

## ASSESSMENT PRACTICES AND LEARNING IMPLICATIONS IN BUSINESS EDUCATION FOLLOWING BLOOM'S REVISED TAXONOMY

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### **ABSTRACT**

*The purpose of the study is to explore the present assessment practice in the tertiary business education based on cognitive domains of Bloom's Revised Taxonomy and to propose the applied form of diversified experiential learning & assessment tools. Mostly Quantitative method has been used in the paper to attain research objectives. Focus group discussion with the faculty members has been conducted and 250 printed questions of different semesters in the business department of the sample private university have been used as a secondary source of data for analysis. Frequency distribution followed by percentage analysis method has been applied as tools of descriptive statistics. The results reveal that the grand mean percentage in 'Apply Level' is the highest and 'Create Level' shows the lowest. Grand mean percentage in higher order learning level is fairly greater than lower level, which represents moderated upward trend. Moreover, in most of the questions, 'Create Level' was not found present and in rest of the questions, it was representing lowest percentage consistently. However, the study indicates that the performance of the sample department is moderately satisfactory and recommends that emphasize should be given more on 'Higher Order Learning Levels'. Hence, implications regarding experiential learning strategies including Case Studies, Business Game, Simulation, and Web-Based Interactive Learning Systems have been proposed to comply with 'Higher Order Learning Levels' of Bloom's cognitive domains. It may help the educators towards application of business operations within the classroom settings adequately. The results of the study may help the higher education authorities of Bangladesh with the relevant scenario of assessment trend in business education in order to take the necessary steps in achieving academic excellence.*

**Keywords:** Revised Taxonomy, Cognitive Domain, Business Education, Case Study, Business Game and Simulation

## INTRODUCTION

Learning as well as assessment techniques in business education is highly crucial as future managers must be trained in such a manner which would rightly equip them to face the challenges of business world. “*We teach management skills in a classroom setting but managers practice their skills while they are dealing with the chaos and pressure of managing a shift*” (Cone, 1996). After attaining academic degrees, fresh graduates commence their career depending fundamentally on their static factual knowledge (i.e., theories, models, definitions, principles, and concepts) about the business operations. Conventional business curriculum requirements facilitate university students with a good understanding of the formal techniques associated with finance, accounting, management and marketing practices. In spite of having huge personal experience as consumers in business they are generally unaware about the real life application of business knowledge and dynamics of business operations. Most business programs have courses related to business operation and management but their assessments techniques might not cover the appropriate requirements. However, due to lack of proper assessment tools and applied techniques, these courses and experiences are often inadequate in preparing new business graduates to deal effectively with many of the situations that they will encounter on the job (Cannon & Feinstein, 2014). In fact, some programs require work experience (i.e., Internship Program) by their students in an effort to provide them with a holistic perspective of the business world.

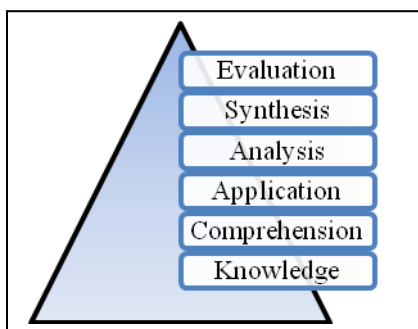
This paper contains several consecutive sections including this introduction. The next section presents the earlier research following the construct-based literatures including the Bloom’s taxonomy and revised taxonomy as well as the research gap identification. Then, it is followed by problem statement, scope of the study, research objectives and research methodology. Major Findings are discussed and focus is given on the managerial implications as well. Finally, conclusions are drawn.

## LITERATURE REVIEW

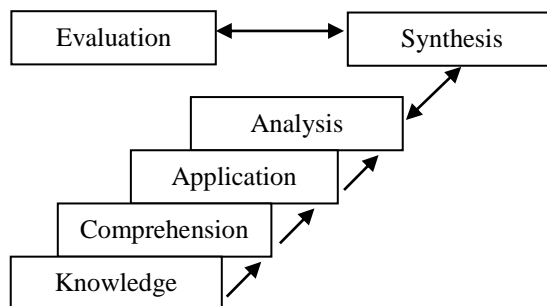
### **Bloom’s Taxonomy**

Bloom’s Taxonomy of Educational Objectives was developed by a group of cognitive psychologists at the University of Chicago and led by educational psychologist, Benjamin Bloom. The group was intended to classify and standardize the learning objectives for students’ achievement. It later guided towards the collaboration of depository of assessment test items, which would evaluate the identical educational objective (Bloom, 1956; Krathwohl, 2002). It rose to significant prominence in the 1960s with the increased emphasis on

education during the period of Lyndon Baines Johnson’s Great Society, and today, the model is well known to many educators. Although, Bloom’s taxonomical theory addresses cognitive domains with its six successive stages of learning: the lower order learning of Knowledge, Comprehension, and Application; and the higher-order learning of Analysis, Synthesis, and Evaluation. The appeal of Bloom’s learning model is laid in its elegance, simplicity, and versatility. Its elegance and simplicity emanate from the notion that learning presumes to occur in this linear and hierarchical fashion. That is, relatively simplistic learning such as concrete knowledge, comprehension and application must necessarily occur before learners, which can engage them in more sophisticated and creative learning such as analysis, synthesis and evaluation as shown in **Figure 01**. The versatility of the model is seen in its application for all levels of education, from kindergarten through higher education, as well as its cross-disciplinary use in business, social and other applied sciences (Athanassiou et al., 2003; Bissel & Lemons, 2006; Blazelton, 2000; Buxkemper & Hartfiel, 2003). Although Bloom’s has been broadly accepted, the hierarchical and linear nature of the model does have its critics who argue that while learning is linear and hierarchical, it is also iterative and dynamic, particularly in the higher learning stages (Zohar & Dori, 2003). In other words, the cognitive action of analyzing new information, synthesizing new information with other information, and then evaluating the parts of the whole and creating new knowledge is ongoing and interrelated, rather than strictly hierarchical, as presented in Figure 02.



**Figure 01: Bloom’s Taxonomy of Learning: Linear Model**  
 Source: Adapted from Bloom, 1956; Krathwohl, 2002



**Figure 02: Bloom’s Taxonomy of Learning: Non-Linear Model**  
 Source: Adapted from Zohar & Dori, 2003

**Revised Taxonomy**

The Revised Bloom’s Taxonomy was introduced by Anderson et al. (2001). During the 1990’s a new group of cognitive psychologist, guided by Lorin Anderson (a former student of Bloom’s), updated the taxonomy to meet the challenges of 21st century. The Revised Taxonomy has incorporated student-

centered learning prototypes into the original Taxonomy, which improves students' comprehension of their own learning, cognition, and thinking. Bloom's six major features were changed from noun to verb forms in the revised taxonomy. For instance, the 'knowledge' level of the original Taxonomy was renamed as 'remembering', whereas the 'comprehension' level of the original Taxonomy became 'understanding'. The application/applying and analysis/analyzing of Bloom's Taxonomy were preserved. Finally, the 'synthesis' category was transformed to 'creating', and the order of synthesis/creating and evaluation/evaluating was interchanged in the Revised Taxonomy. However, in contrast to the original Taxonomy, the Revised Taxonomy (Anderson et al., 2001) allows the categories to overlap one another (Krathwohl, 2002).

Table 01 can be observed for more clear understanding regarding comparison of Original Taxonomy and Revised Taxonomy.

**Table 01: Comparison of Original Taxonomy and Revised Taxonomy**

<b>Original Taxonomy (Noun Form)</b>	<b>Revised Taxonomy (Verb Form)</b>
Knowledge	Remember
Comprehension	Understand
Application	Apply
Analysis	Analyze
Synthesis	Evaluate
Evaluation	Create

*Source: Adapted from Krathwohl (2002); Anderson et al. (2001)*

Revised Taxonomy consists of a hierarchical set of intellectual building blocks, ranging from simple memorization at the bottom, and progressing with increasing levels of abstraction, is presented in Appendix-Table 01. As one progresses up the hierarchy, the intellectual task increases in difficulty as the learner is called upon to discern the similarities and differences among increasingly abstract concepts, organizing them for specific purposes (Cannon & Feinstein, 2014). It has been observed that Bloom's Taxonomy features a hierarchy of objectives, where the lower levels tend to be more knowledge/content-related, and the higher levels more oriented toward cognitive skills/processes. These processes are easily mapped onto the Bloom's categories of remember, understand, application, analysis, evaluation, and create from Appendix-Table 01.

Bloom's Levels of Cognitive Domain can be further classified as 'Lower Level Learning' and 'Higher Order Learning' levels for understanding the implication of the revised taxonomy in the tertiary level of education, which can be shown as follows in Table 02. In primary and secondary level of education, it is somehow acceptable to have most of the questions in 'lower level learning' criteria.

Nevertheless, in tertiary level of education including colleges and universities, most of questions should come from higher order learning level to assess the appropriate learning of graduates (HEQEP, 2014).

**Table 02: Bloom's cognitive domain (Six sub-domains of cognitive domain):**

Lower Level Learning		Higher Order Learning			
Design		Explore		Support	
1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create

*Source: Adapted from Ali (2016)*

Taken together, both the original and Revised Bloom's Taxonomy have provided educators with high and low level thinking closely linked with problem-solving skills, creative and critical thinking when cognitive development ascends the hierarchy of cognitive process. Hence, according to earlier evidences, several experiential learning methods i.e., business game (Ben-Zvi & Carton, 2008), structured case analysis (Klebba & Hamilton, 2007), business simulation (Miller & Nentl, 2014), and web-based interactive learning systems (Bojinova, 2012; Huerta et al., 2003; Kish & Hogan, 2012) etc. can be adapted to courses that inquire about developing critical thinking of learning.

## STATEMENT OF RESEARCH PROBLEM

In-fact, the extensive study of different national and international literature on the subject of proposed research has made it clear that a number of studies were carried out on the multiple issues of Bloom's Taxonomy. Consequently, in the alignment of the past research in different countries, this paper would add value to the present wisdom by empirical study regarding the application of existing cognitive domains in tertiary business education. The researcher focused on the learning assessment of business graduates in private universities of Bangladesh and the exploration of new ventures for applied learning as well as evaluation tools within the business curriculum. However, no in-depth study has been found on the subject of proposed research in the context of tertiary business education in Bangladesh according to the literatures at International recognized journals and researcher's present wisdom. This particular contextual research gap has motivated to conduct the research on "*Assessment Practices and Learning Implications in Business Education Following Bloom's Revised Taxonomy*". Hence, in terms of contribution on this gap, focus of the study will be given on the exploration of present assessment criteria of business courses of the sample university based on revised taxonomy, and propositions will be drawn for facilitating the maximum utilization of human resources through multifaceted and diversified business education.

## **SCOPE AND IMPORTANCE OF THE STUDY**

Higher education is intended to equip the students with skills and technical expertise for facing the challenges in both professional and personal life. It intends to facilitate the application of their knowledge and understanding in solving those issues competently (UNESCO). Economy of Bangladesh has been transforming rapidly towards manufacturing and service industry from ancient agriculture, which turned it into a developing country. Bangladesh is now looking for the global opportunities in building a knowledge based society while highly skilled manpower has already been serving all over the globe. Presently tertiary business education here has been facing many diversified challenges. Developing a quality culture and ensuring good practices in higher education institutions could be the only way to fight back and successfully compete in the global arena (Hossain, 2017). The quality of education refers to the fitness of the university graduates to meet the needs of stakeholders with their relevant knowledge and skills. In the assessment of a student's performance, focus should be given to ensure the achievement of expected learning outcome and thus assessment creates the basement for the judgment. Useful and suitable performance evaluation procedure is thus obligatory in assessing the level of achievement of learning outcomes and skill development. Consequently, assessment tools and relevant questions should be prepared in such a manner that facilitates critical thinking and help students applying the learning in facing real life situations emphasizing on higher order of learning (HEQEP, 2014). In Bangladesh, Private universities as compared to Public Universities have been competitively serving with the supply of skilled work force in the industry of Bangladesh and the global communities as well. Hence, the study would focus on the evaluation of learning assessment practices in the business department of sample private university of Bangladesh and propose relevant policy implications.

## **RESEARCH OBJECTIVES**

The main objective of the study is to evaluate the contemporary assessment practice and propose learning implications in business education following Bloom's Taxonomy. To cover the main objective, following specific objectives would be achieved:

1. To explore the current assessment practice of the business department in the sample university based on the cognitive domains following Bloom's Revised Taxonomy.
2. To examine the proportion between higher order learning and lower level learning in business education.
3. To draw relevant proposition of the applied form of diversified experiential learning and assessment tools for business education complied with Bloom's Revised Taxonomy.

## RESEARCH METHODOLOGY

A total of around 250 questions of different courses conducted by 20 regular faculty members, in last three semester examinations such as Fall 2017, Summer 2017 and Spring 2017 under Department of Business Administration of a private university in Chittagong, Bangladesh were collected through random sampling technique. The study was both partially exploratory and descriptive in nature. Secondary sources of data were used. Printed exam questions of different subjects under business department have been randomly selected as follows:

Semester	Total Questions	No of Sample Question	Percentage of Sample Question
Spring 2017	188	100	53.19%
Summer 2017	184	128	69.56%
Fall 2017	192	125	65.10%

All questions have been individually analyzed by the respective course teachers based on six criteria including ‘Remember’, ‘Understanding’, ‘Apply’, ‘Analyze’, ‘Evaluate’, and ‘Create’ following revised Taxonomy. Microsoft Office Excel Package has been used in every step of analysis and presentation. Each question with full or partial marks has been divided according to six criteria and total marks in each level of learning have been calculated. Based on total marks, percentage in each separate level has been identified. Percentage also has been calculated in terms of lower level learning (*remember, understanding*) and higher order learning (*apply, analyze, evaluate, create*).

After analyzing all the questions in terms of percentage in each level, those are summarized according to respective semesters. Finally, summary was drawn by taking each semester & term based analysis of questions altogether and ‘Grand Mean’ of percentages has been calculated as well. Comparative analysis result in terms of higher order and lower level learning in revised Taxonomy also has been presented through Trend Line Graph. Besides quantitative study, face-to-face interview and focus group discussions have been done with the regular faculty members to explore the current evaluation methods and classroom assessment practices. Required discussions have been given respectively. To draw applicable propositions, extensive literature review has been done regarding the contemporary applications of diversified business education related tools & techniques all over the world.

### FINDINGS AND DISCUSSION

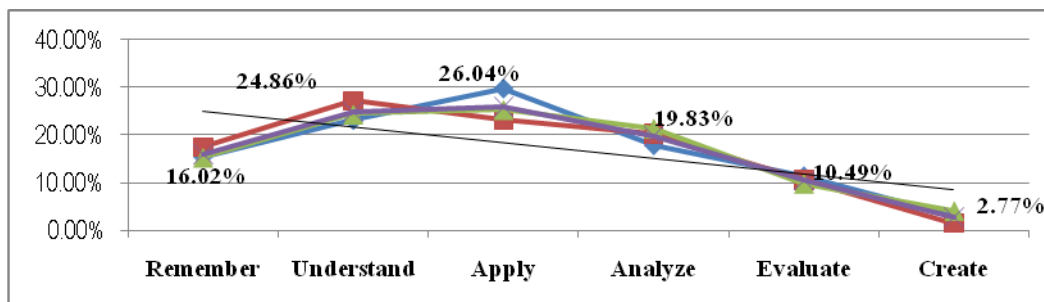
#### Assessment in Exams

Table 03 states the grand average percentage of questions from different semesters based on each Bloom’s level of cognition in the revised Taxonomy.

**Table 03: Grand Average % of questions in each Bloom's level of cognition**

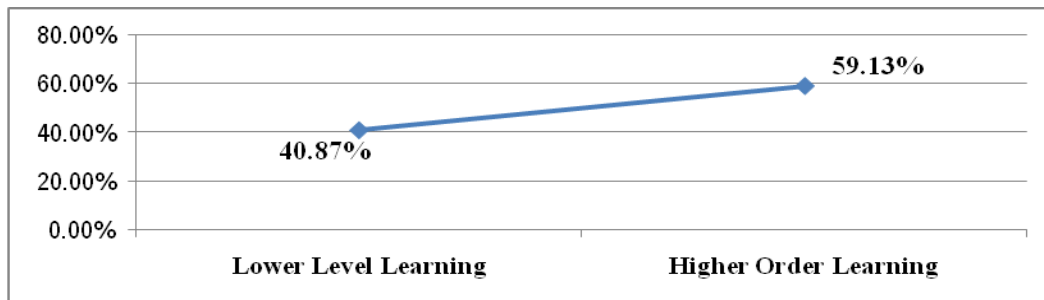
Average % of Questions in Each Bloom’s Level of Cognition						
	1	2	3	4	5	6
Semester	<i>Remember</i>	<i>Understand</i>	<i>Apply</i>	<i>Analyze</i>	<i>Evaluate</i>	<i>Create</i>
Spring 2017	15.35%	23.04%	29.65%	17.78%	11.29%	2.89%
Summer 2017	17.45%	27.16%	23.15%	20.32%	10.45%	1.47%
Fall 2017	15.25%	24.37%	25.31%	21.39%	9.74%	3.95%
<b>Grand Mean %</b>	<b>16.02%</b>	<b>24.86%</b>	<b>26.04%</b>	<b>19.83%</b>	<b>10.49%</b>	<b>2.77%</b>
	Design		Explore		Support	
	<i>Lower Level Learning</i>		<i>Higher Order Learning</i>			
Spring 2017	38.39%		61.61%			
Summer 2017	44.61%		55.39%			
Fall 2017	39.62%		60.39%			
<b>Grand Mean %</b>	<b>40.87%</b>		<b>59.13%</b>			

Source: Compiled By Authors



**Figure 03: Grand Mean % in each cognition level by Line Chart**

Source: Table 03



**Figure 04: Grand Mean % in Lower Level and Higher Order Learning by Trend Line Graph**

Source: Table 03



In 'Spring 2017', highest mean percentage of 29.65% is found in 'Apply Level', which is considered to be Higher Order Learning (HOL). 'Understand Level' contains 23.04%, which is second highest. Lowest percentage 2.89% is found in 'Create Level'. As a whole, it is found that percentage in Higher Order Learning (HOL) is 61.61%, which is quite greater than 'Lower Level Learning' (LLL) of 38.39%. Thus, an upward trend is found towards HOL, which is somehow satisfactory in tertiary education (*Source: Table 03; Figure 03 & 04*).

In 'Summer 2017', highest mean percentage of 27.16% is found in 'Understand Level' which represents 'Lower Level Learning' (LLL). 'Apply Level' contains 23.15% representing 'Higher Order Learning' (HOL) which is second highest. Lowest percentage 1.47% is found in Create Level. As a whole, it is found that percentage in 'Higher Order Learning' (HOL) is 55.39%, which is reasonably greater than Lower Level Learning of 44.61%. Thus, an upward trend is found towards 'Higher Order Learning' (HOL) which is somehow satisfactory in tertiary education (*Source: Table 03; Figure 03 & 04*).

In 'Fall 2017' the study, highest mean percentage of 25.31% is found in 'Understand Level', which represents 'Lower Level Learning' (LLL). Then 'Apply Level' contains 24.37% representing 'Higher Order Learning' (HOL) which is the second highest. Lowest percentage 3.95% was found in Create Level. As a whole, it is found that percentage in 'Higher Order Learning' (HOL) is 60.39%, which is relatively greater than 'Lower Level Learning' (LLL) of 39.62%. Thus, an upward trend is found towards 'Higher Order Learning' (HOL) which is by some means satisfactory in tertiary education (*Source: Table 03; Figure 03 & 04*).

### ***Comparing Higher Order Learning and Lower Level Learning:***

In comparing assessment of 'Higher Order Learning' (HOL) and 'Lower Level Learning' (LLL), the study shows that Grand mean of percentages in Higher Order is 59.13%, which is fairly greater than Lower Level representing 40.87%. Thus, a moderated upward trend can easily be drawn towards 'Higher Order Learning' (HOL) which is rational in tertiary level of education (*Source: Table 03, Figure 04*).

### ***Class Room Assessment Practice***

Classroom assessment contains 25% of total assessment marks including 5% in Class Attendance, 10% in Class Tests, and 10% in Assignments. From face-to-face interview and focus group discussion with the faculty members, several classroom evaluations are identified besides conventional assessment with structured question based examination. These include case study, assignments,

tutorials etc. Different courses come with distinguished assessment techniques. 'Multiple Choice Question' (MCQ) based classroom assessment is found in some business courses. A course named 'Entrepreneurship Development' comes with a project of organizing entrepreneurship fair, where the students have to form different teams and arrange for a business fair within the university premise. Again, evaluation based on students' observed experiences in the industrial tours, is also found as assessment criteria in some business courses. Nevertheless, Bloom's Taxonomy has not been found literally in those classroom assessments, though some evaluation techniques seem to serve the purpose of Taxonomy.

However, the findings of the business department of the sample university are moderately satisfactory but it is expected that in tertiary level of education, questions should represent not more than 20% in lower level of learning including remember and understand level of Bloom's Taxonomy. Moreover, in most of the questions during present study, create level was not found present and in rest of the questions it was representing lowest weight consistently. Students' performance assessment approach should be focused on higher order learning. Thus, questions should be given proportionate weight emphasizing more on higher order of learning especially Evaluate and Create, concerning the appropriate prerequisite of tertiary level of education. With the help of regular quality enhancement training programs, a set of standards prescribed in Bloom's Revised Taxonomy should be followed in preparing questions for achieving academic excellence (Hossain, 2017).

### **POLICY IMPLICATIONS OF THE STUDY**

As we observe from the findings and discussion that around 40% questions are from lower level learning criteria, which is expected not to be more than 20% in tertiary level education. In-fact, 'create' level was not found present, and in rest of the questions, it was representing lowest weight consistently. Thus, students' performance assessment approach should be focused on higher order learning. In-fact, 75% of total assessment is based on subjective or theoretical questions divided in mid-term and final examination, where evaluation of 'higher order learning' is somehow difficult due to lack of application based assessment. However, business courses should come with applied form of business knowledge, which may not be covered with theoretical evaluation techniques only. Moreover, from earlier evidences, it has been observed that the application of Bloom's revised taxonomy allows the students to move from basic memorization of introductory business concepts for using their critical thinking skills to evaluate and synthesize business operations. Students can realize the

learning objectives of the business courses as they progress through the levels of learning.

Hence, in terms of policy implications, two broad perspectives can be recommended which include (i) the preparation of exam questions and (ii) application of experiential learning tools following the cognitive domains of Bloom's Taxonomy, which are discussed below:

### ***Preparing Exam Questions***

Faculty members of business department should be provided with appropriate training for the preparation of questions based on the six categories of Bloom's revised taxonomy, which are not just a scheme of classification, but are a hierarchical organization of cognitive processes according to levels of complexity for the development of expected cognitive objectives. At the end of each chapter of business courses, relevant questions should be developed following the cognitive domains, which would rightly guide the students. 'Questions' and 'Key Words' representing cognitive domains of revised taxonomy are presented in Appendix - Table 02, which may be used to set performance criteria for learning activities, to verify prerequisite knowledge, and to measure achievement against learning outcomes. The Appendix - Table 02 is designed around the Bloom's levels of knowledge model to help illuminate appropriate teaching/learning processes for different performance capabilities and to focus attention on the detail that is expected for business students in order to accomplish learning objectives. The related components of the table will help faculty members to ask better questions, define clearer expectations for assignments, and compose exam questions that are matched to specific levels of learning outcomes (Bobrowski, 2005).

### ***Applying Experiential Learning***

In the present study, 'create' level was not found present in most of the questions, and it was representing lowest weight consistently in rest of the questions. In tertiary business education, students' performance assessment approach should be focused on higher order learning (HEQEP, 2014). Thus, questions should be given proportionate weight emphasizing more on 'higher order learning' especially 'Evaluate' and 'Create'. To achieve the higher order learning levels of cognitive domains (i.e. apply, analyze, evaluate, create etc.), numerous experiential learning tools may be introduced by the business course teachers. Several standard tools i.e. Case Study, Business Game, Simulations, Web-Based Interactive Learning Systems, Oral Presentation etc. may help the educators towards application of business concepts within the class room settings adequately, which are discussed below:

**Case Study:** Case studies on different contemporary businesses should be extensively used in regular business course, which would improve the higher order learning skills i.e., analyze, evaluate etc. of the students in the form of critical thinking in provided real-life context (Noblitt et al., 2010). Case study is a mean of teaching that compels students to analyze and discuss a contextual and complex situation, often in addition to involvement with a dilemma or a problem requiring students to apply theoretical principles to consider possible solutions (Gullahorn, 1959). A structured case with focused questions provides a guide to group discussion, which assists to produce solutions throughout data analysis and detailed study on the case (Hilvano et al., 2014). In addition, case-based discussion, a formative assessment tool, encourages engagement in discussion and provides constructive feedback immediately (Awad et al., 2015). Cases allow students to see the real-world issues and make them see the relevance of fields (Yadav et al., 2014). Additionally, open-ended questions in cases result in students' engagement because they have to elaborate their knowledge to solve procedural questions. Open-ended tasks are capable of scrutinizing students' competence in critical thinking, problem solving and real-world approach (Carver, 2006; Shepard, 2000).

**Business Game:** The objective of a business game is to offer students the opportunity to learn by doing, engaging them in a simulated experience of the real world, to immerse them in an authentic a management situation (e.g., Garris et al., 2002; Martin, 2000). Hence, a business game course may be introduced in the final semester of BBA and MBA program of the sample institute where the primary objective would be to improve students' management and thinking skills by practicing in "real conditions", which may help in achieving the 'higher order learning' levels i.e., apply, analyze, evaluate, create etc.

Earlier studies suggest that business games should be highly realistic, which would be meant to simulate the total business environment. Participants should immerse themselves in an artificially created world where they may form small teams, allocate responsibilities for specific functions, and would work to achieve common goals, which they themselves define. While each participant becomes a specialist in his or her function, a group effort is required to pursue the common objectives of the hypothetical company. The simulated markets could be similar to the international markets, where each company can operate a local branch, which may cover one or any combination of the manufacturing, marketing, distributing, exporting, importing, financing and licensing functions (Ben-Zvi & Carton, 2008). However, it is a common phenomenon in developed countries, yet it can be a comprehensive learning tool in the developing countries like Bangladesh as well.

**Business Simulation:** Inclusion of business simulations in regular business curriculum may help the student to achieve the ‘higher order learning’ level i.e., analyze, evaluate, create etc. Business simulation games address many of the challenges associated with business education such as integration. The key to a simulation’s ability is to lift learning to the level of analysis. A simulation that has high external validity will integrate multifaceted architecture, designed around non-linear mathematics, simultaneous equations, and interdisciplinary dynamics such as finance, economics, marketing, and operations. In line of above discussion, six differentiated forms of electronic learning tools are stated below which are mostly available in the educational marketplace today such as Animations, Discreet scenarios, Branching decisions, Smart Calculators, Deterministic Simulations, and Monte Carlo simulations (Miller & Nentl, 2014).

**Web-Based Interactive Learning Systems:** Insertion of ‘Web-based Learning Systems’ (WBLs) in regular business curriculum may help the students to achieve the ‘higher order learning’ level i.e., apply, analyze, evaluate etc. These systems refer to the use of Internet technologies for delivering instruction, which are powerful tools that help instructors use their in-class and out-of-class time more efficiently, but more importantly, they are claimed to enhance student learning. These systems allow for automatic grading of homework assignments, quizzes, and tests. Some of the most popular web-based active learning platforms are MyEconLab, MyStatLab, MyAccountingLab, MyFinanceLab, MyMarketingLab etc. These systems have been specifically created to improve students’ understanding in the subject matter and allow for the possibility of completing many practice questions, which can help students develop their analytical thinking, as well as their ability to solve business problems (Bojinova, 2012; Huerta et al., 2003; Kish & Hogan, 2012).

In wrapping up, the study recommends that more application-based assessments should be incorporated to achieve ‘higher order learning’ in tertiary business education, rather than depending on theoretical questions only. Preparing exam questions following the prescribed keywords & question pattern along with implementing more experiential learning tools i.e., Case Studies, Business Game, Simulation, and Web-Based Interactive Learning Systems etc. in the learning and assessment process, may help in achieving the higher order learning in tertiary business education. Besides, Individual and group presentations should be included in all the business courses, as students have to express their knowledge in the public forum. Several alternative criteria may be used in the classroom i.e., presentation of empirical studies, seminars, discussion panels, and workshops.

## CONCLUSION

The study was intended to investigate the current assessment practice in business education of the sample university based on the cognitive levels of Bloom's revised Taxonomy and finally to propose more relevant applied tools & techniques for facilitating the business graduates with real-life business environment. It was aimed to compare the current ratio of higher order learning and lower level learning in setting exam questions also. Hence, descriptive analysis was done by converting partial and full marks of each question in percentage based on cognitive domains. Finally, it was observed that higher order learning percentage was moderately greater than that of lower level learning. Thus, the study indicates the performance of the sample department in assessment of learning of the students following revised Taxonomy to be fairly satisfactory.

However, it has been noticed that the skills, which are needed to understand the dynamic component of a business, are typically learned through a brief training period, where the trainee works alongside hourly employees or shadows a manager. In addition, these skills can be achieved by extensively implementing higher order learning & assessment tools in business courses. Thus propositions have been drawn through observing, how the revised version of Bloom's classic Taxonomy of educational objectives might be used to structure experiential learning exercises in the form of Case Based Learning, Introducing Business Games, Simulations, and Web-Based Interactive Learning Systems. Arguments reveal that experiential learning is particularly powerful tool for creating dynamic knowledge, or knowledge that is flexible enough to allow students especially business graduates to use abstractions to manipulate and interact with situations they have never before encountered. This, of course, is what business education is all about.

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**APPENDICES**  
**Appendix Table 01:**  
**Bloom’s Taxonomy of Cognitive Objectives**

<b>Categorized Cognitive Domain</b>	<b>Description</b>	<b>Example</b>
<b>1. Remember</b> 1.1 <i>Recognizing</i> 1.2 <i>Recalling</i>	Retrieving relevant knowledge from long-term memory. The ability to remember ideas such as facts, concepts and theories.	Remember the key elements of X Company’s code of ethical marketing conduct.
<b>2. Understand</b> 2.1 <i>Interpreting</i> 2.2 <i>Exemplifying</i> 2.3 <i>Classifying</i> 2.4 <i>Summarizing</i> 2.5 <i>Inferring</i> 2.6 <i>Comparing</i> 2.7 <i>Explaining</i>	Determining the meaning of instructional messages, including oral, written, and graphic communication. The ability to understand and make intellectual use of knowledge.	Understand the difference between a strategy of relationship marketing and a system of customer relationship management.
<b>3. Apply</b> 3.1 <i>Executing</i> 3.2 <i>Implementing</i>	Carrying out or using a procedure in a given situation. The ability to use abstract ideas in concrete situations.	Explain what consumer orientation means in the context of Product J’s marketing program.
<b>4. Analyze</b> 4.1 <i>Differentiating</i> 4.2 <i>Organizing</i> 4.3 <i>Attributing</i>	Breaking material into its constituent parts and detecting how the parts relate to one another and to an overall structure or purpose. The ability to break ideas down into their parts and logical premises.	Ascertain the reason for falling sales and profitability in Territory A.
<b>5. Evaluate</b> 5.1 <i>Checking</i> 5.2 <i>Critiquing</i>	Making judgments based on criteria and standards. The ability to judge the merit of ideas for given purposes.	Determine what strategy is likely to be most successful for Company X.
<b>6. Create</b> 6.1 <i>Generating</i> 6.2 <i>Planning</i> 6.3 <i>Producing</i>	Putting elements together to form a novel, coherent whole or make an original product. Forming a functional whole, Reorganize elements into a new pattern or structure. The ability to develop new ideas from apparently unrelated parts.	Formulate a new strategy to capitalize on the merger of Company X’s superior technology and Company Y’s superior sales force.
<i>Source: Krathwohl, 2002; Anderson et al., 2001; Cannon &amp; Feinstein, 2014</i>		

**Appendix Table 2:**  
**Levels of Learner Knowledge**

<b>Remember</b>
<b>Key Words:</b> who, what, where, when, which, find, choose, define, list, label, show, spell, match name, tell, recall, select, organize, outline
<b>Questions:</b> What is-? Where is-? When did-? What facts or ideas show-? Who were the main-? Which one -? Can you recall-? Can you select-? Can you list the three -? Who was-?
<b>Understand</b>
<b>Key Words:</b> contrast, how, illustrate, translate, infer, demonstrate, summarize, interpret, show, explain, classify, select, rephrase, why
<b>Questions:</b> How would you describe-? How would you summarize-? How would you show an

<p>understanding of-? How would you state or interpret in your own words-? What is the main idea of-? Which statements support-? Can you explain what is happening-? What is meant by-? Explain why-? Illustrate -?</p>
<p><b>Apply</b></p>
<p><b>Key Words:</b> apply, construct, make use of, plan, build, develop, model, interview, experiment with, identify</p>
<p><b>Questions:</b> How would you use-? What examples can you find to-? What would result if-? Can you make use of the knowledge to-? What approach would you use to-? How would you apply what you learned to develop-? What other way would you plan to-? How would you structure an argument to show-?</p>
<p><b>Analyze</b></p>
<p><b>Key Words:</b> analyze, dissect, inspect, divide, simplify, solve, investigate, examine</p>
<p><b>Questions:</b> What motive is there-? What ideas justify-? What changes would you make to solve-? What inference can you make-? If ... happened, what might have happened to -? What conclusions can you draw-? How would you solve...using what you've learned-? What do you see as the link between -? How is 'A' similar to 'B'? What do you see as other possible outcomes?</p>
<p><b>Evaluation</b></p>
<p><b>Key Words:</b> Evaluate, Asses, Justify, Recommend, theorize, design, formulate, discover, make up, hypothesize, prove, disprove</p>
<p><b>Questions:</b> Is there a better solution to-? How would you judge the success of-? What do you think about-? Can you defend the business' position on-? Can you justify the government's position on-? How do you think the situation should have been handled -? What changes to ...would you recommend? Do you believe -? How do you think it would affect the...if-? How effective is -?</p>
<p><b>Create</b></p>
<p><b>Key Words:</b> propose, construct, design, develop, create</p>
<p><b>Questions:</b> How will you design a magazine cover for -? How will you write a TV advert, song, jingle to -? Can you construct a model that would change-? Can you propose an alternative-? Can you formulate a theory for-? Can you think of an original way to -? Can you create a design to-? Can you create new and unusual uses for -? Can you develop a proposal which would -?</p>
<p><i>Source: Krathwohl, 2002; Bobrowski, 2005.</i></p>