skills and promote their learning outputs. This assumption needs investigation to check whether teachers' practices in the classrooms help accomplish such goals. In other words, do teachers really follow the appropriate questioning techniques that foster students' higher cognitive skills? To verify these assumptions, the researcher designed a survey that underpinned the different questioning techniques that address different cognitive levels. These levels are low and high cognitive levels. The researcher surveyed a random sample of 128 teachers of English, from a population of 250 teachers of English in AL-Ain high schools, to explore their perceptions of the cognitive levels of questions they ask in the classrooms.

The Purpose of the study

The purpose of this study is to investigate and analyze the perceptions of the English language teachers in the UAE high schools of the levels of the cognitive questions they ask in their classrooms. Besides, the study aims to find out if the English language teachers' perceptions of levels of cognitive questions vary according to their

teaching experience. To accomplish this task, the study was conducted in English language classrooms in in AL-Ain government high schools.

Research Questions

This study investigated the perceptions of the English language teachers in the UAE high schools of the levels of the cognitive questions they ask in classrooms. To achieve this goal, the study tried to answer the following research questions:

1. What are the levels of cognitive questions asked by the English language teachers in the UAE high schools?
2. Do English language teachers' perceptions of levels of cognitive questions vary according to their teaching experience?

Problem Statement

The purpose of this study was to investigate the levels of cognitive questions perceived by the English language teachers in the UAE high schools. Questions asked by teachers either address the learners' low or high cognitive levels. The first levels encourage rote learning and memorization whereas the latter levels encourage critical thinking and self-learning. So, the study aims to investigate the levels of cognitive questions asked by teachers to check whether they address learners' low or high cognitive levels. Besides, the study is inspired by the current changes in the educational system in the UAE. The change from rote learning and memorization to self-learning and critical thinking poses big challenges on the teachers of English in the UAE schools. Teachers are requested to implement new teaching methods and strategies in their instruction. Focusing on low levels of cognitive questions does not help improve teaching English. Thus, teachers must spare no effort on considering high levels of cognitive questions to

meet the challenges of modernizing their instructional practices. In fact, teachers' questioning has been examined by researchers for over a century. It has consistently been found that teachers ask lower-level, factual questions (Dantonio & Beisenherz, 2001; Dillon, 1978; Hamm & Perry, 2002; Stevens, 1912). While factual questions are beneficial for checking base level knowledge, they do not promote thinking in students (Ross, 1998). Dillon (1978) found that asking lower level questions resulted in choppy conversation with students' ideas chopped off, leaving them with little desire to pay attention. When factual questions are asked by teachers, students immediately felt that there was one right answer of which the teacher already knew (Hamm & Perry, 2002). Researchers discussed the shortcomings of teacher questioning but also highlighted good questioning techniques.

Effective teacher questioning has been identified by researchers that promote higher-level thinking in students. Teachers can make use of refocusing, clarifying, verifying, redirecting, and supporting questions to enhance student thinking during instructional conversations (Dantonio, 1990). Questions that are open-ended and higher-level are found to be harder for teachers to create but are more beneficial to the learning of students. Ross (1998) stated, "Higher-level questions make us analyze, compare, interpret, hypothesize, reflect, create, evaluate, find new meanings, and stretch our imagination" (p. 98). Research found that the effectiveness of teacher questioning was dependent on the teacher's ability to produce questions that promoted thinking (Dantonio & Beisenherz, 2001). More effective questions were those that required higher-level thinking.

Significance of the Study

The changes in the educational system in the UAE have so far prompted speculations on the various components of the learning process. There have been calls for reform in education by planners and decision-makers. Educational reforms must be an integrated strategy which aims at improving the quality of education as well as raising the citizens' sense of identity and national belonging, and encouraging them to join the teaching workforce (AlSuwaidi, 2011). Therefore, this study partly stems its significance from the belief that it is an effort in line with the general discourse among educational practitioners. Curricula designers can benefit from the results of the study by laying greater emphasis on the higher cognitive levels when they design textbooks and other sources of learning. Besides, lack of research in this scope adds to the significance of the study. In fact, it is the first study about cognitive levels of questions in UAE English classrooms.

Limitations of the Study

The study was exclusively conducted in government schools in AL-Ain. Thus, it would be challenging to generalize the findings to other private schools. In addition, selecting a sample of teachers would add to the risk of generalizing to the whole learning community.

Definition of Terms

Abu Dhabi Education Council (ADEC): The educational authority in the emirate of Abu Dhabi which is responsible for all the issues pertaining to education in the Emirate.

Bloom's Taxonomy: Bloom's Taxonomy is a classification of learning objectives

within education which was proposed in 1956 by a committee of educators chaired by Benjamin Bloom.

Higher cognitive levels: Higher cognitive levels are the upper four levels in Bloom's Taxonomy of educational objectives in the cognitive domain (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956). The levels are labeled as application, analysis, synthesis and evaluation.

Application: The capability to use learned material, or to execute material in new and real situations.

Analysis: The aptitude to break or differentiate the parts of material into its components so that its organizational structure may be better understood.

Synthesis: The capability to place parts together to form a coherent or exclusive new whole.

Evaluation: The capabilities to judge, verify, and even criticize the value of material for a given reason.

Lower cognitive levels: Lower cognitive levels are the lower two levels in Bloom's Taxonomy of educational objectives in the cognitive domain (Bloom et al., 1956). The levels are labeled as knowledge and comprehension.

Knowledge: Remembering or retrieving previously learned material.

Comprehension: The ability to grasp or construct meaning from material.

Convergent question: Closed-ended question which would have only one answer (e.g. What is the capital of the UAE?)

Divergent question: Open-ended question would have indirect or infinite answers (e.g. How were the last two texts you read different?)

Organization of the study

Following the current chapter, the rest of the thesis is organized as follows: Chapter II explores the literature review related to the topic including the theoretical background and related studies. Chapter III discusses the methods used in this study and describes the research design, procedures, participants, instruments, data collection and analysis. Chapter IV consists of two sections. Section one includes the research questions and the analysis of the data and section two involves a summary that sums up the main results and discussion of them in view of other related studies. The last chapter in this study is chapter V. which concludes the whole study with a summary of the research questions, purpose of the study methodology and findings. The chapter also comprises a conclusion to the study, recommendations and implications.

CHAPTER II

LITERATURE REVIEW

Introduction

The purpose of this chapter is to review studies that investigated the issue of teachers' cognitive questions levels. The chapter comprises two sections. The first section reviews the theoretical background in relation to teachers' cognitive questions levels. The second section deals with related studies, master theses and doctoral dissertations that have recently investigated teachers' cognitive questions levels and their impact on students' learning.

Theoretical Framework

The importance of teachers' questions in the classroom has received much attention from teachers and educators in all disciplines for several years. For example, Stevens (1912), considered questions as an essential tool of instruction in the teaching process, which can be used to improve student research and getting students involved in the learning process and experience. Consequently, Dewey (1938) argued that, in essence, questions are the core of education. The effectiveness of teaching is closely related to the efficient use of teachers' questions. Thus, the issue of teachers' questions has continued to be a challenge facing educators (Houghton, 2004). Discussions about learning and thinking led Bloom and a group of educators to classify educational goals and objectives. Bloom and his group (1956) aimed at developing a method of classification for thinking behaviors that affect the leaning process. Ultimately, Bloom's team produced the taxonomy which is linked to his name. Although Bloom's initial product was designed for university examiners, it surprisingly captured the interests of

educators all over the world and became a basic reference for all educators worldwide. Furthermore, Bloom's taxonomy attracted the attention of curriculum planners, administrators, researchers, and classroom teachers at all levels of education (Anderson, 2001). Bloom classified thinking according to six cognitive levels of complexity i.e. the lowest levels; knowledge, comprehension and the highest ones; application, analysis, synthesis, and evaluation (Bloom et al, 19560.) Because the taxonomy is hierarchical, it assumes that teachers can encourage the students jump higher from a lower level to a higher one. So, if a student is working at the comprehension level, this implies that he has already mastered the knowledge level.

Importance of Questions

Having gained such reputation, Bloom's taxonomy ignited researchers to investigate its applicability in teaching and learning. For example, Cotton (1995) investigated 22 studies and 11 research summaries and concluded that teaching by using thinking skills enhances academic achievement as well as fostering intellectual growth. Higher-cognitive instruction and using higher cognitive questions foster thinking skills and improve students' performance. In another context, Pugalee (2001) concluded that while students are involved in reflecting and synthesizing to communicate mathematical concepts, they develop thinking skills and metacognitive behaviors. Indeed, to develop students' critical thinking in all disciplines at all levels of education, questions are believed to play an important role (Godfrey, 2001). In the same vein (Tarlinton, 2003) states that the production of language learners and creative criticism is not an easy task, but can be achieved through the participation of the pedagogy of the teachers questions.

As Duron, Limbach and Waugh (2006) have pointed out that the way to increase the emphasis on critical thinking is asking questions that can stimulate the interaction between teacher and students. This challenges students to define their position and encourages them to think critically. In the language class, questions are also considered an effective way of teaching in different ways. For example, teachers can ask questions to arouse students' curiosity, focus on the lesson and keep their interest, motivate students to investigate and learn new skills and test students' knowledge and understanding. Bradley (2008) agrees that teachers can engage students in the learning process and increase their participation in class. When students participate in lessons or activities in the classroom, teachers can encourage students to think critically by asking questions that require students to formulate and express their own ideas and opinions based on their prior knowledge and experience.

According to Johnson and Lamb (2011), many of the questions teachers use in the language classroom are designed to encourage students to engage in active learning through the practice of using the target language through interaction. This practice offers language learners opportunities to realize their cognitive skills when processing information and monitoring new inputs, such as the new vocabulary and grammatical structures that have been exposed during lessons and formulate their own ideas which can be applied in different contexts. However, Beyer (1997) argued that we must admit that not all questions can stimulate students' higher order thinking. In another context, Gibbons (2003) states that the level of student thinking is indirectly linked to the level of questions asked by teachers and to the degree of the students' participation in the higher-thinking order. Therefore, teachers need to make higher-order questions. Li (20

states that promoting students' skills of critical thinking and cognitive development, calls for a challenging and effective higher cognitive level questioning strategy. Similarly, Pascarella and Terenzini (2005) argue that "the disposition to think critically involves, among other characteristics, factors such as the inclination to ask tough questions and follow reason and evidence to foster students' skills critical thinking and problem solving "(p. 157). This is consistent with Bloom (1956) who proposed that the ability to solve problems through critical thinking skills requires higher-order thinking. Based on Beyer (1997) and Unrau (2000), students' cognitive functioning and development of critical thinking are linked to teachers' reflective questions which could encourage students to participate in the analysis, problem solving and research instead of using low-order questions requiring a simple recall of prior knowledge.

Based on the previous review, it appears that low cognitive level questions could not help enrich critical thinking; while the high-level cognitive questions have a very positive effect on improving student students' higher order thinking. According to Bloom (1956), Birman; Desimone; Porter; Garet (2000) and Renaud (2002), high cognitive level questions and reflection questions are those that require students to employ interpretation, application, analysis, synthesis and evaluation of the subject. These questions go beyond memory and objective information for they require the effort of students and more time to think critically about cause and effect relationships to find effective solutions for problems in complex situations. In a similar context, Rop (2002) asserts that teachers can encourage language students' critical thinking skills by asking: "wh" questions that require students to think critically and use more complex language to answer teachers' questions instead of asking questions that push students on to recall and recognize

previously acquired knowledge, specific data and information or questions whose answers are "Yes" or "No".

Thus, in a language class, teachers can use higher level cognitive questions for meaningful interaction among students and reactions to signal that students are allowed to think critically in the expression of their ideas and opinions and make questions as well. Reem (2009) notes that using higher cognitive questions enhances students' critical skills and fosters their motivation. These questions capture students' focus on solving problems, motivate them and improve their critical thinking skills.

It is notable that many research studies have emphasized the use of questions to promote interaction in the classroom and encourage students to master critical thinking skills. These research studies can be grouped in three main areas: the frequency of different types of questions asked by teachers in the classroom, the cognitive level of questions, and the correlation between the cognitive level of teachers' questions and students' cognitive level of responses. Hsu (2001) investigated the questions of students and teachers in English classes at the university level in the Thai context. This research focuses on the types of questions and questioning strategies that teachers employed in English classrooms. The researcher observed, during an eight- video foundation program that most of the questions that were asked addressed the low cognitive levels of questions. In similar context, Bond (2008) studied the forms and functions of teacher questions in English classes at the university level. The results of his investigation revealed that the teachers focus more on low cognitive questions than high cognitive questions.

In a study, Shertzer, Ewing and Whittington (2005) argue that most teachers ask questions that require short answers, thus missing opportunities to give pupils practice in the skill of using facts to generalize and make inferences. They further elaborate that no change in the questioning techniques of teachers had been seen over a three decade period. However, Dillon (1998) took a different stance on questioning and suggested that questioning, no matter how it is conducted, is not beneficial to the thinking of students. He stated that, "if the students already know the answer, they join the teacher in a situation where no problem exists to stimulate anyone's thought; although everyone is asking or answering questions" (p. 52).

Mercer's (1995) talks about classroom conversations and how teachers should not stuck in the conventional pattern of discourse. It was found that teachers continued to use the traditional pattern of discourse commonly referred to as IRF (Initiation-Response-Feedback). Mercer (1995) noted that, "But one danger of relying heavily and continuously on these traditional, formal question-and-answer reviews for guiding the construction of knowledge is that students then get little opportunity to make coherent, independent sense of what they are being taught" (p. 38). He gave one reason why teachers might ask questions with known answers when stating, "But teachers often ask questions to which they already know the answers because they need to know if the students know the answers too" (p. 26). However, he did not feel that this could lead to the construction of knowledge in the classroom.

A study focused on changing the traditional pattern of classroom discourse was conducted in the end of the 1990s. For example Galton, Hargreaves, Comber, Wall and Pell (1999) found in their study , "open or speculative or challenging questions, where

children are required to offer more than one answer, are still comparatively rare" (p. 33). As questioning patterns remained the same, researchers continued to research the topic of teachers' questioning into the new millennium. In the new millennium, questioning continued to be a hot potato in educational research. Several studies found that students continued to answer questions that asked them merely to recall a fact or give an answer that was already known by the teacher (Dantonio & Beisenherz, 2001; Hamm & Perry, 2002; Shields & Edwards, 2005). Wragg and Brown (2001) reported that, "The most scintillating explanation can be wasted if the audience does not understand, or knows the facts already and so is deeply bored" (p. 10). Cazden (2001) further explained, "We have to consider how the words spoken in classrooms affect the outcomes of education, how observable classroom discourse affects the unobservable thought processes of each of the participants, and thereby the nature of what all students learn" (p. 99). Researchers in the past seven years have offered solutions to questioning problems in the classroom.

Several solutions for questioning flaws in the classroom have come out of the research conducted since the year 2000. Bromley (2001) found out, "Supplementary questions beginning with "how did you know that" were found to be extremely useful in eliciting further information from the children" (p. 64). Along that same line of thinking, Dantonio and Beisenherz (2001) found out, "Actively listening to student responses and using their responses in asking timely, thoughtful follow-up questions foster occasions for teachers to delve into student thinking and promote instructional conversation" (p. 42). Another solution found in the research was to promote genuine questions that asked for information a person truly wanted to gain. Shields and Edwards (2005) concluded their research by stating, "We open ourselves to the other when we pose a genuine

question, a question that erupts from the edge of our known world into the space of what it is we realize we do not know but wish to" (p. 79).

Levels of Questions

Teachers' questioning has been examined by researchers for over a century. It has consistently been found that teachers ask lower-level, factual questions (Dantonio & Beisenherz, 2001). While factual questions are beneficial for checking base level knowledge, they do not promote thinking in students (Ross, 1998).When students are asked factual questions, they immediately feel that there is only one right answer which the teacher already knows. (Hamm & Perry, 2002). Researchers discussed the shortcomings of teachers' questioning and highlighted the best questioning techniques by stressing that effective teacher questioning promote higher-level thinking in students. For example, Leven and Long (2002) stated, "The teacher's effectiveness in questioning depends on an awareness of various purposes that questions may serve and an awareness of different types of questions for achieving these purposes" (p. 422). Teachers can make use of refocusing, clarifying, verifying, redirecting and supporting questions to enhance students' thinking during instructional conversations (Dantonio, 1990). Questions that are open-ended and higher-level are found to be harder for teachers to create but are more beneficial to the learning of students. Ross (1998) stated, "Higher-level questions make us analyze, compare, interpret, hypothesize, reflect, create, evaluate, find new meanings, and stretch our imagination" (p. 98). Research found that the effectiveness of teacher questioning is dependent on the teacher's ability to produce questions that promote thinking (Dantonio & Beisenherz, 2001). More effective questions are those require higher-level thinking.

Coding Teacher Questions

One way for teachers and researchers to understand the questions that are asked during classroom conversations is by coding them. Dantonio and Beisenherz (2001) contend, "Coding the questions and responses in a lesson is a way to understand the patterns of teacher questions, learner responses, and the relationships that exist between teachers' questions and learners' responses" (p. 77). Researchers recommended that teachers are to be familiar with analyzing their classroom conversations. It is important to find ways to encourage teachers to take a critical look at their questioning habits (Black, 2004). By coding classroom talk, teachers can begin to understand the patterns of discourse that occur and change them to increase student thinking and engagement (Dantonio & Beisenherz, 2001). Coding conversations and analyzing questioning and response patterns would provide insight into change taking place over time.

Need for Professional Development

Researchers have made a call for professional development on questioning. From Stevens (1912) to Black (2004), researchers have concluded that professional development in questioning will increase the amount of higher-level, effective questioning. Their studies focused on teacher and student questioning and highlighted the need for training teachers to enhance their questioning skills.

Learner Responses

After reviewing the literature, it was found that there were various categories of learner responses and ways in which teachers reacted to learner responses. Responses were categorized as on-focus, off-focus, clarifying and verifying responses, and student questions (Dantonio & Beisenherz, 2001). Learners' responses can provide teachers with

a guide for how to teach children through instructional conversations (Dantonio & Beisenherz, 2001). Teachers react to learners' responses in various ways from ignoring their responses to asking follow-up questions to gain further information. Myhill and Dunkin (2005) found in their research that a recurring theme in classroom discourse was the ignoring of responses from students due to a teacher's desire to stay true to his/her lesson plans. Often teachers ignore students' responses in order to continue making their own comments, so students have to wait their turn to respond as the teacher want. (Skidmore, Perez-Parent & Arnfield, 2003). Regardless of how teachers react to learners' responses, research concluded that there is a need for teachers to increase their interactive listening to students.

Listening to students

Teachers can learn about the level of learners' understanding by simply listening to them. Charlton and McLaughlin (2005) found, "When time and facilities are available for pupils to talk, teachers can learn much from tuning in to their pupils" (p. 51). Students are often seen as consumers of knowledge instead of producers of knowledge. In Lincoln's (1995) study it was stated ,"Adults often underestimate the ability of children to be shrewd observers , to possess insight and wisdom about what they see and hear and to possess internal resources we routinely underestimate" (p. 89). Taking time to listen to students is difficult when there are curriculums and state standards to teach (Charlton & McLaughlin, 2005). However, much can be learned about the breadth and depth of understanding if teachers listen to their students.

Critical Thinking

Critical thinking has been defined by numerous researchers. Barell (2003) defined critical thinking as the response to problems that happen most often unexpectedly. Lipman (2003) argued, "Critical thinking is skillful, responsible thinking that facilitates good judgment because it relies upon criteria, it is self-correcting and it is sensitive to context" (p. 39). Nosich (2005) contended that critical thinking consists of asking questions, answering questions through reasoning, and believing in the responses given. Critical thinking differs from thinking because it involves thinking about your thinking. Nosich further explained, "To learn to think critically is to learn to think things through, and to think them through well: accurately, clearly, sufficiently, reasonably" (p. 13). Critical thinking requires learners to engage in Meta cognition.

Critical thinking is needed in a democratic society which requires leaders to think through society's needs and concerns. Students must be able to separate truth from falsehood and make sound judgments about issues (Beyer, 1997). Beyer (1997) explains in his research, "If we and our students engage skillfully in critical thinking, we will benefit personally and as a nation" (p. 28). Critical thinking allows for flexible thinking which is required in a democratic society. It eliminates brainwashing and unreflective acts (Lipman, 2003). Within a community of learners, critical thinking allows teachers and students to learn together and create new meanings and understandings together

In fact, many studies tackled classroom interactions and focused on teachers' questions, learners' responses, or the effect of questions on students' achievement. However, there is a scarcity of studies that researched the cognitive levels of questions. Nevertheless, some researchers studied teachers' questions and investigated their

influence on students' learning. For example, Myhill and Dunkin (2005) found that most questions asked by the teachers were factual questions and did not require more than recitation by the students. They concluded, "The analysis indicates by far the most common form of question is the factual question and the most common function of questions is factual elicitation" (Myhill & Dunkin, 2005, p. 420). It was also found that teachers asked questions built on understanding more often in literacy than any other subject. Although some of the factual questions elicited student thinking, they did not produce lengthy student response. In the English language context, Wong (2010) investigated the taxonomy of question-types in Hong Kong EFL classrooms, their appropriate application by teachers, and the resulting effectiveness in helping students understand the correct lesson objectives. Wong collected data through classroom observations, teacher in-depth interviews, and student interviews. The results indicated low-cognitive questions were common. Of those, knowledge-based questions were most frequently used for teaching vocabulary or confirming student understanding. Other findings indicated that teachers used questions inefficiently to manage the classroom or stage lessons. High-cognitive questions, which engender practical English use, were rarely used.

In a study of the effect of teacher's questioning behavior on EFL classroom interaction, Shomoossi (2004) proposes that after the failure of several important methods comparison studies in the 1960s, the influence of interaction analysis stimulated interest in foreign language classroom processes. More careful observational studies gradually revealed which process variables were of interest. Also, there has been much research on teacher talk, with a focus on issues such as the amount and type of teacher talk, speech

modifications made by teachers, instructions and explanations, error correction and questions have been more or less the center of attention. The purpose of this qualitative-quantitative study is conducted as a classroom research and has focused on two question types: display and referential. It explored recurring patterns of questioning behavior and their interactive effects through non-participant observation. Research design: Forty reading comprehension classes were observed in Tehran, Iran by the investigator. The observations were done by the researcher and the study data were gathered through partial ethnography. Events were coded and analyzed. General patterns were considered in regard with the teacher's questioning behavior and the students' interaction to them. The study indicated that display questions were used by teachers more frequently than referential questions. Also, it was concluded that not all referential questions could create enough interaction.

Kubota (1989) examined student responses to teacher-initiated questions in classrooms of English as a Second Language (ESL) and English as a Foreign Language (EFL). The study focused specifically on the similarities and differences in the questions asked by native-speaking (NS) teachers of ESL and by non-native-speaking (NNS) teachers of EFL, and to assess the relationship between teachers' question types and students' responses. Results suggest that the power of Wh-questions is strong, triggering longer and more syntactically complex utterances than yes/no questions. Besides, teachers should note that higher-level cognitive questions might increase the length and syntactic complexity of students' speech. In addition, teachers may paraphrase questions in more cases, but not simply repeat them with one turn when students have difficulty answering. Furthermore, in some contexts, teachers should give students frequent

speaking turns and as much speaking time as possible. Moreover, the study concluded that as in natural discourse outside the classroom, two-way or multi-way exchange of information is ideal for genuine communication.

In a study of scaffolding through questions in upper elementary ELL learning, Kim (2010) argues that among teachers' various classroom discourse strategies, teacher questions are a powerful tool for guiding the linguistic and cognitive development of English as a second language (ESL) students. (Gibbons, 2003) contemplates effective questioning strategies that support the growth of ESL students' thinking and language skills. He explains two successful ESL teachers' instructional practice, with a focus on their questions, specifically the types of questions teachers asked and their functions, and changes in students' participation and use of English oral language in classroom activities. The researcher found out that the two teachers used different types of questions to scaffold their students' learning across a school year, and teacher questions positively affected student participation in classroom activities and language learning. Relevant to the context, in a study explored re-specifying display questions; Lee (2006) suggests that Language previous research into teachers' questions has focused on what types of questions are more conducive for developing students' communicative language use. In this regard, "display questions," whose answers the teacher already knows, are considered less effective because they limit opportunities for students to use genuine language use . (Leven & Long, 2002) argue that although the research into teacher questions has been refined in recent years, it is not certain how much we know about how display questions work, especially how they are produced and acted on in the course of classroom interaction by language teachers and students. The study used sequential analysis to

examine teachers' display questions. Sequential analysis considers how classroom talk is the outcome of the contingent coordination of interactional work of common understanding.

In another study, Ho (2005) tries to find out why teachers ask the questions they ask and concludes that although teacher questioning has received much attention in the past few years, studies on teacher questions in the ESL classroom have so far revolved around the "closed"/"open" or "display"/"referential" distinction. Findings from classroom observations show excessive use of closed questions by teachers in the classroom. The argument that has been more or less accepted is that such questions seek to elicit short, restricted student responses and are therefore purposeless in the classroom setting. The paper attempts to conduct an analytical discussion of the argument. The questions of three non-native ESL teachers during reading comprehension in the upper secondary school in Brunei are analyzed using a three-level question construct. Through this three-level question analysis, it is possible to challenge the argument concerning question types and purposes. Particularly, it illustrates the problem of assigning teacher questions into narrowly defined categories and that questions asked by teachers in the language classroom are purposeful when reflected against the goals and agenda of the educational institution.

Another study focused on the effect of the level of questions on ESL Reading Comprehension, Perkins (1990) had a sample of 150 Japanese English-as-a-Second-Language students at Southern Illinois University. The students were given a reading comprehension test containing three levels of questions: factual, generalization, and inference, to measure comprehension effects at different proficiency strata. The results

indicated that there were significant differences among the proficiency levels for the factual questions, but no significant differences among the generalization and inference levels of questions. An explanation for the compacted scoring distributions and resultant lack of significant differences among the proficiency levels is that the generalization and inference levels of questions required more short term memory ability, the attention and recall of more textual material, and more elaboration and rehearsal than the samples' target language competence could accommodate.

Costin (1986) conducted a survey at the Hong Kong Baptist College and gathered information about first-year remedial reading instruction in English as a second language (ESL). The study focused on the kinds and purposes of reading assignments, the levels of cognitive processes related to reading assignments, the cognitive ability levels of weak students, the cognitive process levels to be reinforced in ESL remedial reading, and implications for change in the reading program. Results showed that a substantial percentage of students(21%) were regarded by their teachers as weak, with deficiencies in the four lower levels of Bloom's Taxonomy of Educational Objectives in the cognitive domain (knowledge, comprehension, application, and analysis), which were also the most required skills. It is suggested that English language teachers could reinforce the needed cognitive skills in reading programs by means of a cognitively oriented approach, using schema theory with an interactive, top-down, bottom-up processing model, complemented by cognitive skills training through questioning. A sample text, schema, and questions are provided.

In as study of the effects of referential questions on ESL classroom discourse, Brock (1986) describes a study done to determine if higher frequencies of referential

questions have an effect on discourse in an adult English-as-a-second-language classroom. The result of the study showed that those referential questions generated differences in the language produced by the learners.

CHAPTER III

METHODOLOGY

Introduction

This chapter explained the methods used in this study. The researcher used quantitative method to investigate the perceptions of the high school English teachers in the UAE of the levels of the cognitive questions they ask in ESL classrooms. The investigation includes perceptions of teachers of the whole sample. In addition, the sample is divided into four groups according to the lengths of teaching experience. The chapter describes the research design, procedures, participants, instruments, data collection and analysis.

Research Design

This study employed quantitative method to investigate the research questions. The data was collected via a survey which was randomly distributed to the teachers of English in AL-Ain high schools. The survey aimed at finding the teachers' perceptions of the levels of cognitive questions they ask in the classrooms. From a population of 250 teachers of English in AL-Ain high schools, 128 teachers participated in filling the survey. The survey is based on Bloom's Cognitive Levels Taxonomy and includes thirty statements representing the six cognitive levels of questions. The researcher designed the survey to investigate teachers' perceptions of the cognitive levels of questions. The investigation of perceptions of cognitive levels of questions was based on analysis of the responses of participants. The researcher chose the survey instrument which is useful to explore a variety of educational problems and issues. Gay and Airasian (2003) stated that

quantitative method depends mainly on numerical data collection and analysis obtained from a large number of participants by a questionnaire.

Procedures

Depending on the extensive literature review related to the topic research and ADEC's professional standards for teachers, the researcher developed the methodological instruments for conducting this research study. A survey included statements representing the Bloom's Taxonomy of cognitive levels of questions were developed to generate data for the study (See appendix B). A jury of referees (UAEU instructors, English language advisors, teachers) revised and measured the validity of the research instruments including the survey (See appendix C). A pilot study was conducted among a group of participants (Ten teachers of English in a government High School) to insure clarity of the contents of the survey. The participants on the pilot study comprised ten teachers from AL-Maqam High School. The researcher amended, changed and deleted some of the statements in light of the jury's recommendations and the peers' comments during the pilot study. The research tool which is the survey (See appendix B) was refined and the researcher got permission from AL-Ain Educational Office to conduct the survey in the targeted high schools. The regulations of ADEC stipulate that getting permission is a perquisite to conduct studies in schools to ensure that those activities go in line with ADEC philosophy of education. AL-Ain Educational Office addressed the schools officially and requested them to facilitate the researcher's mission in conducting the survey. Having finished all those procedures, the researcher started distributing the survey in coordination with schools' principals and through personal contacts. The researchers' colleagues assisted the researcher in distributing the surveys to the

participants and collecting them back. Then the researcher collected the surveys through personal contacts with colleagues in the targeted high schools. As mentioned above, the survey was administered to examine the English teachers' perceptions of the cognitive levels of the questions they ask in the classroom. Then, the researcher used descriptive statistics to interpret the results of the survey.

Participants

The study was conducted in AL-Ain government high schools to investigate teachers' perceptions of the English teachers of the levels of cognitive questions they ask in their classrooms. The number of the participants who participated in the survey is 128 high school English teachers. The participants were randomly selected from a population of 250 English teachers in high schools in AL-Ain. The teachers who participated in the survey are Arab nationals who teach English as a foreign language in the UAE high schools. All of those teachers work for ADEC in public schools in the Emirate of Abu Dhabi. The teachers who participated in the survey comprised males and females with different years of experience. Most of them hold bachelor degrees and a few of them hold master degrees. Male teachers were 88 teachers, 11of them hold master degrees, while 77 hold bachelor degrees. The teachers' teaching experience varies from 5 to 26 years. As for the female teachers, 5 teachers hold master degrees and 35 hold bachelor degrees. The females' teaching experience varies from 3 to 20 (See appendix A). The sample included teachers from schools in the four geographical areas of AL-Ain city. Thus; it represented the entire educational zone. The researcher analyzed the data generated from the survey to find out perceptions of teachers of the levels of the cognitive questions they ask in the classrooms. Then the researcher divided the whole sample into four groups based on their

years of experience. Group one includes teachers with one to five years of teaching experience. Group two includes teachers with teaching experience of six to ten years. Group three includes teachers with eleven to fifteen years of teaching experience. Group four includes teachers with more than fifteen years of teaching experience. By incorporating the results generated from the whole sample then dividing it into four groups, the researcher was able to report the perceptions of teachers in the whole sample then compare its results with the perceptions of teachers within each group of teaching experience.

Instruments used in the study

The study investigated the perceptions of the English teachers of the levels of the cognitive questions in the UAE high schools and the relationship between those perceptions and the teachers' teaching experience. This was done in accordance with criteria established by Bloom's Taxonomy of the cognitive domain (1956). The taxonomy can help teachers identify the levels of the cognitive questions they ask in the classrooms, so, they can state the adequate learning objectives in their planning. Thus, to achieve the goal of the study, the researcher reviewed a vast bulk of literature related to questions pertaining to the cognitive levels of questions. The literature review in addition to the recommendations of the jury of referees and the researcher's experience in teaching English as a foreign language helped the researcher design a survey as an adequate research tool.

Survey of Cognitive Levels of Questions

In accordance with Abu Dhabi Education Council (ADEC) professional standards for teachers, the researcher designed a survey of levels of cognitive questions to report

those levels of questions as perceived by the English teachers in the UAE high schools. Background information about the participants including gender, academic qualifications, teaching level, age and years of teaching experience were collected via a survey (See appendix A).Teachers' perceptions of the levels of the cognitive questions they ask in classrooms were reported via a survey (See appendix B).The survey comprises thirty statements representing the six categories of Bloom's Taxonomy. A Likert scale was used to report and classify teachers' questions into six categories according to Bloom's Taxonomy. According to the five-point scale "1" means "I never do this". "2" means "I occasionally do this.", "3" means "I sometimes do this." "4" means "I usually do this and "5" means "I always do this. The researcher analyzed the data obtained from the survey and classified teachers' questions into the six categories of Bloom's Taxonomy (See appendix B). The six cognitive levels of the taxonomy were knowledge, comprehension, application, analysis, synthesis and evaluation. In the following paragraphs, I will give detailed description of each level.

The Knowledge Cognitive Level: At the knowledge level students are expected to remember or retrieve previously learned materials. The knowledge level includes three statements: "Recall and use vocabulary"; "Describe objects, people and things" and "Identify supporting details in texts or lectures".

The Comprehension Cognitive level: At this level students are expected to grasp or construct meaning from materials. The Comprehension level included six statements: "Interpret information from maps, charts, graphics, audio or video"; "Draw conclusions from information mentioned in a passage"; "Recognize key words used by an author to

strengthen an argument" ; "Summarize texts or stories"; "Make inferences from texts and "Determine sequence of events".

The Application Cognitive level: At the application level students are assumed to use learned material, or to use material in new and real situations. This level comprised eight statements: "Apply comprehension strategies to construct meaning"; "Practice grammatical rules in new situations"; "Relate events to their prior knowledge"; "Use bottom-up strategies to construct meaning"; "Demonstrate knowledge of spelling rules"; "Use transition words to show a sequence of events"; "Represent textual information by drawing, painting.... etc." and "Produce a persuasive essay which takes a stance for or against an issue".

The Analysis Cognitive level: At the analysis level, students are required to break or differentiate the parts of material into its components so that its organizational structure may be better understood. It comprised four statements as follows: "Recognize statements that adequately summarize a passage"; "Identify main ideas in texts"; "Retell important events in stories" and "Compare and contrast ideas".

The Synthesis Cognitive level: At this level students are required to place parts together to form a coherent or exclusive new whole. This level comprises three statements: "Use prior knowledge and clues to make predictions about texts"; "Combine syllables within spoken words" and "Recommend an alternative to solve a problem'.

The Evaluation Cognitive level: The evaluation level requires students to judge, verify, and even criticize the value of material for a given reason. It includes five statements: "Explain relationships between ideas"; "Evaluate the strengths and weaknesses of an

argument"; "Support an argument with evidence from a text"; "Assess a classmate's presentation" and "Validate a conclusion drawn from a discussion".

In a pilot study, the researcher, as a coordinator of the English Staff, conducted a professional development session to discuss the survey statements and Bloom's Taxonomy with teachers. Teachers' comments were taken into consideration and some amendments were introduced accordingly. Then, 10 teachers responded to the survey which proved that the survey was adequately clear. Based on the participants' comments during the pilot study, the three English advisors review and the jury's recommendations, the researcher deleted, changed and amended some of the items in the survey before distributing it to the larger sample. The survey was structured according to Bloom's Taxonomy. Thirty statements describing levels of cognitive questions were listed in such a way to categorize them into low levels cognitive questions and high levels of cognitive questions. The first category included knowledge and comprehension, whereas the latter comprised application, analysis, synthesis and evaluation. Indeed, the survey made it possible to sort teachers' questions into categories to analyze them easily (See Appendix B).

Having finished the perception survey, the researcher collected and analyzed the data of the whole participants in the survey to answer research question one. Then, the researcher classified the participants and their data into four groups according to their teaching experience. Thus, group one comprised teachers with one to five years of teaching experience, group two included teachers with six to ten years of teaching experience, group three with eleven years of teaching experience and group four with more than fifteen years of teaching experience. Analyzing the results of the four groups

made it possible to report teachers' perceptions within each group to answer research question two.

Validity and Reliability

The survey lends its structure to Bloom's Taxonomy of the levels of cognitive questions. There are six cognitive levels classified into two main categories. The knowledge and comprehension levels comprise the category of low levels, while the application, analysis, synthesis and evaluation comprise the category of the high levels. The taxonomy is generally supported as a way to identify behaviors of teachers and students at various levels of cognition (Pickford, 1988). Besides, a jury of referees measured the validity of the survey items .They proposed some amendments on few statements to make them clearer. The referees who included (UAEU professors, supervisors of English Language, teachers) approved the research instrument (See appendix C). To ensure the clarity of the survey statements, the researcher conducted a pilot study among ten teachers of English in a high school to respond to the survey.

As for the reliability of the results, the researcher used descriptive statistics to identify Cronbach's Alpha reliability degree of the questionnaire. It was important to ensure the degree of the reliability of participants' responses to judge the consistency of their answers. Cronbach's Alpha was found to be .86 for the survey of levels of cognitive questions.

Data Analysis

The data obtained, in the study by the survey of the cognitive levels of questions, was analyzed by using descriptive statistics. The scores for the statements of the survey were as follows: 5 (I always do this); 4(I usually do this); 3 (I sometimes do this) ; 2(I

occasionally do this) and 1(I never do this). The data is arranged into six levels of cognitive questions and each level has a number of statements. The frequency and percentage for each statement were calculated. The mean score for each statement was calculated. The mean score for each cognitive level was calculated. To report the teachers' perceptions of the low and high levels of cognitive questions, the cumulative mean for each level was also calculated.

CHAPTER IV

Results of the Study

Introduction

The purpose of this study was to investigate the English teachers' perceptions of the levels of cognitive questions in the UAE high schools. The research utilized quantitative method to collect data and analyze it. The chapter includes the research questions, the analysis of the data using descriptive statistics and a summary of the major results as related to other studies.

Research Questions

This study attempted to answer the following three research questions.

1. What are the levels of cognitive questions asked by the English language teachers in the UAE high schools?
2. Do English language teachers' perceptions of levels of cognitive questions vary according to their teaching experience?

To answer the research questions, the data was collected via a survey consists of 30 statements describing teachers' levels of cognitive questions. The statements of the survey were classified into six cognitive levels based on Bloom's Taxonomy. Each cognitive level comprised a number of statements. The first two cognitive levels, knowledge and comprehension, represented the low cognitive levels of questions. The second four cognitive levels, application; analysis; synthesis and evaluation, comprised the high cognitive levels.

The data from the survey was collected by quantitative methods and displayed in tables. The tables include the statements and are classified into six cognitive levels. The

frequency, percentage and mean score for each statement were calculated. The cumulative mean score for the statements comprising each cognitive level was also calculated. Furthermore, the cumulative mean scores for the two main cognitive levels, low and high, were calculated. The frequencies, percentages mean scores and cumulative mean scores were shown in tables and described in details.

Question 1: What are the levels of cognitive questions asked by the English language teachers in the UAE high schools?

To answer this research question, the data was collected through a survey and categorized in tables illustrating their different cognitive levels. Thus, the analysis of teachers' perceptions of the cognitive levels of their questions comprises seven tables. The first six tables describe the six cognitive levels of questions. The seventh table sums up the mean and cumulative scores for the two main cognitive levels which are the low cognitive levels and the high cognitive levels.

Table 1
Descriptive statistics for questions at the Knowledge Level (n=128)

	Always		Usually		Sometimes		Occasionally		Never		mean
	F	%	F	%	F	%	F	%	F	%	
S1	57	44.5	52	40.6	13	10.2	4	3.1	2	1.6	4.3
S2	46	35.9	46	35.9	30	23.4	5	3.9	1	0.8	4
S22	24	18.8	58	45.3	35	27.3	8	6.3	3	2.3	3.7
											4

Table 1 shows teachers' perceptions of questions asked at the knowledge cognitive level. In responding to the different statements at this level, it is noticed that the cumulative mean score for the questions was 4. Fifty-seven teachers (44.5%) perceive that they always ask questions to help students develop abilities to recall vocabulary (S1)

while 46 teachers (35.9%) perceive that they always ask questions to help students describe objects (S2). Forty teachers (35.9%) perceive that they usually ask questions to help students describe objects (S2). Fifty-eight teachers (45.3%) perceive that their questions usually help students develop abilities to identify supporting details in texts or lectures (S22).

Table 2
Descriptive statistics for the questions at the Comprehension Level (n=128)

	Always		Usually		Sometimes		Occasionally		Never		Mean
	F	%	F	%	F	%	F	%	F	%	
S4	26	20.3	54	42.2	40	31.3	5	3.9	3	2.3	3.8
S8	49	38.3	49	38.3	19	14.8	8	6.3	3	2.3	4.1
S9	44	34.4	46	35.9	33	25.8	4	3.1	1	.8	4
S16	41	32.0	55	43.0	25	19.5	6	4.7	1	.8	4
S18	46	35.9	46	35.9	30	23.4	5	3.9	1	.8	3.9
S27	33	25.8	51	39.8	30	23.4	12	9.4	2	1.6	3.7
											3.92

Table 2 displays the frequency and percentages of the questions teachers perceive to ask at the comprehension cognitive level. The cumulative mean score of teachers' questions at this level was 3.92. The results show that fifty-four teachers (42.2 %) perceive that they usually ask questions which require students to interpret information from maps, charts, graphics, audio or video (S4). Forty-nine teachers (38.3%) reported that they always ask questions to prompt students to draw conclusions based on information mentioned in a passage (S8). Forty-nine teachers (38.3%) reported that they

usually ask questions to prompt students to draw conclusions based on information mentioned in a passage (S8). Forty-six teachers (35.9 %) reported that their questions usually encourage students to recognize key words used by an author to strengthen an argument (S9). Fifty-five teachers (43 %) were reported to ask questions that usually help students to summarize texts or stories (S16). Forty-six teachers' questions (35.9 %) were found as always helping students to make inferences from texts (S18). Forty-six teachers' questions (35.9 %) were found as usually helping students to make inferences from texts (S18). Fifty-one teachers' questions (39.8 %) were reported as they usually help students to determine sequence of events (S27).

Table 3
Descriptive statistics for the questions at the Application Level (n=128)

	Always		Usually		Sometimes		Occasionally		Never		Mean
	F	%	F	%	F	%	F	%	F	%	
S10	35	27.3	57	44.5	28	21.9	4	3.1	4	3.1	3.9
S11	29	22.7	52	40.6	37	28.9	5	3.9	5	3.9	3.8
S12	41	32.0	55	43.0	24	18.8	5	3.9	3	2.3	3.9
S13	33	25.8	46	35.9	37	28.9	9	7.0	3	2.3	3.7
S14	22	17.2	48	37.5	42	32.8	11	8.6	5	3.9	3.5
S17	34	26.6	61	47.7	25	19.5	7	5.5	1	.8	3.9
S19	23	18.0	56	43.8	30	23.4	14	10.9	5	3.9	3.6
S20	28	21.9	56	43.8	33	25.8	16	12.5	5	3.9	3.6
											3.74

Table 3 shows frequencies and percentages of questions as perceived to be asked by teachers at the cognitive application level. The cumulative mean score for teachers'

questions at this level was 3.74. Fifty-seven teachers (44.5%) reported that they usually ask questions that help students to apply comprehension strategies to construct meaning (S10). Fifty-two teachers (40.6 %) reported asking questions that help students to practise grammatical rules in new situations (S11). Fifty-five teachers (43 %) reported that their questions usually help students to relate events to their prior knowledge (S12). Forty-six teachers (35.9 %) reported that they usually encourage students to use bottom-up strategies to construct meaning (S13). Forty-eight teachers (37.5 %) reported that their questions usually encourage students to demonstrate knowledge of spelling rules (S14). Sixty-one (47.7 %) teachers reported that their questions help students to use transition words to show a sequence of events (S17). Fifty-six teachers (43.8 %) reported that their questions usually encourage students to represent textual information by drawing, painting.... etc. (S19) and fifty-six (43.8 %) reported that they usually ask questions that help students to produce a persuasive essay which takes a stance for or against an issue (S20).

Table 4
Descriptive statistics for the questions at the Analysis Level (n=128)

	Always		Usually		Sometimes		Occasionally		Never		Mean
	F	%	F	%	F	%	F	%	F	%	
S3	32	25.0	48	37.5	32	25.0	12	9.4	4	3.1	3.9
S6	25	19.5	61	47.7	31	24.2	6	4.7	5	3.9	3.9
S7	64	50.0	39	30.5	18	14.1	4	3.1	3	2.3	4.4
S15	35	27.3	59	46.1	26	20.3	5	3.9	3	2.3	3.9
S21	28	21.9	57	44.5	32	25.0	8	6.3	3	2.3	3.8
											3.98

Table 4 shows the frequencies and percentages of questions teachers perceive that they ask in classrooms at the analysis cognitive level. Teachers' responses to the different statements at this level have a cumulative score of 3.98. Forty-eight teachers (37.5%) reported questions were for distinguishing facts from opinions (S30). Sixty-one teachers' questions (47.7 %) were reported for recognizing statements that adequately summarize a passage (S6). Sixty-four (50 %) of teachers' questions were reported for identifying main ideas in texts (S7). Fifty-nine (46.1%) of teachers' questions were reported for retelling important events in stories (S15) and fifty-seven (44.5 %) for comparing and contrasting ideas (S21).

Table 5
Descriptive statistics for the questions at the Synthesis Level (n=128)

	Always		Usually		Sometimes		Occasionally		Never		Mean
	F	%	F	%	F	%	F	%	F	%	
S5	46	35.9	50	39.1	26	20.3	2	1.6	4	3.1	4.1
S24	25	19.5	44	34.4	39	30.5	17	13.3	3	2.3	3.6
S28	37	28.9	44	34.4	37	28.9	8	6.3	2	1.6	3.8
											3.83

Table 5 points out the frequencies and percentages of teachers' perceptions of questions they ask in classrooms at the synthesis cognitive level. By analysing teachers' responses to the different statements at this level, the results reveal that the teachers' questions have a cumulative mean score of 3.83. Fifty teachers' questions (39.1 %) were reported for using prior knowledge and clues to make predictions about texts (S5) and forty-four (34.4 %) for combining syllables within spoken words (S24) and recommending an alternative to solve a problem (S28).

Table 6 shows the frequencies and percentages of teachers' perceptions of their questions at the evaluation cognitive level. The questions at these levels have a cumulative mean score of 3.74. Forty-four of teachers' questions (34.4 %) were found for explaining relationships between ideas (S23). Fifty-one (39.8 %) of teachers' questions were reported for evaluating the strengths and weaknesses of an argument (S25). Forty-nine (38.3%) of teachers' questions were reported for supporting an argument with evidence from a text (S26). Forty-three (33.6%) of the questions reported were for assessing a classmate's presentation (S29) and forty-nine (38.3%) for validating a conclusion drawn from a discussion (S30).

Table 6
Descriptive statistics for the questions at the Evaluation Level (n=128)

	Always		Usually		Sometimes		Occasionall		Never		Mean
	F	%	F	%	F	%	F	%	F	%	
S23	37	28.9	44	34.4	34	26.6	10	7.8	3	2.3	3.8
S25	31	24.2	51	39.8	36	28.1	7	5.5	3	2.3	3.7
S26	40	31.3	49	38.3	24	18.8	14	10.9	1	.8	3.8
S29	40	31.3	43	33.6	33	25.8	9	7.0	3	2.3	3.8
S30	27	21.1	49	38.3	37	28.9	12	9.4	3	2.3	3.6
											3.74

Table 7
Descriptive statistics for the questions at the Cumulative Level (n=128)

Category		Level	Mean	CM
Low	Knowledge	4		3.96
	Comprehension	3.92		
High	Application	3.74		3.82
	Analysis	3.98		
	Synthesis	3.83		
	Evaluation	3.74		

Table 7 shows the reported use of cognitive levels of questions by the UAE English teachers in the classrooms. The cumulative mean for the low cognitive levels i.e. Knowledge and Comprehension was found to be 3.96. For the higher cognitive levels i.e. Application; Analysis; Synthesis and Evaluation, it was 3.82. At the lower category of the cognitive levels, the knowledge level was 4 and the Comprehension level was 3.92. At the higher category of the cognitive levels, the Application level was 3.74; the Analysis level was 3.98; the synthesis level was 3.83 and the Evaluation level was 3.74.

Question 2: Do English language teachers' perceptions of levels of cognitive questions vary according to their teaching experience?

To answer this research question, the data was collected through the survey then it was categorized into groups according to the teachers' teaching experience. Thus, group one includes the data of teachers with one to five years of teaching experience. Group two includes teachers' data with six to ten years of teaching experience. Group three comprises teachers' data with eleven to fifteen years of teaching experience and group four comprises teachers' data with more than fifteen years of teaching experience. Then the data was analyzed and displayed in tables showing the cognitive levels, frequencies, percentages, mean scores and cumulative mean scores. The description of each group includes seven tables. The first six tables describe the six cognitive levels of questions in terms of reported questions' frequencies, percentages, mean scores and cumulative mean scores. The seventh table sums up the mean and cumulative scores at the two main cognitive levels which are the low cognitive levels and the high cognitive levels.

Table 8 shows perceptions of teachers, with teaching experience of less than five years, of questions asked at the knowledge cognitive level. The cumulative mean score for all the questions at this level was 4. Twelve teachers (46.2%) perceive that they

always ask questions to help students develop abilities to recall vocabulary (S1) while eleven teachers (42.3%) perceive that they usually ask questions to help students describe objects (S2). Eleven teachers (42.3%) perceive that their questions usually help students develop abilities to identify supporting details in texts or lectures (S22).

Table 8
Descriptive statistics for the questions at the Knowledge Level (Group 1; n= 26)

	Always		Usually		Sometimes		Occasionally		Never		mean
	F	%	F	%	F	%	F	%	F	%	
S1	12	46.2	8	30.8	5	19.2	1	3.8	0	0	4.2
S2	8	30.8	11	42.3	6	23.1	1	3.8	0	0	4
S22	6	23.1	11	42.3	7	26.9	2	7.7	0	0	3.8
											4

Table 9
Descriptive statistics for the questions at the Comprehension Level (Group 1; n= 26)

	Always		Usually		Sometimes		Occasionally		Never		mean
	F	%	F	%	F	%	F	%	F	%	
S4	5	19.2	16	61.5	4	15.4	1	3.8	0	0	4
S8	10	38.5	10	38.5	5	19.2	1	3.8	0	0	4.1
S9	10	38.5	9	34.6	4	15.4	2	7.7	1	3.8	4
S16	6	23.1	12	46.2	5	19.2	3	11.5	0	0	3.8
S18	8	30.8	11	42.3	6	23.1	1	3.8	0	0	4
S27	9	34.6	10	38.5	5	19.2	1	3.8	1	3.8	4
											3.98

Table 9 shows perceptions of teachers, with teaching experience of less than five years, of questions asked at the comprehension cognitive level. The cumulative mean score for all the items at this level was 3.98. The results show that sixteen teachers (61.5%) perceive that they usually ask questions which require students to interpret information from maps, charts, graphics, audio or video (S4). Ten teachers (38.5%) reported that they always ask questions to prompt students to draw conclusions based on information mentioned in a passage (S8). Ten teachers (38.5%) reported that they usually ask questions to prompt students to draw conclusions based on information mentioned in a passage (S8). Ten teachers (38.5 %) reported that their questions always encourage students to recognize key words used by an author to strengthen an argument (S9). Twelve teachers (46.2%) were reported to ask questions that usually help students to summarize texts or stories (S16). Eleven teachers' questions (42.3%) were found as usually helping students to make inferences from texts (S18). Ten teachers (38.5%) reported that they usually ask questions that help students to determine sequence of events (S27).

Table 10 shows perceptions of teachers, with teaching experience of less than five years, of questions asked at the application cognitive level. The cumulative mean score of questions at this level was 3.8. The teachers' questions reveal that twelve teachers (46.2%) reported that they usually ask questions that help students to apply comprehension strategies to construct meaning (S10). Eleven teachers (42.3%) reported asking questions that usually help students to practise grammatical rules in new situations (S11). Fifteen teachers (57.7%) reported that their questions usually help students to relate events to their prior knowledge (S12). Eight teachers (30.8%) reported that they

always encourage students to use bottom-up strategies to construct meaning (S13). Eight teachers (30.8%) reported that they usually encourage students to use bottom-up strategies to construct meaning (S13). Fifteen teachers (57.7 %) reported that their questions usually encourage students to demonstrate knowledge of spelling rules (S14). Nine teachers (34.6%) reported that they usually ask questions to prompt students to use transition words to show a sequence of events (S17). Eighteen teachers (69.2 %) reported that they usually ask questions to help to represent textual information by drawing, painting.... etc. (S19). Eight teachers (30.8 %) reported that their questions always help students to produce a persuasive essay which takes a stance for or against an issue (S20).

Table10
Descriptive statistics for the questions at the Application Level (Group 1; n= 26)

	Always		Usually		Sometimes		Occasionally		Never		Mean
	F	%	F	%	F	%	F	%	F	%	
S10	7	26.9	12	46.2	6	23.1	1	3.8	0	0	4
S11	5	19.2	11	42.3	9	34.6	1	3.8	0	0	3.8
S12	6	23.1	15	57.7	5	19.2	0	0	0	0	4
S13	8	30.8	8	30.8	8	30.8	1	3.8	1	3.8	3.8
S14	3	11.5	15	57.7	5	19.2	3	11.5	0	0	3.7
S17	8	30.8	9	34.6	5	19.2	4	15.4	0	0	3.8
S19	5	19.2	18	69.2	2	7.7	1	3.8	0	0	3.7
S20	8	30.8	6	23.1	6	23.1	5	19.2	1	3.8	3.6
											3.8

Table 11 shows perceptions of teachers, with teaching experience of less than five years, of questions asked at the analysis cognitive level. The cumulative mean score for all the questions at this level was 3.98. Fifteen teachers (57.7 %) reported questions were for distinguishing facts from opinions (S3). Thirteen teachers' questions (50 %) were reported for recognizing statements that adequately summarize a passage (S6).

Fifteen (57.7%) of teachers' questions were reported for identifying main ideas in texts (S7). Nine (34.6 %) of teachers' questions were reported for retelling important events in stories (S15) and thirteen (50 %) for comparing and contrast ideas (S21).

Table11
Descriptive statistics for the questions at the Analysis Level (Group 1; n= 26)

	Always		Usually		Sometimes		Occasionally		Never		Mean
	F	%	F	%	F	%	F	%	F	%	
S3	5	19.2	15	57.7	4	15.4	2	7.7	0	0	3.9
S6	5	19.2	13	50	8	30.8	0	0	0	0	3.9
S7	15	57.7	7	26.9	4	15.4	0	0	0	0	4.4
S15	8	30.8	9	34.6	7	26.9	2	7.7	0	0	3.9
S21	5	19.2	13	50	5	19.2	3	11.5	0	0	3.8
Total											3.98

Table 12

Descriptive statistics for the questions at the Synthesis Level (Group 1; n= 26)

	Always		Usually		Sometimes		Occasionally		Never		Mean
	F	%	F	%	F	%	F	%	F	%	
S5	8	30.8	12	46.2	5	19.2	1	3.8	0	0	4
S24	10	38.5	6	23.1	8	30.8	2	7.7	0	0	3.9
S28	9	34.6	10	38.5	7	26.9	0	0	0	0	4.1
											4

Table 12 shows perceptions of teachers, with teaching experience of less than five years, of questions asked at the synthesis cognitive level. The cumulative mean score of all the questions at this level was 4. Twelve teachers' questions (46.2 %) were reported

for using prior knowledge and clues to make predictions about texts (S5). Ten teachers (38.5 %) reported that they always ask questions for combining syllables within spoken words (S24) ten teachers reported that they usually ask questions for recommending an alternative to solve a problem (S28).

Table 13
Descriptive statistics for the questions at the Evaluation Level (Group 1; n= 26)

	Always		Usually		Sometimes		Occasionally		Never		mean
	F	%	F	%	F	%	F	%	F	%	
S23	10	38.5	7	26.9	7	26.9	2	7.7	0	0	4
S25	4	15.4	14	53.8	5	19.2	3	11.5	0	0	3.6
S26	9	34.6	10	38.5	6	23.1	1	3.8	0	0	4.
S29	12	46.2	8	30.8	3	11.5	2	7.7	1	3.8	4.1
S30	8	30.8	9	34.6	6	23.1	2	7.7	1	3.8	3.8
											3.9

Table 13 shows perceptions of teachers, with teaching experience of less than five years, of questions asked at the evaluation cognitive level. The cumulative mean score of teachers' questions at this level was 3.9. Ten of teachers' questions (38.5 %) were found for explaining relationships between ideas (S23). Fourteen (53.8 %) of teachers' questions were reported for evaluating the strengths and weaknesses of an argument (S25). Ten (38.5 %) of teachers' questions were reported for supporting an argument with evidence from a text (26). Twelve (46.2 %) of the questions reported were for assessing a classmate's presentation (S29) and nine (34.6 %) for validating a conclusion drawn from a discussion (S30).

Table14

Descriptive statistics for the reported questions at the Cumulative Level (Group 1; n= 26)

Category	Level	Mean	CM
Low	Knowledge	4	3.99
	Comprehension	3.98	
High	Application	3.8	3.92
	Analysis	3.98	
	Synthesis	4	
	Evaluation	3.9	

Table 14 shows the statistics for group one of the perceptions of the English language teachers of the levels of cognitive questions they ask in their classrooms. The table describes the mean scores for the levels of cognitive questions as well as the cumulative mean scores for the two main categories of the levels of cognitive questions. The table points out the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found to be 3.99. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation) the cumulative mean was 3.92. At the lower category of the cognitive levels, the knowledge level was 4 and the Comprehension level was 3.98. At the higher category of the cognitive levels, the Application level was 3.8; the Analysis level was 3.98; the synthesis level was 4 and the Evaluation level was 3.9.

Table 15 shows teachers' perceptions with teaching experience ranging from six to ten years, of questions asked at the knowledge cognitive level .Responding to questions at this level had a cumulative mean score of 3.97. Twenty teachers (47.6 %) perceive that they usually ask questions to help students develop abilities to recall vocabulary (S1) while seventeen teachers (40.5 %) perceive that they always ask questions to help students describe objects (S2). Seventeen teachers (40.5 %) perceive

that their questions usually help students develop abilities to identify supporting details in texts or lectures (S22).

Table 15
Descriptive statistics for the questions at the Knowledge Level (Group 2; n=42)

	Always		Usually		Sometimes		Occasionally		Never		mean
	F	%	F	%	F	%	F	%	F	%	
S1	16	38.1	20	47.6	4	9.5	1	2.4	1	2.4	4.1
S2	17	40.5	13	31.5	10	23.8	2	4.8	0	0	4
S22	9	21.4	17	40.5	15	35.7	0	0	1	2.4	3.8
											3.97

Table 16 shows perceptions of teachers, with teaching experience ranging from six to ten years, of questions asked at the comprehension cognitive level. The cumulative mean score for the questions at this level was 3.92. The results show that eighteen teachers (42.9%) perceive that they sometimes ask questions which require student to interpret information from maps, charts, graphics, audio or video (S4). Eighteen teachers (42.9 %) reported that they always ask to prompt students to draw conclusions based on information mentioned in a passage (S4). Sixteen teachers (38.1%) reported that their questions usually encourage students to recognize key words used by an author to strengthen an argument (S9). Sixteen teachers (38.1%) were reported to ask questions that usually help students to summarize texts or stories (S16). Eighteen teachers' questions (42.9 %) were found as always helping students to make inferences from texts (S18). Thirteen teachers' questions (31.0 %) were reported as they always help students

to determine sequence of events (S27). Thirteen teachers' questions (31.0 %) were reported as they usually help students to determine sequence of events (S27).

Table16
Descriptive statistics for the questions at the Comprehension Level (Group 2; n=42)

	Always		Usually		Sometimes		Occasionally		Never		mean
	F	%	F	%	F	%	F	%	F	%	
S4	8	19.0	14	33.3	18	42.9	0	0	2	4.8	3.6
S8	18	42.9	15	35.7	7	16.7	1	2.4	1	2.4	4.1
S9	14	33.3	16	38.1	10	23.8	1	2.4	1	2.4	4.2
S16	13	31.0	16	38.1	11	26.2	1	2.4	1	2.4	3.9
S18	13	31.0	18	42.9	6	14.3	3	7.1	2	4.8	3.9
S27	13	31.0	13	31.0	12	28.6	3	7.1	1	2.4	3.8
											3.92

Table 17 shows teachers' perceptions, with teaching experience ranging from six to ten years, of questions asked at the application cognitive level. According to the table, questions asked at this level had a cumulative mean score of 3.78. Nineteen teachers (45.2 %) reported that they usually ask questions that help students to apply comprehension strategies to construct meaning (S10). Twenty-five teachers (59.5 %) reported asking questions that help students to practise grammatical rules in new situations (S11). Seventeen teachers (40.5 %) reported that their questions usually help students to relate events to their prior knowledge (S12). Fifteen teachers (35.7 %) reported that they usually encourage students to use bottom-up strategies to construct meaning (S13). Eighteen teachers (42.9 %) reported that their questions sometimes

encourage students to demonstrate knowledge of spelling rules (S14). Nineteen (45.2 %) teachers reported that their questions usually help students to use transition words to show a sequence of events (S17). Sixteen teachers (38.1 %) usually ask questions that help students to represent textual information by drawing, painting.... etc.). Twenty-one teachers (50 %) reported that their questions usually help students to produce a persuasive essay which takes a stance for or against an issue (S20).

Table 17
Descriptive statistics for the questions at the Application Level (Group 2; n=42)

	Always		Usually		Sometimes		Occasionally		Never		Mean
	F	%	F	%	F	%	F	%	F	%	
S10	11	26.2	19	45.2	10	23.8	1	2.4	1	2.4	3.9
S11	6	14.3	25	59.5	7	16.7	2	4.8	2	4.8	3.7
S12	12	28.6	17	40.5	12	28.6	0	0	1	2.4	3.9
S13	11	26.2	15	35.7	13	31.0	2	4.8	1	2.4	3.8
S14	8	19.0	13	31.0	18	42.9	2	4.8	1	2.4	3.7
S17	10	23.8	19	45.2	9	21.4	3	7.1	1	2.4	3.8
S19	9	21.4	16	38.1	11	26.2	4	9.5	2	4.8	3.7
S20	8	19.0	21	50	9	21.4	2	4.8	2	4.8	3.7
											3.78

Table 18 shows perceptions of teachers, with teaching experience ranging from six to ten years, of questions asked at the analysis cognitive level. The cumulative mean score for all the questions at this level was 3.94. Fourteen teachers (33.3 %) reported asking questions for distinguishing facts from opinions (S3). Sixteen teachers' questions (38.1 %) were reported for recognizing statements that adequately summarize a passage

(S6). Twenty-two (52.4 %) of teachers' questions were reported for identifying main ideas in texts (S7). Twenty (47.6 %) of teachers' questions were reported for retelling important events in stories (S17) and nineteen (45.2 %) for comparing and contrasting ideas (S21).

Table 18
Descriptive statistics for the questions at the Analysis Level (Group 2; n=42)

	Always		Usually		Sometimes		Occasionally		Never		Mean
	F	%	F	%	F	%	F	%	F	%	
S3	13	31.0	14	33.3	10	23.8	4	9.5	1	2.4	3.8
S6	10	23.8	16	38.1	10	23.8	4	9.5	2	4.8	3.7
S7	22	52.4	13	31.0	6	14.3	1	2.4	0	0	4.3
S15	11	26.2	20	47.6	7	16.7	3	7.1	1	2.4	3.9
S21	12	28.6	19	45.2	9	21.4	1	2.4	1	2.4	4
											3.94

Table 19 shows perceptions of teachers, with teaching experience ranging from six to ten years, of questions asked at the synthesis cognitive level. The cumulative mean score for the questions at this level was 3.7. Nineteen teachers' questions (45.2 %) were reported for using prior knowledge and clues to make predictions about texts (S5). Fourteen teachers' questions (33.3 %) were reported for combining syllables within spoken words (S24) and fifteen (35.7 %) for recommending an alternative to solve a problem (S28).

Table 19
Descriptive statistics for the questions at the Synthesis Level (Group 2; n=42)

	Always		Usually		Sometimes		Occasionally		Never		Mean
	F	%	F	%	F	%	F	%	F	%	
S5	14	33.3	19	45.2	6	14.3	2	4.8	1	2.4	4
S24	7	16.7	14	33.3	14	33.3	6	14.3	1	2.4	3.5
S28	8	19.0	15	35.7	15	53.7	2	4.8	2	4.8	3.6
											3.7

Table 20
Descriptive statistics for the questions at the Evaluation Level (Group 2; n=42)

	Always		Usually		Sometimes		Occasionally		Never		mean
	F	%	F	%	F	%	F	%	F	%	
S23	13	31.0	11	26	14	33.3	4	9.5	0	0	3.8
S25	9	21.4	17	40.5	12	28.6	3	7.1	1	2.4	3.7
S26	11	26.2	18	42.9	7	16.7	5	11.9	1	2.4	3.8
S29	12	28.6	13	31.0	13	31.0	3	7.1	1	2.4	3.8
S30	10	23.8	15	35.7	14	33.3	2	4.8	1	2.4	3.7
											3.76

Table 20 shows perceptions of teachers, with teaching experience ranging from six to ten years, of questions asked at the evaluation cognitive level. The cumulative mean score for all the questions at this level was 3.76. Fourteen of teachers' questions (33.3 %) were found for explaining relationships between ideas (S23). Seventeen (40.5 %) of teachers' questions were reported for evaluating the strengths and weaknesses of an

argument (S25). Eighteen (42.9 %) of teachers' questions were reported for supporting an argument with evidence from a text (S26). Thirteen (31.0 %) of the questions reported were for assessing a classmate's presentation (S29) and fifteen (35.7%) for validating a conclusion drawn from a discussion (S30).

Table 21
Descriptive statistics for the questions at the Cumulative Level (Group 2; n=42)

Category	Level	Mean	CM
Low	Knowledge	3.97	3.95
	Comprehension	3.92	
High	Application	3.78	3.79
	Analysis	3.94	
	Synthesis	3.7	
	Evaluation	3.76	

Table 21 shows the statistics of group two for the reported perceptions of the English language teachers of the levels of cognitive questions they ask in their classrooms. The table describes the cumulative mean score for the levels of cognitive questions as well as the cumulative mean score for the two main categories (low and high) of the levels of cognitive questions. The table points out that the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was 3.95. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation), the cumulative mean was 3.79. At the lower category of the cognitive levels, the knowledge level was 3.97 and the Comprehension level was 3.92. At the higher category of the cognitive levels, the Application level was 3.78; the Analysis level was 3.94; the synthesis level was 3.7 and the Evaluation level was 3.76.

Table 22
Descriptive statistics for the questions at the Knowledge Level (Group 3; n= 30)

	Always		Usually		Sometimes		Occasionally		Never		mean
	F	%	F	%	F	%	F	%	F	%	
S1	12	40.0	15	50	2	6.7	1	3.3	0	0	4.3
S2	12	40.0	10	33.3	7	23.3	1	3.3	0	0	4.1
S22	5	16.7	16	53.3	6	20.0	2	6.7	1	3.3	3.7
											4.03

Table 22 shows perceptions of teachers, with teaching experience ranging from eleven to fifteen years, of questions asked at the knowledge cognitive level. It is noticed that the cumulative mean score for the questions at this level was 4.03. The perceptions for the reported questions are inferred by the frequency percentage of those questions. Fifteen teachers (50 %) perceive that they usually ask questions to help students develop abilities to recall vocabulary (S1) while ten (33.3 %) perceive that they usually ask questions to help students describe objects (S2). Sixteen (53.3 %) teachers perceive that their questions usually help students develop abilities to identify supporting details in texts or lectures (S22).

Table 23 shows perceptions of teachers, with teaching experience ranging from eleven to fifteen years, of questions asked at the comprehension cognitive level. The cumulative mean score for all the questions at this level was 3.88. The results show that sixteen teachers (53.3 %) perceive that they usually ask questions which require students to interpret information from maps, charts, graphics, audio or video (S4). Thirteen teachers (43.3 %) reported that they usually ask to prompt students to draw conclusions

based on information mentioned in a passage (S8). Ten teachers (33.3 %) reported that their questions always encourage students to recognize key words used by an author to strengthen an argument (S9). Ten teachers (33.3 %) were reported to ask questions that always help students to summarize texts or stories (S16). Twelve teachers' questions (40.0 %) were found as usually helping students to make inferences from texts (S18). Ten teachers' questions (33.3 %) were reported as they usually help students to determine sequence of events (S27).

Table 23
Descriptive statistics for the questions at the Comprehension Level (Group 3; n= 30)

	Always		Usually		Sometimes		Occasionally		Never		mean
	F	%	F	%	F	%	F	%	F	%	
S4	7	23.3	16	53.3	6	20.0	1	3.3	0	0	4
S8	10	33.3	13	43.3	3	10.0	2	6.7	2	6.7	4
S9	10	33.3	9	30.0	9	30.0	1	3.3	1	3.3	4
S16	10	33.3	9	30.0	6	20.0	3	10.0	2	6.7	4
S18	6	20.0	12	40.0	8	26.7	3	10.0	1	3.3	3.7
S27	7	23.3	10	33.3	6	20.0	5	16.7	2	6.7	3.6
											3.88

Table 24 shows perceptions of teachers, with teaching experience ranging from eleven to fifteen years, of questions asked at the application cognitive level. According to the table, the mean score for all the questions at this level was 3. 8. Fourteen teachers (46.7 %) reported that they usually ask questions that help students to apply comprehension strategies to construct meaning (S10). Fourteen teachers (46.7 %)

reported asking questions that always help students to practise grammatical rules in new situations (S11). Eleven teachers (36.7 %) reported that their questions always help students to relate events to their prior knowledge (S12). Eleven teachers (36.7 %) reported that their questions usually help students to relate events to their prior knowledge (S12). Nine teachers (30.0 %) reported that they usually encourage students to use bottom-up strategies to construct meaning (S13). Ten teachers (33.3 %) reported that their questions usually encourage students to demonstrate knowledge of spelling rules (S14). Fifteen (50 %) teachers reported that their questions usually help students to use transition words to show a sequence of events (S17). Seventeen teachers (56.7 %) reported that their questions usually encourage students to represent textual information by drawing, painting.... etc. (S19) and ten (33.3 %) reported that they usually ask questions that help students to produce a persuasive essay which takes a stance for or against an issue (S20).

Table 24
Descriptive statistics for the questions at the Application Level (Group 3; n= 30)

	Always		Usually		Sometimes		Occasionally		Never		Mean
	F	%	F	%	F	%	F	%	F	%	
S10	6	20.0	14	46.7	7	23.3	2	6.7	1	3.3	3.8
S11	14	46.7	7	23.3	6	20.0	2	6.7	1	3.3	4.1
S12	11	36.7	11	36.7	3	10.0	3	10.0	2	6.7	4
S13	8	26.7	9	30.0	6	20.0	4	13.3	3	10.0	3.6
S14	5	16.7	10	33.3	9	30.0	2	6.7	4	13.3	3.4
S17	8	26.7	15	50	5	16.7	2	6.7	0	0	4.1
S19	4	13.3	17	56.7	4	13.3	3	10.0	2	6.7	3.7
S20	7	23.3	10	33.0	7	23.3	3	10.0	3	10.0	3.7
											3.8

Table 25 shows perceptions of teachers, with teaching experience ranging from eleven to fifteen years, of questions asked at the analysis cognitive level. The figures

point out those teachers' questions had a cumulative mean score of 3.86. Twelve teachers' reported questions (40.0 %) were for S3 (to distinguish facts from opinions). Thirteen teachers' questions (43.3 %) were reported for S6 (to recognize statements that adequately summarize a passage). Eleven of teachers' questions (36.7 %) were reported for S7 (to identify main ideas in texts). Twelve of teachers' questions (40.0 %) were reported for S15 (to retell important events in stories) and fourteen (46.7 %) for S21 (to compare and contrast ideas).

Table 25
Descriptive statistics for the questions at the Analysis Level (Group 3; n= 30)

	Always		Usually		Sometimes		Occasionally		Never		Mean
	F	%	F	%	F	%	F	%	F	%	
S3	7	23.3	12	40.0	6	20.0	3	10.0	2	6.7	3.8
S6	7	23.3	13	43.3	6	20.0	3	10.0	1	3.3	3.9
S7	9	30.0	11	36.7	6	20.0	1	3.3	3	10.0	3.9
S15	7	23.3	12	40.0	8	26.7	2	6.7	1	3.3	3.9
S21	4	13.3	14	46.7	9	30.0	2	6.7	1	3.3	3.8
											3.86

Table 26 shows perceptions of teachers, with teaching experience ranging from eleven to fifteen years, of questions asked at the synthesis cognitive level. The results show that the cumulative mean score for the questions at this level was 3.93. Eleven of the questions (36.7 %) were reported as they always help students use prior knowledge and clues to make predictions about texts (S5).Twelve of the questions (40.0 %) were reported as they usually help students combine syllables within spoken words (S24) and

eleven (36.7 %) were reported as they always help students recommend an alternative to solve a problem (S28) .

Table 26
Descriptive statistics for the questions at the Synthesis Level (Group 3; n= 30)

	Always		Usually		Sometimes		Occasionally		Never		Mean
	F	%	F	%	F	%	F	%	F	%	
S5	11	36.7	10	33.3	6	20.0	2	6.7	1	3.3	4.1
S24	6	20.0	12	40.0	9	30.0	3	10.0	0	0	3.8
S28	11	36.7	8	26.7	7	23.3	3	10.3	1	3.3	3.9
											3.93

Table 27
Descriptive statistics for the questions at the Evaluation Level (Group 3; n= 30)

	Always		Usually		Sometimes		Occasionally		Never		mean
	F	%	F	%	F	%	F	%	F	%	
S23	8	26.7	12	40.0	4	13.3	4	13.3	2	6.7	3.9
S25	10	33.3	11	36.7	6	20.0	3	10.0	0	0	4
S26	9	30.0	10	33.3	6	20.0	3	10.0	2	6.7	3.9
S29	7	23.3	13	43.3	6	20.0	3	10.0	1	3.3	3.8
S30	3	10.0	14	46.7	8	26.7	3	10.0	2	6.7	3.7
											3.86

Table 27 shows perceptions of teachers, with teaching experience ranging from eleven to fifteen years, of questions asked at the evaluation cognitive level. The cumulative mean score for the questions at this level was 3.86. Twelve of teachers'

questions (40.0 %) were found for S23 (to explain relationships between ideas). Eleven of teachers' questions (36.7 %) were reported for S25 (to evaluate the strengths and weaknesses of an argument). Ten of teachers' questions (33.3 %) were reported for S26 (to support an argument with evidence from a text). Thirteen of teachers' questions (43.3 %) were reported for S29 (to assess a classmate's presentation) and fourteen of the questions (46.7 %) were reported for S30 (to validate a conclusion drawn from a discussion).

Table 28
Descriptive statistics for the reported questions at the Cumulative Level (Group 3; n= 30)

Category	Level	Mean	CM
Low	Knowledge	4.03	3.96
	Comprehension	3.88	
High	Application	3.8	3.86
	Analysis	3.86	
	Synthesis	3.93	
	Evaluation	3.86	

Table 28 shows the results of group three for the reported perceptions of the English language teachers of the levels of cognitive questions they ask in their classrooms. The table describes the cumulative mean score for the levels of cognitive questions as well as the cumulative mean score for the two main categories of the levels of cognitive questions. The table points out that the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found to be 3.96. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation), the cumulative mean was 3.86. At the lower category of the cognitive levels, the knowledge level was 4.03 and the Comprehension level was 3.88. At the higher category of the

cognitive levels, the Application level was 3.8; the Analysis level was 3.86; the synthesis level was 3.93 and the Evaluation level was 3.86.

Table 29
Descriptive statistics for the questions at the Knowledge Level (Group 4; n= 30)

	Always		Usually		Sometimes		Occasionally		Never		mean
	F	%	F	%	F	%	F	%	F	%	
S1	16	53.3	11	36.7	3	10.0	0	0	0	0	4.4
S2	11	36.7	12	40.0	5	16.7	2	6.7	0	0	4.1
S22	5	16.7	13	43.3	8	26.7	4	13.3	0	0	3.6
											4.03

Table 29 shows perceptions of teachers, with teaching experience of more than fifteen years, of questions asked at the knowledge cognitive level. The cumulative mean score for the questions at this level was 4.03. Sixteen teachers (53.3 %) perceive that they always ask questions to help students develop abilities to recall vocabulary (S1) while twelve teachers (40.0 %) perceive that they usually ask questions to help students describe objects (S2). Thirteen teachers (43.3 %) perceive that their questions usually help students develop abilities to identify supporting details in texts or lectures (S22).

Table 30
Descriptive statistics for the questions at the Comprehension Level (Group 4; n=30)

	Always		Usually		Sometimes		Occasionally		Never		mean
	F	%	F	%	F	%	F	%	F	%	
S4	6	20.0	7	23.3	13	43.3	4	13.3	0	0	3.5
S8	11	36.7	12	40.0	3	10.0	3	10.0	1	3.3	4
S9	8	26.7	13	43.3	0	0	9	30.0	0	0	4
S16	10	33.3	13	43.3	5	16.7	2	6.7	0	0	4.1
S18	10	33.3	12	40.0	5	16.7	3	10.0	0	0	3.8
S27	4	13.3	16	53.3	5	16.7	5	16.7	0	0	3.6
											3.83

Table 30 shows perceptions of teachers, with teaching experience of more than fifteen years, of questions asked at the comprehension cognitive level. The cumulative mean score for questions at this level was 3.83. The results show that thirteen teachers (43.3%) perceive that they sometimes ask questions which require students to interpret information from maps, charts, graphics, audio or video (S4). Twelve teachers (40.0 %) reported that they usually ask to prompt students to draw conclusions based on information mentioned in a passage (S8). Thirteen teachers (43.3 %) reported that their questions usually encourage students to recognize key words used by an author to strengthen an argument (S9). Thirteen teachers (43.3 %) were reported to ask questions that usually help students to summarize texts or stories (S16). Twelve teachers' questions (40.0 %) were found as usually helping students to make inferences from texts (S18). Sixteen teachers' questions (53.3 %) were reported as they usually help students to determine sequence of events (S27).

Table 31 shows perceptions of teachers, with teaching experience of more than fifteen years, of questions asked at application cognitive level. According to the table, the cumulative mean score for the questions at this level was 3.56. Eleven teachers (36.7 %) reported that they always ask questions that help students apply comprehension strategies to construct meaning (S10). Eleven teachers (36.7 %) reported that they usually ask questions that help students apply comprehension strategies to construct meaning (S10). Eleven teachers (36.7 %) reported asking questions that sometimes help students to practise grammatical rules in new situations (S11). Eleven teachers (36.7 %) reported that their questions always help students to relate events to their prior knowledge (S12). Ten teachers (33.3 %) reported that they usually or sometimes encourage students to use

bottom-up strategies to construct meaning (S13). Twelve teachers (40.0 %) reported that their questions sometimes encourage students to demonstrate knowledge of spelling rules (S14). Thirteen (43.3 %) teachers reported that their questions usually help students to use transition words to show a sequence of events (S17). Ten teachers (33.3 %) reported that their questions sometimes encourage students to represent textual information by drawing, painting.... etc. (S19) and eleven (36.7 %) reported that they sometimes ask questions that help students to produce a persuasive essay which takes a stance for or against an issue (S20).

Table 31
Descriptive statistics for the questions at the Application Level ((Group 4; n=30)

	Always		Usually		Sometimes		Occasionally		Never		Mean
	F	%	F	%	F	%	F	%	F	%	
S10	11	36.7	11	36.7	7	23.3	1	3.3	0	0	4.1
S11	5	16.7	9	30.0	11	36.7	4	13.3	1	3.3	3.5
S12	11	36.7	9	30.0	5	16.7	4	13.3	1	3.3	3.8
S13	5	16.7	10	33.3	10	33.3	3	10.0	2	6.7	3.4
S14	4	13.3	5	16.7	12	40.0	6	20.0	3	10.0	3
S17	8	26.7	13	43.3	7	23.3	2	6.7	0	0	3.9
S19	5	16.7	9	30.0	10	33.3	5	16.7	1	3.3	3.4
S20	4	13.3	9	30.0	11	36.7	5	16.7	1	3.3	3.4
											3.56

Table 32 shows perceptions of teachers, with teaching experience of more than fifteen years, of questions asked at the analysis cognitive level. The figures point out that the mean score for questions at this level was 3. 8. Twelve teachers (40.0 %) reported that

their questions sometimes help students distinguish facts from opinions (S3). Eighteen teachers (60%) reported that their questions usually help students recognize statements that adequately summarize a passage (S6). Seventeen of teachers' questions (56.7 %) were reported as usually helping students identify main ideas in texts (S7). Fifteen of teachers' questions (30 %) were reported as usually helping students retell important events in stories (S15). Ten of the teachers' questions (33.3 %) were reported as usually helping students compare and contrast ideas (S21). Ten of the teachers' questions (33.3 %) were reported as sometimes helping students compare and contrast ideas (S21).

Table 32

Descriptive statistics for the questions at the Analysis Level (Group 4; n=30)

	Always		Usually		Sometimes		Occasionally		Never		Mean
	F	%	F	%	F	%	F	%	F	%	
S3	6	20.0	8	26.7	12	40.0	3	10.0	1	3.3	3.5
S6	2	6.7	18	60.0	7	23.3	1	3.3	2	6.7	3.6
S7	17	56.7	9	30.0	2	6.7	2	6.7	0	0	4.4
S15	7	23.3	15	50	6	20.0	1	3.3	1	3.3	3.9
S21	6	20.0	10	33.3	10	33.3	4	13.3	0	0	3.6
											3. 8

Table 33

Descriptive statistics for the questions at the Synthesis Level (Group 4; n=30)

	Always		Usually		Sometimes		Occasionally		Never		Mean
	F	%	F	%	F	%	F	%	F	%	
S5	13	43.3	8	26.7	9	30.0	0	0	0	0	4.1
S24	2	6.7	11	36.7	10	33.3	7	23.3	0	0	3.3
S28	7	23.3	10	33.3	10	33.3	3	10.0	0	0	3.7
											3.7

Table 33 shows perceptions of teachers, with teaching experience of more than fifteen years, of questions asked at the synthesis cognitive level. The results reveal that the cumulative mean score for the questions at this level was 3.7. Thirteen teachers (43.3 %) always ask questions for using prior knowledge and clues to make predictions about texts (S5) and eleven (36.7 %) were reported as usually helping students combine syllables within spoken words (S24) whereas ten of the questions (33.3 %) were reported as usually and sometimes helping students to recommend an alternative to solve a problem (S28).

Table 34
Descriptive statistics for the questions at the Evaluation Level ((Group 4; n=30)

	Always		Usually		Sometimes		Occasionally		Never		mean
	F	%	F	%	F	%	F	%	F	%	
S23	5	16.7	12	40.0	11	36.7	2	6.7	0	0	3.7
S25	8	26.7	7	23.3	13	43.3	1	3.3	1	3.3	3.7
S26	8	26.7	9	30.0	6	20.0	7	23.3	0	0	3.6
S29	7	23.3	9	30.0	9	30.0	4	13.3	1	3.3	3.6
S30	5	16.7	7	23.3	12	40.0	5	16.7	1	3.3	33
											3.58

Table 34 shows perceptions of teachers, with teaching experience of more than fifteen years, of questions asked at the evaluation cognitive level. The cumulative mean score for the questions at this level was 3.58. Twelve of teachers' questions (40 %) were found as usually helping students to explain relationships between ideas (S23). Thirteen of teachers' questions (43.3 %) were found as sometimes helping students to

evaluate the strengths and weaknesses of an argument (S25). Nine of teachers' questions (30.0 %) were reported as usually helping students to support an argument with evidence from a text (S26). Nine of the questions (30 %) were reported as usually and sometimes helping students to assess a classmate's presentation (S29) and twelve of the questions (40.0 %) were reported as sometimes helping students to validate a conclusion drawn from a discussion (S30).

Table 35
Descriptive statistics for the questions at the Cumulative Level ((Group 4; n=30)

Category	Level	Mean	CM
Low	Knowledge	4.03	3.93
	Comprehension	3.83	
High	Application	3.56	3.66
	Analysis	3. 8	
	Synthesis	3.7	
	Evaluation	3.58	

Table 35 shows the results of group four for the reported perceptions of the English language teachers of the levels of cognitive questions they ask in their classrooms. The table describes the mean score for the levels of cognitive questions as well as the cumulative mean score for the two main categories of the levels of cognitive questions. The table points out the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found to be 3.93. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation), the cumulative mean was 3.66. At the lower category of the cognitive levels, the knowledge level was 4.03 and the Comprehension level was 3.83. At the higher category of the cognitive levels, the Application level was 3.56; the Analysis level was 3. 8); the synthesis level was 3.0 and the Evaluation level was 3.58.

Table 36
Descriptive statistics for the reported questions at the Cumulative Level (The four groups)

Group	Category	Level	Mean	CM
Group 1	Low	Knowledge	4.00	3.99
		Comprehension	3.98	
	High	Application	3.8	3.92
		Analysis	3.98	
		Synthesis	4	
		Evaluation	3.9	
Group 2	Low	Knowledge	3.97	3.95
		Comprehension	3.92	
	High	Application	3.78	3.79
		Analysis	3.94	
		Synthesis	3.7	
		Evaluation	3.76	
Group 3	Low	Knowledge	4.03	3.96
		Comprehension	3.88	
	High	Application	3.8	3.86
		Analysis	3.86	
		Synthesis	3.93	
		Evaluation	3.86	
Group 4	Low	Knowledge	4.03	3.93
		Comprehension	3.83	
	High	Application	3.56	3.66
		Analysis	3. 8	
		Synthesis	3.7	
		Evaluation	3.58	

Table 36 shows the results of the four groups (Group one with teaching experience from one to five years; group two with teaching experience from six to ten years; group three with eleven to fifteen years of teaching experience and group four with more than fifteen years of teaching experience.) for the reported levels of cognitive questions. The table describes the mean score for the levels of cognitive questions as well as the cumulative mean score for the two main categories of the levels of cognitive questions. As for group one (teachers with less than five years of experience), the table shows that the cumulative mean for the low cognitive levels (i.e. Knowledge and

Comprehension) was found to be 4. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation), the cumulative mean was 3.92. At the lower category of the cognitive levels, the knowledge level was 4 and the Comprehension level was 3.98. At the higher category of the cognitive levels, the Application level was 3.8; the Analysis level was 3.98; the synthesis level was 4 and the Evaluation level was 3.9.

As for group two (teachers with six to 10 years of teaching experience), the table shows that the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found 3.95. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation) the cumulative mean was 3.79. At the lower category of the cognitive levels, the knowledge level was 3.97 and the Comprehension level was 3.92. At the higher category of the cognitive levels, the Application level was 3.78; the Analysis level was 3.94; the synthesis level was 3.7 and the Evaluation level was 3.76.

For group three (teachers with eleven to fifteen years of teaching experience), the table shows that the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found to be 3.96. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation), the cumulative mean was 3.86. At the lower category of the cognitive levels, the knowledge level was 4.03 and the Comprehension level was 3.88. At the higher category of the cognitive levels, the Application level was 3.); the Analysis level was 3.86; the synthesis level was 3.93 and the Evaluation level was 3.86.

Regarding group four (teachers with more than fifteen years of teaching experience), the table shows that the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found 3.93. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation), the cumulative mean was 3.66. At the lower category of the cognitive levels, the cumulative means for the knowledge and the comprehension levels were 4.03 and 3.83 respectively. At the higher category of the cognitive levels, the cumulative mean scores for the Application level, the Analysis level, the Synthesis level and the Evaluation level were 3.56; 3.8; 3.7 and 3.58 respectively.

Summary of the Major Findings

This summary concludes the main ideas revealed by the two research questions. The data collected through the survey included descriptions of the reported questions for the entire sample as well as the four groups of teachers with different teaching experience. The descriptions were demonstrated by tables. The tables included the statements classified into six cognitive levels. The percentages, frequencies and mean score for each statement were calculated. The cumulative mean score for the statements comprising each cognitive level was also calculated. Furthermore, the cumulative mean scores for the two main cognitive levels, low and high, were calculated. The frequencies, percentages, mean scores and cumulative mean scores were shown in tables and described in details.

The results generated through the analysis of the data provided answers to the research questions. The reported teachers' questions (obtained via the survey of the levels of the cognitive questions) revealed these findings.

1. For the entire sample, the cumulative mean for the low cognitive levels i.e. Knowledge and Comprehension was found to be 3.96. For the higher cognitive levels i.e. Application; Analysis; Synthesis and Evaluation, it was 3.82. At the lower category of the cognitive levels, the knowledge level was 4 and the Comprehension level was 3.92.At the higher category of the cognitive levels, the Application level; the Analysis level; the synthesis level and the Evaluation level were 3.74; 3.98; 3.83 and 3.74 respectively.
2. As for group one (teachers with less than six years of teaching experience), the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found to be 3.99. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation) the cumulative mean was 3.92.
3. Regarding group two (teachers with six to ten years of teaching experience), the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found 3.95. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation) the cumulative mean was 3.79.
4. The results of group three (teachers with eleven to fifteen years of teaching experience) reveal that the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found to be 3.96. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation) the cumulative mean was 3.86.
5. Results of group four (teachers with more than fifteen years of teaching experience), shows that the cumulative mean for the low cognitive levels (i.e.

Knowledge and Comprehension) was found to be 3.93. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation) the cumulative mean was 3.66.

6. The results show that the application level was given the least priority in the reported questions for the entire sample (CM=3.74); group one (CM=3.8); group three (CM= 3.8) and group four (CM=3.56).Group two was the only exception where the synthesis level was the least of occurrences (CM=3.7).
7. Group one (teachers with less than six years of teaching experience) recorded the highest occurrences of the high cognitive levels of questions (CM=3.92) in contrast to the least occurrences reported by group four; teachers with more than fifteen teaching years of experience (M=3.66).

CHAPTER V

DISCUSSION and Conclusion

Introduction

This chapter incorporates the last parcel of the study. It includes a summary of the research questions, purpose of the study, methodology and findings. The chapter also comprises a conclusion of the study, recommendations and implications .The limitations of the study are acknowledged and recommendations for further research are proposed.

Major Findings

This study investigated the perceptions of the English language teachers of the levels of cognitive questions in the UAE high schools. To have more in-depth insights about the issue, a quantitative data was obtained via a survey of 128 English language teachers in AL-Ain high schools. A survey of the levels of cognitive questions comprised 30 statements representing the six cognitive levels of Bloom's Taxonomy investigated the teachers' perceptions of the levels of cognitive questions. The participants filled in the survey and their responses were analyzed. The responses of the entire sample were analyzed then they were classified in four groups according to teaching experience. The investigation of the responses of the entire sample and the four groups aimed at answering the two research questions.

To answer research questions, the data was collected, analyzed, displayed in tables and statistically interpreted. The statistical interpretation came up with the following major findings.

1. For the entire sample, the results indicate that there is more focus on the low cognitive levels than on the high cognitive levels. The cumulative mean for the

low cognitive levels i.e. Knowledge and Comprehension was found to be 3.96. For the higher cognitive levels i.e. Application; Analysis; Synthesis and Evaluation, it was 3.82. At the lower category of the cognitive levels, the knowledge level and the comprehension levels were 4 and 3.92 respectively. At the higher category of the cognitive levels; the Application level; Analysis level; the synthesis level and Evaluation level were 3.74; 3.98; 3.83 and 3.74 respectively.

2. For group one (teachers with less than six years of teaching experience), the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found 3.9. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation) the cumulative mean was 3.92. The results indicate that there was more focus on the low cognitive levels than on the high cognitive levels.
3. Regarding group two (teachers with six to ten years of teaching experience) the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found to be 3.95. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation) the cumulative mean was 3.79. Similar to group one, there was more focus on the low cognitive levels than on the high levels.
4. The results of group three (teachers with eleven to fifteen years of teaching experience) reveal that the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found to be 3.96. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation), the

cumulative mean was 3.86. The figures for this group show more low cognitive questions than higher ones.

5. Results of group four (teachers with more than fifteen years of teaching experience), shows that the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found 3.93. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation), the cumulative mean was 3.66. The figures indicate that there is a greater emphasis on the low cognitive levels than on the higher levels.
6. The results indicate that the application level was given the least priority in the questions for the entire sample (CM=3.74); group one (CM=3.8); group three (CM= 3.8) and group four (CM=3.56).Group two was the only exception where the synthesis level was the least of occurrences (CM=3.7).
7. Group one (teachers with less than six years of teaching experience) recorded the highest occurrences of the high cognitive levels of questions (CM=3.92) in contrast to the least occurrences reported by group four (M=3.66).

Discussion

To further analyze the findings, detailed descriptions for answering research questions were included. The data was collected by a survey and categorized in tables illustrating their different cognitive levels. Thus, the analysis of teachers' perceptions of the levels of cognitive questions (for both of the entire sample and the four groups) includes tables describing the statements comprising each cognitive level. A table at the end of each cognitive level provided a summary of the mean scores and the cumulative mean scores which allowed adequate descriptions and comparisons.

The analysis of the results of the entire sample revealed more occurrences for the lower cognitive levels i.e. Knowledge and Comprehension (CM=3.96) with less occurrences of the higher cognitive levels i.e. Application; Analysis; Synthesis and Evaluation, it was (CM=3.82). This indicates that teachers should emphasize more on questions that address the higher cognitive levels. As Gibbons (2003) states that the level of students' thinking is indirectly linked to the level of questions asked by teachers and to the degree of the students' participation in the higher-thinking order. Therefore, teachers need to make higher-order questions.

For group one (teachers with less than six years of teaching experience), the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found to be 4. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation), the cumulative mean was 3.92. This indicates more occurrences for the questions that address the low cognitive levels. At the lower category of the cognitive levels, the knowledge level was 4.00 and the Comprehension level was 3.98. At the higher category of the cognitive levels, the Application level; the Analysis level; the synthesis level and the Evaluation level were 3.8; 3.98; 4 and 3.9 respectively. These findings point out that the priority was for the knowledge cognitive level in contrast to the application level which has the least occurrence. The implications of these results are that there is a need for more questions that tackle the higher cognitive levels to promote students' skills of critical thinking and cognitive development (Li, 2004).

As for group two (teachers with six to ten years of teaching experience), the results point out that the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found to be 3.95. Likewise for the higher cognitive levels (i.e.

Application; Analysis; Synthesis and Evaluation), the cumulative mean was 3.79. Similar to the entire sample and group one, more emphasis was laid on the lower cognitive levels. However, this group is different from the other three groups in the fact that the synthesis cognitive level is the least reported. At the lower category of the cognitive levels, the knowledge level was 3.97 and the Comprehension level was 3.92. At the higher category of the cognitive levels, the Application level; the Analysis level; the synthesis level and the Evaluation level were 3.78; 3.94; 3.7 and 3.76 respectively. Like the other groups, more attention should be paid for questions that encourage students to engage in active learning through the practice of using the target language through interaction. This practice offers language learners opportunities to realize their cognitive skills when processing information and monitoring new inputs, such as the new vocabulary and grammatical structures that have been exposed during lessons and formulate their own ideas which can be applied in different contexts (Johnson & Lamb, 2011).

For group three (teachers with eleven to fifteen teaching years of experience), the results show that the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found to be 3.96. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation), the cumulative mean was 3.86. In spite of the slight difference, the lower levels received more focus contrasted to the higher levels. At the lower category of the cognitive levels, the knowledge level was 4.03 and the Comprehension level was 3.88. Similar to the other groups, the priority is to the knowledge level and the least focus is on the application level. The analysis of the results of this group indicates more prevalence of the low cognitive questions than the higher ones. Thus, teachers must ask more questions that require students to employ

interpretation, application, analysis, synthesis and evaluation of the subject (Birman; Desimone; Porter; Garet, 2000).

Regarding group four (teachers with more than fifteen years of teaching experience) the results indicate that the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found to be 3.93. In contrast, the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation), the cumulative mean was 3.66. Even though the difference is slight, it is the greatest in comparison to the other groups. At the category of the cognitive levels, the knowledge level was 4.03 and the Comprehension level was 3.83. At the higher category of the cognitive levels, the Application level; the Analysis level: the synthesis level and the Evaluation level were 3.56; 3.8; 3.7 and 3.58 respectively. The analysis of the results of this group indicates that there is more focus on the knowledge level and less focus was on the application level. The implications of these results calls for teachers to work harder to create higher-level questions that are more beneficial to the learning of students. Higher-levels questions make us analyze, compare, interpret, hypothesize, reflect, create, evaluate, find new meanings, and stretch our imagination (Ross, 1998). In addition to that, research found that the effectiveness of teacher questioning is dependent on the teacher's ability to produce effective questions that require higher-level thinking (Dantonio & Beisenherz, 2001).

As for research question two which investigated teachers' levels of cognitive questions in terms of teaching experience, to the best knowledge of the writer, there is a scarcity of research pertaining to this issue. However, the following results were revealed: Group one (teachers with less than six years of teaching experience), recorded

the highest occurrences for lower cognitive levels (i.e. Knowledge and Comprehension) with a cumulative mean score of 3.99. This indicates that the teachers with the least teaching experience relied more on low cognitive questions. In fact, this is quite natural as new teachers in service may lack the adequate questioning strategies and taxonomies. However, this group recorded the highest occurrences of high cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation) in comparison to other groups (CM=3.92). The indication of this result might be that teachers with less teaching experience are newly graduates and thus they are exposed to the most recent developments in teaching strategies and questioning techniques. Another notable indicator for the results of group one is that the application level has the least occurrences (CM=3.8) compared to other cognitive levels within the same group. However, by contrast with other groups, the application level in group one (CM=3.8) was equal to its counterpart in group three but greater than group two (CM=3.78) and four (CM=3.56). These findings point out that the priority was for the knowledge cognitive level in contrast to the application level which has the least occurrence.

As for group two (teachers with six to ten years of teaching experience), the results point out that the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found to be 3.95. The indication of the result of this group is that teachers with longer years of teaching experience have less focus on low cognitive levels. However, group two recorded second in least occurrences of the higher cognitive levels of questions (CM= 3.79) in comparison to the same levels in group four (CM=3.66). In fact, teachers in this group have a fairly good number of years of teaching experience and thus their questions are assumed to have greater occurrences in the higher

cognitive levels. The notable result of this group is that the synthesis level has the least occurrences (CM=3.7).

For group three (teachers with eleven to fifteen teaching years of experience), the results show that the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found to be 3.96. Likewise for the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation), the cumulative mean was 3.86. In spite of the slight difference, the lower levels received more focus contrasted to the higher levels. At the lower category of the cognitive levels, the knowledge level was 4.03 and the Comprehension level was 3.88. Similar to the other groups, the priority is to the knowledge level and the least focus is on the application level. The analysis of the results of this group indicates more prevalence of the low cognitive questions than the higher ones. In comparison to other groups, group three (CM=3.96) is better than group one (CM=3.99) in terms of frequent occurrences of low cognitive questions. Nevertheless, it is less in advantage than group one in terms of the higher cognitive levels (CM=3.86; CM=3.99) respectively.

Regarding group four (teachers with more than fifteen years of teaching experience) the results indicate that the cumulative mean for the low cognitive levels (i.e. Knowledge and Comprehension) was found to be 3.93. In contrast, the higher cognitive levels (i.e. Application; Analysis; Synthesis and Evaluation), the cumulative mean was 3.66. Even though the difference is slight, it is the greatest in comparison to the other groups. At the category of the cognitive levels, the knowledge level was 4.03 and the Comprehension level was 3.83. At the higher category of the cognitive levels, the Application level; the Analysis level; the synthesis level and the Evaluation level were

3.56; 3.8; 3.7 and 3.58 respectively. The analysis of the results of this group indicates that there is more focus on the knowledge level and less focus was on the application level. The implications of these results are quite surprising. Because group four includes the most experienced teachers, it is assumed that its results are the best. Compared to other groups, group four recorded the least occurrences of low cognitive levels of questions (CM=3.93).Yet, it recorded as well the least occurrences of the higher cognitive levels of questions (CM=3.66). The results of group four in this study are quite similar to a study which investigated teaching experience and its effect on students' achievement. AL-Jasir (2012) examined the teaching experience and whether it influences the Saudi EFL learners' level of achievement. AL-Jasir found that longer teaching experience did not correlate positively with higher achievement level. On the contrary, shorter teaching experience correlated with higher level of achievement. Surprisingly, students under instructors who had longer teaching experience scored lower than students receiving instructions from teachers who had the least teaching experience.

The findings of the study revealed more focus on the low cognitive questions and less emphasis on high cognitive questions which is in congruence with a study conducted by Ertmer & Sadf (2011).The study investigated the relationships among question types and levels and students' subsequent responses/interactions in online discussion forums. The study proposed that questions at the higher levels of Bloom's taxonomy facilitate higher levels of students' responses. In another study, McBain (2011) examined how high up in the scale of Bloom's taxonomy students were able to reach to understand higher order thinking skills when studying critical thinking questions. McBain suggested that focusing on higher order thinking skills encourages students to study more in-depth &

use problem solving skills .These skills could lead to the development of students' own motivation, self-regulation & critical thinking skills.

The findings of the study also relate to a study by Neal and Wood (2009). The authors investigated engagement of students through effective questions. The study found that the highest-order open-ended questions engage students in dynamic thinking and learning. Besides, they assist students synthesize information, analyse ideas, and draw their own conclusions. In addition, these questions help prepare students for the larger community by becoming critical thinkers.

Conclusion

This study investigated teachers' perceptions of the levels of cognitive questions in the UAE English high schools. It provided answers for the research questions by using the data generated from the quantitative research instrument. It revealed findings that are in congruence with current research in the field of teachers' questions. The study showed a relatively more prevalence of the low levels of cognitive questions for the entire sample as well as the teaching experience groups. Similarly, the application cognitive level recorded the least occurrence among other cognitive levels for the entire sample as well as the teaching experience groups. For the entire sample, the results indicate that there is more focus on the low cognitive levels than on the high cognitive levels (CM= 3.96; 3.82) respectively. These results explained research question one.

As for research question two which investigated teachers' levels of cognitive questions in terms of teaching experience, the following results were revealed: For group one (teachers with less than six years of teaching experience), the most occurrences of the lower cognitive levels of questions were found in this group. However, it recorded the

highest occurrences of the higher cognitive levels of questions. Results of group two (teachers with six to ten years of teaching experience), show more dominance for the lower cognitive levels in comparison to the higher levels within the group itself (CM=3.95; CM=3.79) respectively. But in comparison to other groups, the group recorded fewer occurrences of lower cognitive questions than group one and three. However, it recorded fewer occurrences in the higher cognitive levels than group one and three. Group three also recorded more occurrences for the lower cognitive questions in comparison to the higher levels within the group itself (CM=3.96; CM=3.86) respectively. Nevertheless, the group recorded more occurrences of higher cognitive questions than group two and four. It is noteworthy that group four had the greatest discrepancy between lower cognitive questions contrasted with the higher cognitive levels (CM=3.93; CM=3.66) respectively. It is notable that group four recorded the least occurrences of higher cognitive question among the other groups. This indicates that the most experienced teachers, in terms of years of service, were the most frequent in relying on the lower cognitive levels of questions. In fact, the result is surprising because teachers with the longest teaching experience are expected to have the most dominance of the highest cognitive levels of questions. On the contrary, shorter teaching experience, as was exemplified by group one, correlated with higher levels of cognitive questions.

Generally speaking, the results reveal that there is greater emphasis on the lower cognitive levels than on the higher levels for groups of different teaching experience. In other words, teaching experience doesn't provide an advantage for teachers' questioning i.e. asking higher cognitive levels of questions.

Recommendations and Implications

The results of this study can be used by researchers to help guide teachers through a new area of research. Most researchers in this field indicate that teachers need training to improve their skills of questioning. Thus, teachers must have pr-service and in-service training to help them master the art of questioning. Another group of people, who would benefit from the results of this study, are the teachers and school officials who agreed to participate in the study. Indeed, it will be important for teachers to review the results to maximize the amount of time allocated to the use of high cognitive levels in planning and instruction.

Schools officials might benefit from the results of this study to conduct professional development sessions to improve teachers' questioning.

A mixed-method research design might prove to be more beneficial for future research. Interviewing teachers to get their thoughts and insights on shifting their questioning techniques would provide more data and understanding of change over time. Interviewing students to get their thoughts on the amount of time they are given to speak and give responses would be of interest. A mixed-method design would also allow researchers to gather more information on the amount of time spent putting the limited professional development course activities into practice.

Recommendations for Further Research

This study is limited in terms of both time and place. The study took place over the years 2010-2011.During that period too much water flowed in the river. There have been gigantic efforts by Abu Dhabi Education Council (ADEC) to introduce reforms in the educational system. The essence of the new reforms is teaching the skill rather than

the information. To achieve this objective, ADEC has adopted the Standard-Based Curriculum. The new system gives the teacher an upper hand in choosing the adequate curriculum he wants to teach provided that he attains the standards. As a teacher for ADEC, the researcher can claim that most teachers are currently obsessed with the idea of professional development. Therefore, further research is needed to investigate teachers' questioning techniques in the new educational system. Are these techniques shifting from traditional rote-learning?

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APPENDIXES
Appendix A

Background Information

Please check the right box as it applies to you:

Gender: Male □ Female □

Academic Qualification:

Diploma □ Bachelor □ Master □ Doctoral □

Teaching Level: Primary □ Preparatory □ Secondary□

Years of experience : 1-5 □ 6-10 □ 11-15 □ More than 15 □

Appendix B

Survey of Cognitive Questions Levels Used by EFL Teachers

The purpose of this survey is to collect information about the cognitive level questions you ask during your teaching English as a foreign language. In this survey each statement is followed by five numbers, 1, 2, 3, 4, and 5, and each number means the following:

'1' 'I never or almost never do this'.
'2' 'I do this only occasionally'.
'3' 'I sometimes do this' (*About 50% of the time*).
'4' 'I usually do this'.
'5' 'I always or almost always do this'.

Category Statement (My questions help the students to .....)	Never				Always
Knowledge Category					
1. recall and use vocabulary	1	2	3	4	5
2. describe objects, people and things	1	2	3	4	5
22. identify supporting details in texts or lectures.	1	2	3	4	5
Comprehension Category					
4. interpret information from maps, charts, graphics, audio or video.	1	2	3	4	5
8. draw conclusions based on information mentioned in a passage.	1	2	3	4	5
9. recognize key words used an author to strengthen an argument.	1	2	3	4	5
16. summarize texts or stories.	1	2	3	4	5
18. make inferences from texts.	1	2	3	4	5
27. determine sequence of events.	1	2	3	4	5
Application Category					
10. apply comprehension strategies to construct meaning.	1	2	3	4	5
11. practice grammatical rules in new situations.	1	2	3	4	5
12 .relate events to their prior knowledge.	1	2	3	4	5
13. use bottom-up strategies to construct meaning.	1	2	3	4	5
14. demonstrate knowledge of spelling rules.	1	2	3	4	5
17. use transition words to show a sequence of events.	1	2	3	4	5
19. represent textual information by drawing, painting.... etc.)	1	2	3	4	5
20. produce a persuasive essay which takes a stand for or against an issue.	1	2	3	4	5
Analysis Category					
3. distinguish facts from opinions.	1	2	3	4	5
6. recognize statements that adequately summarize a passage.	1	2	3	4	5
7. identify main ideas in texts .	1	2	3	4	5
15. retell important events in stories.	1	2	3	4	5
21. compare and contrast ideas.	1	2	3	4	5
Synthesis Category					
5. use prior knowledge and clues to make predictions about texts.	1	2	3	4	5
24. combine syllables within spoken words.	1	2	3	4	5
28. recommend an alternative to solve a problem.	1	2	3	4	5
Evaluation Category					
23. explain relationships between ideas.	1	2	3	4	5
25. evaluate the strengths weaknesses of an argument.	1	2	3	4	5
26. support an argument with evidence from a text.	1	2	3	4	5
29. assess a classmate's presentation.	1	2	3	4	5
30 .validate a conclusion drawn from a discussion.	1	2	3	4	5

APPENDIX C:

JURY OF REFEREES FOR RESEARCH INSTRUMENTS

No.	Position	Name	Signature
1	Associate Prof JAEU	Hamed Alawidi	
2	Associate Prof UAEU.	Mohammed Alzyadi	
3	Ibrahim Jadaneh		
4	Coordinator of English Supervision	Ibrahim Jadaneh	
5	Licenced Teacher for English	Philip M Searle	
6	Teacher-Advisor	Fadi Abughwaileh	
7	Senior English Consultant	William Harrison	
9	Senior Teacher Advisor	Richard Lee Wilson, III	Richard Lee Wilson, III
10	Lead Teacher	Joseph Dennis	

APPENDIX D

PERMISSION FOR STUDY IMPLEMENTATIONS:

UAEU Faculty of Education

جامعة الإمارات العربية المتحدة
United Arab Emirates University

التاريخ: 2011/11/23

الأستاذ الفاضل/ مدير منطقة العين التعليمية
السلام عليكم ورحمة الله وبركاته

بداية يطيب لنا أن نتقدم لكم بأطيب تحياتنا متمنين لكم ولمنطقة العين التعليمية كل التوفيق والنجاح في ارتقاء بالعملية التعليمية التعلمية. هذا وفي إطار التعاون الدائم بين منطقة العين التعليمية وكلية التربية بجامعة الإمارات العربية المتحدة، نود إفادتكم علماً بأن الطالب/ شنيع عبد الكريم يوسف، مسجل في برنامج الماجستير تخصص المناهج وطرق التدريس، ويقوم بإعداد رسالة الماجستير تحت عنوان **تحليل مستويات الأسئلة الذهنية لمادة اللغة الانجليزية في المدارس الثانوية بدولة الإمارات العربية المتحدة**، لذا نرجو التكرم بالموافقة على تسهيل مهمته البحثية.

شاكرين ومقدرين حسن تعاونكم.

هذا وتفضلوا بقبول فائق التحية والتقدير،،،

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هاتف: [illegible] / [illegible] فاكس: [illegible]

التحقق من ادراك مدرسي اللغة الانجليزية لمستويات الاسئلة العقلية
في المدارس الثانوية بدولة الامارت العربية المتحدة

ملخص الدراسة :

هدف هذه الدراسة هو التحقق من ادراك مدرسي اللغة الانجليزية لمستويات الاسئلة العقلية في المدارس الثانوية بدولة الامارت العربية المتحدة. وقد تناولت الدراسة مدى ادراك المدرسين لمستويات تلك الاسئلة ومدى العلاقة بين سنوات الخبرة التعليمية وادراك تلك المستويات. وتم جمع البيانات اللازمة عن ذلك الأدراك من خلال استطلاع اراء عينة عشوائية من المدرسين (مائة وثمانية وعشرين مدرسا من اصل مائتي وخمسين مدرسا) في المرحلة الثانوية في مدارس العين في امارة ابو ظبي.أجاب المدرسون المشاركون في الاستبانة المبنية على تصنيفات بلوم للاسئلة العقلية على ثلاثين عبارة تمثل المستويات الستة في تقسيمات بلوم.

ولتبيان العلاقة بين مدى ادراك المدرسين لمستويات تلك الاسئلة وسنوات الخبرة التعليمية تم تحليل اسئلة المدرسين في العينة ككل ثم تم تصنيف المدرسين الى أربع مجموعات وتم تحليل اسئلة المدرسين في كل منها على حدة.هذا وشملت المجموعة الأولى: المدرسين ذوي الخبرة من سنة الى خمس سنوات والمجموعة الثانية :المدرسين ذوي الخبرة من ست الى عشر سنوات والثالثة : المدرسين ذوي الخبرة من احدى عشرة الى خمس عشرة سنة والرابعة المدرسين ذوي الخبرة اكثر من خمس عشرة سنة .

اظهرت النتائج عدم وجود فروق جوهرية بين ادراك المدرسين لمستويات الأسئلة العقلية وبين سنوات الخبرة التعليمية. ولوحظ ان اسئلة المدرسين ذووي الخبرات التعليمية المختلفة تركز اكثر قليلا على المستويات الدنيا من الاسئلة كالتذكر والحفظ والاستيعاب مقارنة بالمستويات العليا كالتطبيق والتحليل والتركيب والتقييم التي من خلالها يستطيع المتعلم تطبيق ما تعلمه في مواقف جديدة خارج نطاق الحفظ والاستذكار. واللافت للنظر ايضا ان مستوى التطبيق كان الأقل تركيزا لدى المدرسين في مختلف الخبرات التعليمية باستثناء الفئة الثانية وهي المدرسون ذوي الخبرة من ست الى عشر سنوات التي كان لديها التركيز الأقل على مستوى التركيب .

لذا توصي الدراسة بمزيد من الاهتمام بمستويات الاسئلة لتمكين الطلبة من اجتياز المستويات الدنيا في الاسئلة المعرفية الى تلك العليا من تطبيق وتركيب وتقييم للاشياء.وهذا من شانه زيادة مستوى الفهم والاستيعاب الى التطبيق والنقد والتقويم مما ينعكس ايجابا على مستوى تحصيل الطلبة واكسابهم المهارات اللازمة التي تمكنهم من تطبيق ما يتعلمونه في سياقات ومواقف جديدة.

عنوان الرسالة:

التحقق من إدراك مدرسي اللغة الانجليزية لمستويات الأسئلة العقلية في المدارس الثانوية بدولة الامارت العربية المتحدة

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جامعة الإمارات العربية المتحدة
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رسالة مقدمة من الطالب

بديع عبد الكريم عمر الشيخ

إلى

جامعة الإمارات العربية المتحدة

استكمالاً لمتطلبات الحصول على درجة الماجستير في التربية

المناهج وطرق التدريس- لغة انجليزية

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جامعة الامارات العربية المتحدة

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