

## **ENHANCEMENT OF LEARNERS' CONSCIOUSNESS TOWARDS LIFELONG LEARNING IN THE 21<sup>ST</sup> CENTURY**

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### **ABSTRACT**

The study explores current pedagogies preparing learners as active contributors to a changing environment and enhancing the learners' consciousness towards the real world. The study focuses on thinking skills which prepares the students in solving real problems in the 21<sup>st</sup> century. The study proposes to integrate the 6 levels of learning objectives of the cognitive domain of the Bloom's Taxonomy which facilitates high levels of thinking skills among the students and the 6 thinking Hats introduced by Edward de Bono which encourages lateral thinking a powerful classroom pedagogy in this century. The study is an attempt to explore ways to collaborate Bloom's Taxonomy with the 6 thinking Hats in classroom practices to enhance the cognitive skills among the students in Omani classrooms.

**KEYWORDS:** Thinking Hats, Bloom's Taxonomy, Critical Thinking, High Order Thinking Skills, Lateral Thinking, Problem Solving

### **INTRODUCTION**

Over the last few decades, a gradual but major shift has taken place in the field of education resulting in less emphasis on teacher centered instruction and greater accent on learner centered pedagogies and critical thinking skills in learning. This shift has influenced language education curriculum and pedagogies in different ways. Most EFL teachers face a universal classroom challenge, where students are passive and reluctant to explore their high order thinking skills when exposed to a problem. There will be times when students are reluctant to answer a problem question posed by the teacher, and are excessively dependent on the teachers for solutions.

This study focuses on key issues on the above paradigm shift and focuses on the use of Bloom's high order thinking strategies in foreign language learning and teaching. In doing so, the study also focuses on thinking hats created by Edward de Bono which talks about lateral thinking in problem solving. The study proposes to collaborate the cognitive domain of the Bloom's Taxonomy which facilitates high order thinking skills among the learners and the 6 thinking Hats introduced by Edward de Bono which encourages lateral thinking to enhance learner's consciousness towards problem solving, the need of the 21<sup>st</sup> century.

### **LITERATURE REVIEW**

In this context Barell, (2007) stated that the PBL approach to learning exposes students to problems outside the classroom. The PBL approach engages students in real world contexts enabling them to experience and learn from the life situations. Another interesting research by Carter (2004:41) says "creative thought can be defined by an ability to think literally and innovatively, especially for purposes of problem solving and changing of accepted ways of seeing and

understanding a situation” The present day educators are aware that students’ success in the 21st century depends on well developed thinking skills, teaching methodologies and appropriate learning environment.

Bloom (1956) proposed a much clearer classification of learning objectives in the process of learning. He classified the cognitive domain into 6 levels of intellectual behavior which is a part of learning. The lowest level in the learning pyramid as per the old version is knowledge followed by comprehension. This is followed by application, analysis, synthesis and evaluation.

Problem solving is a task which involves creative and critical thinking. In order to display critical thinking, students need to develop skills in higher level objectives of the Bloom’s taxonomy. Benjamin Bloom’s (1995) Taxonomy of Educational Objectives and his six-level description of thinking has been widely adapted and used in countless contexts ever since. His list of cognitive processes is organized from the most simple, the recall of knowledge, to the most complex, making judgments about the value and worth of an idea. Both the original Bloom’s Taxonomy and its later revisions can be used to develop much-needed critical thinking among students.

The importance of critical thinking in education has been recognized by leading theorists and educationists. It has been the focus of education reforms in many parts of the world. In this context Fisher (1998, p. 5) states that “the aim of the reforms is to create a ‘thinking curriculum,’ placing the development of thinking skills at the heart of the educational process. Paul (1995) further stated that ”Critical thinking is “the heart of well-thought educational reforms because it is the main focus towards the 21st century.

In this context Edward de Bono (1985, 1991) propounded yet another perspective to the thinking process called ‘Lateral thinking’ which advocates teaching any concept through problem solving. He designed tools to broaden the natural flow of thinking. He created the 6 thinking hats technique (STH) a powerful tool in the 21<sup>st</sup> century pedagogy. It is used to look at a situation from different perspectives. This technique includes six hats in 6 different colors that you can put on or take off. The colour of each hat represents a different style of thinking and when each hat is put on it changes the style of thinking. The Six Thinking Hats method is a powerful classroom pedagogy of the 21<sup>st</sup> century. The shift is to understand that every problem may be viewed in various perspectives which promotes thinking followed by creative thought for new solutions.

Manktelow (2005:88) believes that the Six Thinking Hats (STH) technique is an important and a powerful technique used to look at problems from different perspectives which forces one to think laterally. It helps students to react to different situations in different ways. Each color Hat helps them to identify their reactions to the situations, analyze them, and come out with creative ideas to solve real life problems.

Thinking is a life skill which acts upon experience” (de Bono, 1976, p.33). The purpose of teaching thinking is to extend improving the ability of students to develop skills and competencies to think and react as per the real life context, based on their learning experiences. Gregory & Masters(2010) opine that the STH technique encourages students to focus on their own thinking and to different perspectives on an issue.

## **STATEMENT OF THE PROBLEM**

The study attempts to explore if the language curriculum is preparing students with life skills in the 21<sup>st</sup> century. The study also investigates the appropriateness of the English language course books /textbooks adopted by the Foundation

programmes, the lack of planning for appropriate and effective language environments, and the ineffective teaching methodology for problem solving which involves critical thinking skills in Omani classrooms.

## OBJECTIVES

The major objectives of this research study are as follows:

- To explore appropriate pedagogies for the 21<sup>st</sup> century to foster critical thinking among the Omani students.
- To assess the impact of the Q: Skills for Success course book on the high order thinking skills of the students in Omani classrooms.
- To focus on the questioning skills on the levels of Bloom's taxonomy and to promote lateral thinking in solving problems.
- To offer suggestions in improving the learning process in problem based learning.

## Definitions of Important Terms

Lateral thinking is the ability to use your imagination to look at a problem in a fresh way and come up with a new solution. Lateral thinking is not a skill but a different approach to solving problems. It often leads to problems that you never knew you had. Edward de Bono(1985).

Critical thinking involves thinking deeply, evaluating the true value of statements and in search of errors.

Creative Thinking has been identified as a key element in reaching high educational goals (Torrance, 1993). Therefore, educators continue to be in quest for different teaching learning models that motivate students to be more creative while solving complex problems in the real world context.

Problem solving deals with finding out the causes of the problem and then finding solutions to solve the problem. Harland (2002) believes that students learn new skills and new ways of thinking through the PBL approach.

## Is Thinking Teachable?

The focus of the study is can thinking be taught throughout the curriculum. The study of thinking enables students to acquire strategies to think beyond the classroom with the information acquired. It includes problem solving, assessment and reflection. Teachers and teacher educators must consider the "purpose" of exploiting the thinking process in classrooms which helps one answer questions vital to acquire the skills of reasoning and logical flow of thinking to a situation. Appropriate questioning on concepts taught will enhance the thinking process in problem solving. Figure 1 shows the different components of the thinking process.

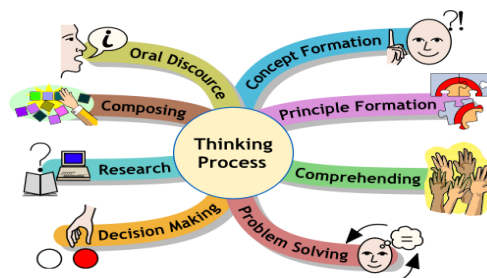
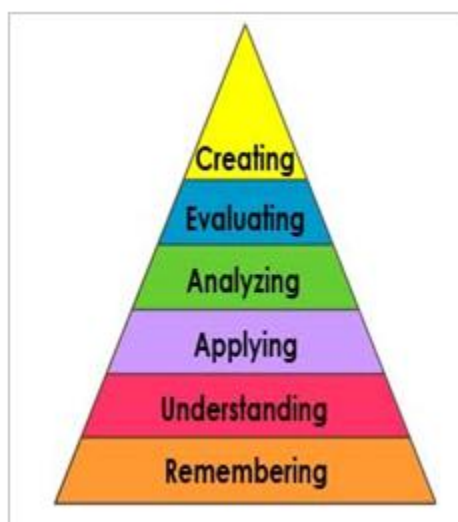


Figure 1: The Thinking Process

### Overview of Bloom's Taxonomy and the Thinking Hats

The framework of the current study is the Bloom's Revised Taxonomy which emerged out of Bloom's Original Taxonomy in 2001 which involves the thinking process. The revision includes some changes which appear to be trivial, yet they are quite significant changes. According to Hanna (2007), there are some changes in terminology. For example, the six categories in the cognitive process have changed from noun to verb forms. It was due to the fact that the authors defined cognition as thinking and since thinking is an active process, they preferred verbs because they believed that verbs can describe the action involved in thinking in a better way. Figure 2 shows the cognitive dimension of the New version of the Bloom's taxonomy.



**Figure 2: Blooms New Version of the Cognitive Domain**

Remembering consists of recognizing and recalling relevant information from long-term memory. Understanding is the ability to make your own meaning from educational material such as reading and teacher explanations. The third level of thinking in the pyramid is applying which refers to transferring the learned principle to a different or real world context. Analyzing, breaks down information into smaller units and involves thinking about how the smaller units are related to the overall information. Evaluation which is at the top of the learning objectives in the old version takes the fifth level in the new version as evaluating. It includes checking and making a critical judgment of the information on hand. Creating which is not included in the earlier Taxonomy, is the highest level of thinking of the new version. This component involves putting things together to generate new ideas.

According to this taxonomy, each level of knowledge can correspond to each level of cognitive thinking. Today emphasis is laid on making students more conscious of their own learning and thinking. This paradigm shift is applicable across numerous models such as Piagetian, Vygotskian, and situated learning theories (Anderson & Krathwohl, 2001; Marzano, Pickering & Pollock, 2001).

### The Six Thinking Hats Technique

#### Definition

Six Thinking Hats is a simple, effective thinking process that helps people be more productive, focused, and mindfully involved, and once learned, the tools can be applied immediately.

The 6 Hats according to de Bono are 6 imaginary hats which represents 6 different ways of thinking.

*The Yellow Thinking Hat* thinks about both the sides of a real life situation. It reflects upon reasons for why and how a particular problem could be solved. It also involves the positive and negative sides of the solutions offered.

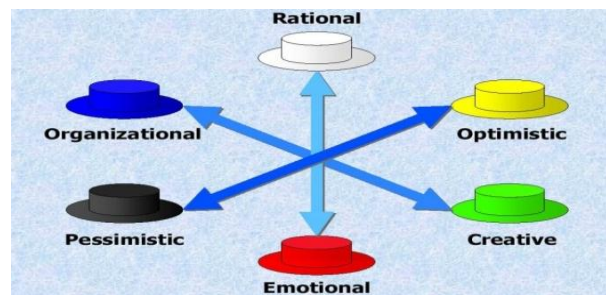
*The Red Thinking Hat* views a problem mixed with emotions, gut feelings, hunches, suspicions and intuition. A red hattries to think about the emotional reaction of people to problems

*The Blue Thinking Hat* controls the ideas and leads one into the right track. Summaries and conclusions are given by a blue hat thinker.

*The Black Thinking Hat* highlights the weak points of a solution to a problem. It helps to identify the risks and flaws of a decision before it is put into action.

*The White Thinking Hat* evaluates the data and information available. It tries to fill in missing information or explore the information further.

*The Green Thinking Hat* develops alternative and creative solutions to problems. One can freely lend ideas unbiased without the fear of being criticized.



**Figure 3: De Bono's Six Thinking Hats**

### Why Bloom's Taxonomy?

Houghton, 2004; cited in Forehead, 2005 reasons for where does a teacher begin teaching the thinking process among students. There were attempts made between the 1950s and the 1970s to begin in developing and classifying the various domains of human learning, namely cognitive, affective and psychomotor. The most common theory followed is the Bloom's Taxonomy (1956), and recently by Anderson and Krathwohl (2001) of learning objectives which promotes high order thinking skills in the field of education worldwide. Accordingly, since developing our learners' thinking is, regarded as one of the goals of today's educational systems, appropriate curriculum and course books/textbooks must be adopted by academic institutions. The educators must provide appropriate and effective language environments, and effective teaching methodologies for problem solving which involves critical thinking skills.

### Why Should Thinking Hats be Used in the Classroom?

The six thinking hats is a technique to enable one to think in different ways in the learning process. In this technique, each color hat represents different perspectives of thinking. Thinking Hats help learners to tackle a problem or situation and analyze a topic from different viewpoints.

Thinking Hats also help learners to analyze and evaluate a given situation scientifically, critically and innovatively. This tactic is used when one is faced with a difficult situation to enable themselves to analyze the problem

from various perspectives. The thinking hats technique helps one to think laterally which improves the skills of analyzing, evaluating and creating new ideas. This technique serves in making learning more relevant to the 21<sup>st</sup> century.

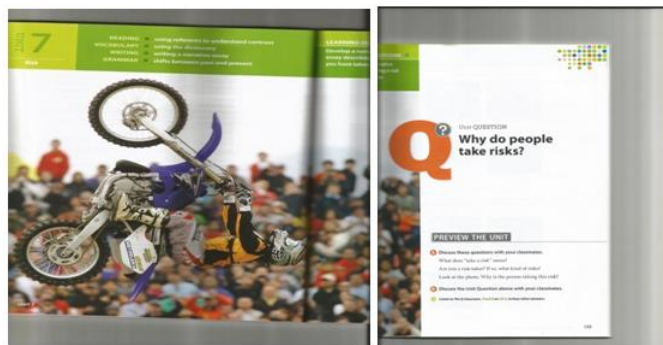
### **The Impact of Bloom’s Taxonomy and Thinking Hats in Classroom Practices**

In English Language Teaching (ELT), specifically in the English as a Foreign Language (EFL) classroom more focus must be put on the course book/textbook as it plays a significant role as a powerful tool in the form of language input (Kim & Hall, 2002). In fact, it is extremely important for us as teachers to evaluate, select and adapt teaching materials to meet our teaching and students' learning needs. In order to get the most out of the learning potentials and developing learners' thinking as one of the goals of today's educational systems using questions as per the levels of Bloom's Taxonomy might be an appropriate means to use the course books/textbooks towards problem solving. The study proposes to explore the impact of the Q-Skills for Success course book for problem solving.

### **Q: SKILLS FOR SUCCESS COURSEBOOK**

Q: Skills for Success course book includes a six-level series with Reading and Writing and Listening and speaking from the A1 to C2 level of the Common European Framework of Reference. The Q: Skills course book is based on teaching theories as well as real world classroom practice. Q: Skills connects critical thinking, language skills and learning outcomes. Every Unit includes a thought provoking Unit question providing a vital structure for the unit. The reading skill in every unit in the Q-skills is followed by ‘What do you think?’ Where students analyze the text and change their perspective on the unit question. As mentioned earlier the purpose of the thinking processes is to aid students to think logically to answer questions essential to concept formation and creative ideas.

### **Questioning Promoting High Order Thinking- A Sample of the Q-Skills Course Book**



**Figure 4: Risky Sports from Q Skills Course Book 3**

Critical thinking can be fostered among students by including questions on the high order thinking skills of the Bloom's taxonomy when teaching the reading and the writing skills. The figure above is used as a sample from Q: Skills course book for teachers to plan appropriate questioning to foster thinking.

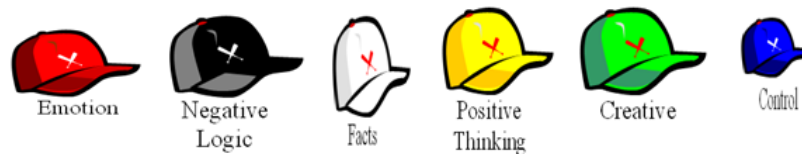
The following questioning may be included on the above picture for a better understanding and high order thinking starting from applying.

Applying can be referred to the blue thinking hat and includes question such as 'How would you describe the photograph to others?' 'What caption would you write for this photograph?' (say, in a newspaper). In applying one has to transfer acquired knowledge to a new situation or context.

Analyzing may be related to the red thinking hat and asks 'Why is the person ready to take the risk?''What do you know about the life of the person based on this picture?' In analyzing one has to think critically to break the information into smaller units.

Evaluating may be compared to the black thinking hat questioning such as 'What might this person say about the sport in an interview setting?' 'What might he say about the future of risky sports?' In evaluating the learner has to check, and judge the information to construct or plan a decision.

Creating is undoubtedly the green thinking hat and includes questions like 'What is the significance of the picture to the unit question?' Compare the sport in the picture with other sports'. 'How are they similar?' 'Are they different?' In creating the learner discriminates and summarizes the information to generate new ideas.



**Figure 5: A Suggested Hats Ranking in Solving a Problem**

## **BLOOMS TAXONOMY VERSUS THINKING HATS**

The *white hat* can be compared to knowledge in the Bloom's taxonomy because the white hat asks for facts, figures and information similar to knowledge which is recalling information in Bloom's Taxonomy. It includes the questions 'What information do we have?' 'What information do we need to get?' 'Who has the information we need?'

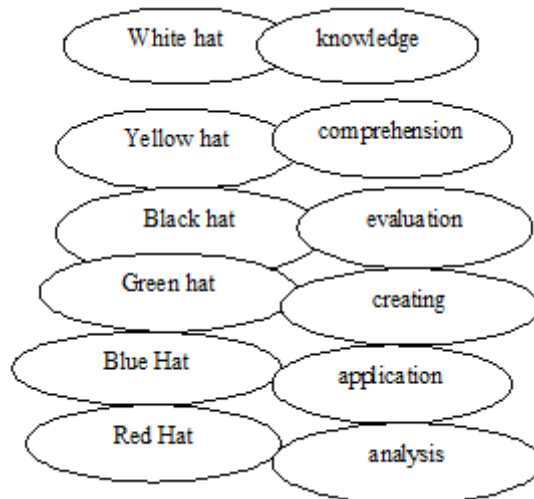
The *yellow hat* includes the questions which seeks reasons such as why something can be done and the reasons for the benefits. The yellow hat also asks for reasons why a particular solution to a problem is the right thing and good thing to do, and therefore can be compared to comprehension in the taxonomy which includes understanding the basic principles underlying a concept.

The *black hat* signifies caution and critical thinking to get the facts right to know if something works or not. This can be compared to *evaluation*, which occupies the highest level in the original taxonomy which justifies and argues for supporting information before a decision is taken.

The *green hat* explores for new ideas and suggestions. It looks for different ideas. This can be compared to creating the highest level of thinking in the new version of Bloom's taxonomy. This skill focuses on generating new ideas to tackle a difficult situation.

The *blue hat* controls the process of thinking. It focuses on the relevance of the different views and to what extent they could be accepted. This can be compared to applying in the Bloom's taxonomy which refers to transferring acquired knowledge to either in an acquainted or new situation.

The red hat includes one's emotional thinking towards a situation. The red hat thinker is doubtful of a situation and the consequences of solutions offered. This can be compared to smaller units relate analyzing in the taxonomy which involves breaking down information into smaller units and thinking about how the smaller units relate to the real context.



**Figure 6: Blooms Taxonomy versus Thinking Hats**

### **Strengths & Weaknesses of Bloom's Taxonomy and the Thinking Hats**

Although Bloom's taxonomy has been followed by many practitioners since its recognition as the most appropriate approach to thinking it has its strengths and weaknesses. Those educators who include appropriate questioning as per the 6 levels of thinking in the cognitive domain of Bloom's Taxonomy will reportedly encourage higher-order thinking skills in the students than the teachers who have made no such attempt. However, practitioners who endeavored including relevant questioning and classroom activities according to the six levels of thinking of the Taxonomy opine that terms like analysis or evaluation have no concrete meaning. Moreover, many activities, including real world problems and projects, don't reflect the Taxonomy and doing so would weaken their prospective as learning opportunities.

As to the STH technique, it allows you to think differently without threat, promotes understanding, emphasizes thinking and leads to more original thinking, and improves making sound judgments and decisions. On the other hand, lateral thinking is a behavioral approach in solving a problem and lacks clarity of how the thinking techniques are connected to one another.

### **DISCUSSIONS**

Finally, the study shows that critical thinking skills are essential for a problem solving approach an essential component for learner's consciousness to real world situations. In a typical EFL classroom, educators may attempt to utilize appropriate questioning skills which focus on high order thinking skills. For this to happen, educators might evaluate the validity of course books in the EFL curriculum settings, in terms of learning objectives in Bloom's Revised Taxonomy (2001) to see which levels of Bloom's Revised Taxonomy were more emphasized in the course books. The educators may thus create a positive and effective learning environment to develop reflective thought among the learners towards lateral thinking. Educators might develop suitable methodologies for problem solving to enhance lifelong learning in the 21<sup>st</sup> century to enable students to process information objectively in whatever situation their professional careers demand.



## CONCLUSIONS

Every educator today has to pay attention to the language curriculum, course books /text books if they are appropriate for the 21<sup>st</sup> century or not. Education for the 21<sup>st</sup> century must truly enhance lifelong learning promoting learners' thinking skills to solve problems in the real world context. It must also enrich the learner's consciousness towards universal contexts.

Lifelong learning is to prepare students in solving problems outside the classroom, dealing with authentic contexts and proficiently coping with the undercurrents of real life. For reaching these outcomes, today's language curriculum must include critical thinking and problem-solving skills. The curriculum must cater to teaching and learning in aiding the attainment of life skills potent in the 21<sup>st</sup> century. For this we need new classroom pedagogies and innovative methods of learning, a different perspective to processing information or interacting.' (Siemens, 2006). Innovative pedagogies become effective only when people learn how to face the challenges in social contexts. Appropriate skills that are acquired in the present should enable one to transfer to similar or different contexts in future. This enhances students intellect towards constructive change, with a universal perspective. These skills need new pedagogies which focus on developing thinking, sensitivity to social contexts, flexibility and creativity to develop their capacities as problem solvers paving way to the 21<sup>st</sup> century.

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