A Comparative Evaluation of Top Notch Series and High School English Textbooks based on Multiple Intelligences Theory

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ABSTRACT
This study devises a broader educational angle to English textbook evaluation of the latest editions of two widely-used textbooks in Iran; namely, High School Textbooks and Top Notch. The researcher focused on the activities of these books and grouped them according to MI model in eight groups. Chi-square test is used to compare the textbooks in terms of incorporation of different types of intelligences. The results show that in comparison with international textbooks, (1) Iranian high school textbooks significantly rely on activities which incorporate verbal-linguistic intelligence; (2) they are unidimensional, in that, they do not outstandingly cater for none of the intelligences but verbal-linguistic intelligence; and (3) none of them do not crucially attend to musical, bodily-kinesthetic, logical-mathematical, and naturalist intelligences.

KEYWORDS: Multiple Intelligences; High School English Textbooks; Comparative Analysis; Top Notch series

INTRODUCTION

It is very important to plant for the future. We can plan for the coming generations, keeping in mind their thoughts, point of views and values. It is through the educational curriculum that we can prepare for those future generations. It is through the educational curriculum that a society can achieve the goals of its people. For this reason the educational curriculum should continually be developed and enhanced to keep up with the cognitive revolution in the world. This development leads to the creation of generations that are fully aware of what is happening around them in the world. Therefore it is important to keep up with the developments in the educational field and try to benefit from the current educational views and psychological theories. The educational system is in need to re-examine its aims, content, methods and curriculum in order to become an instrument for development. Textbook evaluation is an applied linguistic activity through which teachers, supervisors, administrators and material-developers can make judgments about the effect of the materials on the people using them" (Tomlinson, 2001 p. 15).

The educational system needs to be changed in order to meet the challenges of modern society. In recent years, research has focused on the teachers' mental abilities and cognitive abilities.

This concern in the mind and cognitive abilities is the base of the multiple intelligences theory, theory which had its impact on changing the educational methods, and formed a challenge for the traditional meaning of the still intelligence theory. This leads to the creation of a variety of teaching and learning methods in the classroom (Denig, 2004).

The roots of the multiple intelligences theory goes back to Gardner who dared the educationalists in their thoughts by changing the traditional methods of teaching and the educational routine to methods of learning and teaching that meet the needs of the new educational situation (Denig, 2004).

This theory that Gardner came up with for the mind, means there are differences between people in their mental and cognitive abilities, which means they have different types of intelligences. For example a person could have excellent verbal intelligence but finds it difficult to learn music. This means that a person may possess all the multiple intelligences or some of them. For example if a student doesn't participate in a classroom that doesn't mean that the student is weak, the student might have other intelligences that enable him to be creative in other areas. Initially Gardner (1983) formulated a list of seven intelligences which were eight different ways to demonstrate intellectual abilities including verbal /linguistic, logical /mathematical, visual/spatial, bodily/kinesthetic, musical, interpersonal and intrapersonal.

The theory of multiple intelligences contains eight types of intelligences and they are:
• Verbal intelligence: having the ability to use the words fluently in speech or writing it also involves being able to remember the information and form words and their meanings.

• Logical/mathematical intelligence: being able to logically analyze the problems, work with the mathematical equations and explaining it in a good way, and applying the scientific way in solving problems.
• The Spatial intelligence: having the ability to realize the universe in visual/spatial way and it also involves the ability to visualize and to be able to visualize graphically the visual and spatial ideas.
• Physical Intelligence: It is shown in the energy and experience the student has in using all his body as a whole or parts of his body in learning and being able to express their ideas and feelings and be able to solve problems in a way that goes with the individual mental abilities.
• Musical intelligence: it is the ability to feel the musical notes and being able to perform.
• Natural intelligence: it is the ability to understand the different natural limitations and to get to know the different types in nature.
• Social Intelligence: the ability to understand the feelings of others, their motives, interests and differentiate between them.
• Self intelligence: This cares about the individual understanding himself, his motives, and feelings and what he has from abilities.

Irma (1996) stated that the theory of multiple intelligences is considered a cognitive model that allows the publishers of the school books to develop in light of this theory which will help the teacher to use any teaching courses in different ways to reach as many number of students with their different levels and abilities.

Campell and Dickinson (1996) emphasize that designing the curriculum in light of this theory will help with developing the students' abilities from all sides from the beginning stages of learning by including in the curriculum different educational activities. Othman (2001) showed that designing and developing the curriculum in light of the multiple intelligences theory, the content must be organized in a way where we would move from one intelligence to another to meet the students' intelligences; for example the activity would provide the logical/mathematical activities with reading in addition to musical, artistic and physical activities. Some researchers emphasized that the educational courses must be done according to the intelligence and skills available among teachers and that would achieve positive educational results some of which are: understanding the educational content, getting the students to acquire the information in more than one method and one technique and having more interaction in the classroom and taking the individual differences in mind.

Gardner (1999) argued that the best stage to apply the curriculum that is based on multiple intelligence theory is the stage where students are between the ages of 3-7.

Gardner (1993) puts a number of principles that must be available in the curriculum that is designed in light of the multiple intelligences theory. These principles include: teaching to develop personality, listening comprehension, building the basic skills, developing the individuals' abilities to benefit from the lessons independently, developing the learners' cognitive and mental abilities, group learning, and finally inclusion and interacting with society and its problems and issues.

It is important to point out at this point that any curriculum designed in light of the multiple intelligences theory must link between the different cognitive fields where it would provide the students with the chance to use their intelligences in a scientific way and also vary in its use of different activities that would meet the different intelligences of the student.

Many attempts have been made in trying to design the curriculum in light of this theory; and especially in the kindergarten stage, researchers try to design a curriculum for the kindergarten stage using five units each with three lessons and each lesson included seven types of intelligences: verbal, mathematical/logical, physical, musical, spatial/social, individual/personal, and varies in the use of the different activities in each unit and also varied in the methods of teaching it. She considered the seven types of intelligence as a way to present the child with the different educational experience and with the type of intelligence suitable for him/her. Others developed a curriculum for the children in light of this theory as a way of teaching, she also translated the thoughts embedded in the theory of multiple intelligence in practical lessons that also included activities based on the theory of multiple intelligence, and suggested evaluative methods suitable for each type of intelligence such as observation and recording students' speech.

This theory was also very useful in developing the teaching practice itself. It led to a strong tie between the teacher and the students. There are many important usages for this theory in teaching. Armstrong (1994) argues that the teacher can present the information for the students in nine different ways. Also it can help the teachers in varying their teaching strategies to reach as many numbers of students as possible with their different level of intelligence going beyond the verbal and logical views that are used in a classroom environment. As for the importance of this theory for the learner it gave him the chance to discover real life situations and to look at it from different views, the person can go back and relive the different life situations through different living abilities. In

addition the application of the theory gives the student the ability to depend on himself more and provides him with the ability to apply new skills and improve group learning and also improves their academic achievement as suggested by Thabet, (2005).

As McDonough and Shaw (1993) note, "though in different circumstances, the options to choose teaching materials may vary from totally free to extremely circumscribed; the ability to evaluate them effectively is a veryimportant professional activity for all ELT teachers". When teaching materials are to be used by a group of teachers, it seems sensible that they are selected by all those who will be involved in their use.

This leads us to conclude that the teacher can use this multiple intelligences theory to train their students to be more conscious and reflective in their thinking abilities and in the different methods of learning. It also helps teachers to understand the differences which they realize among their students and choose the suitable teaching methods in light of the individual differences between them.

The subject of multiple intelligences has taken a great deal of attention by the researchers, so they started investigating about multiple intelligences among their students whether in school learning stage or university learning stage, others tied between methods of learning and its relation to multiple intelligences, others studied multiple intelligence and its relation to gender.

LITERATURE REVIEW

The following are a number of studies that are related to the current study. Jones (1996) conducted a study to discover the multiple intelligence theory in the elementary comprehensive grades and that was through the teachers expectations around what the theory contains in these grades. The sample of the study consisted of 23 teachers from five different elementary schools from the state of Missouri in the United States. The theory of multiple intelligence was used as a frame for learning, the instrument of the study contained a group of questions which were: is the theory of multiple intelligence considered a successful method to be applied in curriculum and instruction to teach students and evaluate their learning? And can the methods of teaching of the multiple intelligences be applied along with the methods of teaching for the other comprehensive grades? And how can the theory of multiple intelligence be applied in the elementary grades? The results showed that teachers were positive around using the theory of multiple intelligences in general and its content that can be used in preparing the curriculum and teaching students in the comprehensive elementary stages.

researchers conducted a study that aims at investigating the distribution of multiple intelligences among pre service teachers. The study also aimed at developing programs that apply this theory in training and preparing teachers. The study consisted of three parts: the first part distributing the multiple intelligences among the study sample, the second part: a suitable sample of the theory was presented, and the third part was to develop the curriculum of the pre service teachers to include the theory of multiple intelligence, and the sample of the study consisted of elementary stage teachers in one of the Ohio state schools. The study also consisted of pre service teachers who were also enrolled in training programs of the multiple intelligence theory. The results showed significant statistical differences between the eight relations on the questionnaire used in favor of the pre service teachers; also it shows that all teachers have agreed that their knowledge of the types or kinds of multiple intelligences is very important in order for them to succeed in their teaching in the different stages.

Others conducted a study to compare between a teacher's guide that was developed according to the multiple intelligence theory and the traditional guide, the sample of the study consisted of 24 students in fifth grade and for a five week period, the control group was taught by the traditional curriculum, whereas the experimental group was taught by the curriculum that was prepared according to the multiple intelligences theory. The results showed no significant statistical differences between the controlled or experimental groups in the students' achievement. Vivona (2001) conducted a study to see the effect of using the multiple intelligence theory with the gifted training programs on how much they understand the curriculum and how much they work on developing their academic achievement and their motivation towards learning, the sample of the study consisted of 30 teachers for the gifted in a moderate school, and to answer the questions of the study an instrument was developed around accomplishing the multiple intelligences curriculums for the gifted, and the instrument consisted of 20 questions and each question has five options. The results showed that there is no effect for the use of the multiple intelligences theory in the school curriculums and also in students' motivation in achievement.

In a study done by Barrington (2004) where he aimed at investigating the teachers' knowledge of the multiple intelligences theory and the importance of its application in the courses taught. He met with 49 teachers from different training sessions for the teachers, and distributed his instrument which contained four open-ended questions, and the questions revolved around how much they knew about the multiple intelligences theory before they attended the training sessions, and about the relationship of multiple intelligence in learning and its importance

in the teaching process, the results showed: that 3 teachers out of 25 expressed their high knowledge of the multiple intelligences theory, while the rest of the teachers had very little knowledge about it. Most of the participants in the training programs expressed that there is relation between this theory and the Ministry of Higher education. And also the participants in this session agreed that education would be better if the theory of multiple intelligences was to be included in the curriculum and school books, the results also showed that the participants' views in the training sessions were positive towards this theory.

Ozdener and Ozcoban, (2004) conducted a study that aimed at comparing the traditional ways of teaching with a teaching sample that was based on the multiple intelligence theory in classrooms that taught computer courses, the study was done on 75 college students in Istanbul studying a course in computer (Power Point MS). They were divided into two groups; the first was the control group which was taught in the traditional method. The second group was the experimental group which was taught by the multiple intelligences theory, the results showed that the second group that was taught according to the multiple intelligence theory obtained higher marks than the control group.

It is clear from reviewing the previous studies that there are positive views around using the multiple intelligence theory in teaching and in designing school curriculum and that was shown in the studies done by (Barrington, 2000, Jones, 1996 and Ozdener and Ozcobanm 2004).

De Oliviera (2009) analyzed two course books utilized in Porto Alger city, Brazil and came to the conclusion that verbal/linguistic, intrapersonal, interpersonal and visual/spatial intelligences appeared mostly in the textbooks. Kirkgöz (2010) investigated locally-published ELT textbooks in Turkey and came to the conclusion that naturalistic intelligence was the least type. Others worked on Top-notch series based on the elements of multiple intelligences theory. The results confirm that, Top-notch is reach in addressing verbal intelligence followed by the visual, logical, musical, interpersonal, bodily, and intrapersonal one while to some extent poor in representing natural and existential intelligences. Recently, Taase (2012) analyzed ELT textbooks used in guidance school of Iranian educational system on the basis of Multiple Intelligence Theory. He found that verbal/linguistic and visual/spatial were the most predominant intelligences in those books. He also did not find any trace of bodily/kinesthetic, musical, and naturalistic intelligences. And the current study is similar to the previous studies in that it focuses on the multiple intelligences theory in the curriculum, the difference between our current study and previous studies is that this study was not done by any of the previous researchers.

The study at hand focuses on rather limited area of investigation and evaluates common course books used in different settings in Iran from the theory of multiple intelligences perspective.

This study is significant because it is considered one of national studies to investigate the multiple intelligences in the school books; specifically in the English language textbooks. In addition the results of the study will help course designers to include multiple intelligences in their books.

This study is also significant in that it provides researchers with an instrument which they can use to analyze the content of other books for different grade levels with respect to the inclusion of multiple intelligences. Finally the results of the study will provide the Ministry of Education with information on how much do the current textbooks take into account the theory of multiple intelligences.

Research questions
1. What are the most common multiple intelligences types in high school textbooks, and Top Notch Series?
2. Do the degrees of distribution in the multiple intelligences among the four textbooks differ?

METHOD

The researcher used the content analysis approach in this study to investigate the types of multiple intelligences in the textbooks chosen. The sample of this study consisted of four widely used course books in Iranian English language teaching settings, namely, high school English course books published by the Ministry of Education for 2014-2015 academic year, and Top Notch series published by Longman in 2010. However, the first level textbook of each series was selected for analysis. The researcher did the following to analyze the course books:
1. The researcher designed an analytical table that consisted of intervals and frequencies and total frequencies.
2. The sentence considered as the unit of analysis since it is the most suitable unit of analysis for this study.
3. The researcher considered pictures, paintings and tables as a sentence, and were analyzed as such.
4. The researcher took it for granted that if there were to be any confusion during the analysis with respect to certain variables the frequency would be counted for the closer variable.

RESULTS AND DISCUSSION

Following the above mentioned procedure the following results were obtained. The results are discussed in the light of each research question.

The first research questioned was interested in the most common multiple intelligences types in the sample course books. To answer this question, the researcher analyzed the content of the textbooks and the frequencies and the percentages were calculated for each of the domains as it is shown in the following table.

Table1. Frequencies and percentages for the degrees of existence of the multiple intelligences in each textbook

Type of intl.	High sch. txb.		Top Notch Series	
	Freq.	Per.	Freq.	Per.
Linguistic	732	5.38	766	47.28
Logical	13	1.33	21	1.29
Interpersonal	116	11.94	518	31.97
Intrapersonal	59	6.07	191	11.79
Kinesthetic	11	1.13	21	1.29
Musical	27	2.78	36	2.22
Natural	6	0.61	19	1.17
Visual/spatial	7	0.62	48	2.96

The table shows that the most common type of multiple intelligences in all the books is the linguistic type. The highest percentage for each textbook is the one of linguistic (verbal) intelligence. This fact is due to the nature of the subject matter of the textbooks, that is, English. However, as it is clearly visible in the following graph, high school textbook is intensely relies on linguistic intelligence; whereas, other international textbooks are rather moderately emphasize verbal intelligence. This may be due to the overemphasis of high school textbooks on linguistic competence.

Another explanation could be that international publishers of the textbooks analyzed by the researcher know that they should take the individual differences of foreign language learners into account. Thus, they attempt to share the content of the textbooks among other types of intelligences.
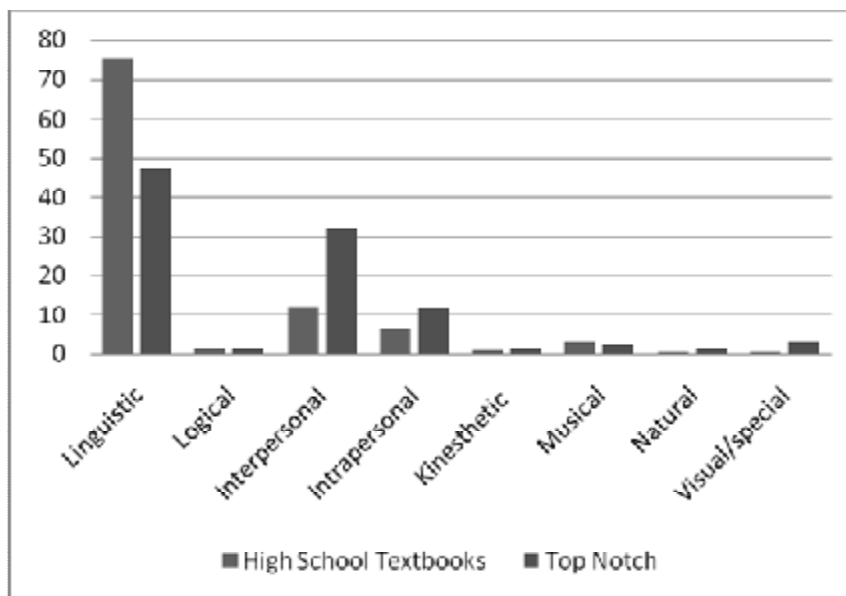

Figure 1. Graph: multiple intelligences frequencies of the textbooks

The figure above also shows that the least common types of intelligences are kinesthetic, musical, natural, and spatial ones. This may be related to the fact that the subjects included in the different textbooks do not require physical use of the body. On the other hand, it may be related to the developmental characteristics of the students who use these textbooks. According to their writers, these textbooks are mainly designed for teenagers and young adults. Moreover, in terms of other types of the least touched intelligences, one can highlight the indirect relationship between language and each of those intelligences. For example, in terms of the percentages of existence of natural intelligence in these textbooks, it is crucial to say that these books are mainly concerned with the development of linguistic and communicative skills such reading and writing rather than focusing on students' environment which could be best focused in social studies book.

Further reflection on the table and the following graphs shows that unlike Top Notch Series, high school course books are a little more ignorant of intrapersonal intelligence. However, this may be interesting if we consider the three international textbooks only.

The second research question is concerned with the degrees of distribution of multiple intelligences among the textbooks. To answer this question, Chi-square values were calculated as they are shown in the following table.

Table 2. The values of Chi-square to calculate the correlation between intelligence and textbook

Textbook	Chi-value	Degree of freedom	Sig.
High school textbook	56.00	49	0.229
Top Notch	40.00	35	0.258

Table 2 shows that the high school textbook is significantly different from other international textbooks in terms of incorporating multiple intelligences and paying attention to individual differences.

CONCLUSION

According to the findings of this study, the following conclusions can be made:

1. Iranian high school textbooks significantly rely on activities which incorporate verbal-linguistic intelligence;
2. They are unidimensional, in that, they do not outstandingly cater for none of the intelligences but verbal-linguistic intelligence;
3. There is no significant difference among international textbooks in terms of the incorporation of verbal-linguistic, special-visual and interpersonal intelligences;
4. Iranian high school textbooks, are significantly weaker than Top Notch series in terms of relying on intrapersonal intelligence;
5. None of them crucially attend to musical, bodily-kinesthetic, logical-mathematical, and naturalist intelligences.

However, this study is limited to textbooks. Further analysis should be undertaken to analyze the supplementary materials of these course books; for example, workbooks, video books, etc. Moreover, further analysis may be possible regarding the tests which each course devises in terms of the multiple intelligences theory.

Conflict of Interest
The authors declare no conflict of interest

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