Multiple Intelligences Theory and Iranian Textbooks: An Analysis

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The purpose of this study is to investigate locally designed ELT textbooks in the light of multiple intelligences theory. Three textbooks (grade 1.2.3) used in guidance school of Iranian educational system were analyzed using MI checklist developed by Botelho, Mario do Rozarioand. Catered for kinds of intelligences in the activities and exercises were specified in a profile. The results of the study showed that verbal/linguistic and visual/spatial were the most predominant intelligences followed by logical/mathematical, interpersonal and intrapersonal in much lower ratios. Bodily/kinesthetic, musical and naturalistic intelligences were not found in any percent.

1 Introduction

Howard Gardner proposed the theory of Multiple in the early 1980s with the publication of Frames of Mind (Gardner, 1983). Initially he formulated a list of seven intelligences which were seven different ways to demonstrate intellectual abilities including verbal /linguistic, logical /mathematical, visual/spatial, bodily/kinesthetic, musical, interpersonal and intrapersonal. After Grander's primary listing of the intelligences in Frames of Mind, a great deal of discussion continued for expanding or limiting the list. Naturalist intelligence, spiritual intelligence and existential intelligence were proposed by Grander and his colleagues as particular probabilities .Further on, Grander came to the conclusion that naturalistic intelligence 'merits addition to the list of the original seven intelligences' (Gardner 1999: 52).

Multiple intelligence challenged traditional notion of intelligence in many ways. Contrary to traditional notion in which people are born with a fixed amount of intelligence, MI considers that all human beings possess all the intelligences, but each person has a unique combination, or profile. Short answer tests like Stanford-Binet, intelligence quotient and Wechsler intelligence scale for children(WISCIV) are not used in MI because while measuring just rote memorization skills and one's ability to do well on short

answer questions they lack the ability to measure disciplinary mastery or deep understanding. The new theory regards that all people can improve each of the intelligences, though some people will improve more readily in one intelligence area than in others and in addition to logic and language, there are many more types of intelligence which reflect different ways of interacting with the world. The same materials were taught to everyone in traditional practice but in MI, the teachers teach and assess differently based on individual intellectual strengths and weaknesses. Teachers structure learning activities around an issue or question and connect subjects in MI model of intelligence and develop strategies that allow for students to demonstrate multiple ways of understanding and value their uniqueness. In Grander's view intelligence is the ability to solve problems and fashion products that are valued in a particular cultural setting or community (Gardner, 1993). This view of intelligence is culture-free and accounts for differences in time and place.

However, MI theory was not designed to be applied in education or language teaching, it gained an increasing attention in applied linguistics since teachers looked at the different learning styles which are different ways students learn the materials. Like other fields, ELT has applied the theory of multiple intelligences widely. Akbari & Hosseini (2007) investigated possible relations between multiple intelligences and language learning strategies and found significant relations between the use of language learning strategies and IQ scores of the learners. Nilgün Yenicea, HilalAktam (2009) and Nergüz BulutSerina, Serina, M. Ali Yavuza, Behbud Muhammedzade (2009) examined the relationship between multiple intelligence and teachers' learning style and strategies. Rahimi & Qannadzadeh (2010) investigated the relationship between quantitative usage of logical connectors in Iranians' EFL essay writing and their logical/mathematical and linguistic intelligences. Multiple intelligences approach in intuitive English learning investigated by Loredana-Andreea Stăncună, Aneliz-Iulia Crăciun (2011) in a case study showed that the dynamics of the game-like activities as well as the wide range of – mainly - visual, kinesthetic, interpersonal and musical entry points or representations allowed young students to enjoy effortless activities that motivated their learning.

Textbooks have been analyzed under the lights of MI theory in recent years to determine different sorts of intelligences embedded in their activities. Palmberg (2002) in his study presented the analysis of course books by student teachers in order to identify intelligence profile. Botelho's study(2003) showed that the intelligence profile of the analyzed books were mainly verbal/linguistic. Carolina Leonardi de Oliviera (2009) analyzed two course books utilized in Porto Algerecity, Brazil and came to conclusion that verbal/linguistic, intrapersonal, interpersonal and visual/spatial intelligences appeared mostly in the textbooks. Yasemin Kırkgöz (2010) investigated

locally-published ELT textbooks in Turkey and found that naturalistic intelligence was the least type.

The purpose of this study is to analyze locally- published ELT textbooks taught in Iranian state guidance school educational system to determine to what extent MI theory is reflected in these textbooks. Consideration of textbooks in the light of multiple intelligence theory is essentially useful because textbooks are the main and the most applicable source of teachers in classrooms to transfer the curriculum objectives. In addition, students with different learning styles and personality types possess a variety of intelligences and it is necessary for textbooks to provide as many intelligences as possible to match the students' needs.

2 Method

2.1 MI checklist

In this study I used the procedure developed by Botelho, Mario do Rozario, de Lima (2003) which defines eight intelligences and lists the activities, techniques, materials and description related to each intelligence. For example, verbal linguistic intelligence is defined as the ability to use words effectively both orally and in written form. The range of activities for this intelligence include reading books, listening to talking books, writing, note taking, memorizing and etc. (see appendix A for definition and related activities of eight intelligence)

2.2 Analysis of ELT textbooks

Using the procedure developed by Botelho, Mario do Rozario, de Lima (2003), three English textbooks presently used in Iranian guidance schools were analyzed carefully to investigate their catering for different intelligences. For this purpose I considered all activities and exercises in three books observantly to identify the kinds of intelligence they carry in themselves. The investigated textbooks include Right Path to English (1), Right Path to English (2) and Right Path to English (3) for grade 1, 2 and 3. Each textbook was scrutinized in terms of its inclusion for different intelligences.

To identify the appropriate intelligence in each activity, the main procedure was to decide that each activity caters for what sort of intelligence predominantly. For example, the activities like listen and repeat, fill in the blanks with correct form of verb and answer the questions with "Yes" or "No" are definitely related to verbal/linguistic intelligence. Some activities were a mixture of intelligences. For example the activity like "look at the pictures and fill in the blanks" caters for both verbal/linguistic and visual/spatial intelligences. Such activities were categorized into more than one intelligence type. Basic structure and review sections were not considered.

2.3 Procedure

Two raters identified different kinds of intelligences in each textbook independently: the author of this study and an expert teacher having a great experience in teaching these textbooks and advanced knowledge of MI theory and its intelligences.

Having rated, we agreed upon 95% of the identified categories. Then we came to an agreement for remaining 5% through discussion and consultation with another expert teacher.

3 Results

Table 1 shows the distribution of different categories of multiple intelligences in the locally published textbooks used in Iran guidance school.

Table 1. Distribution of Intelligences in textbooks

Textbooks	Intelligence types f %							
	Verbal/ linguistic	Visual/ spatial	Logical/ mathematical	Inter personal	Intra personal	Bodily/ kinesthetic	musical	Total F %
Right path to English (1)	59 64.13	25 27.17	2 2.17	6 6.52	0 -	0 -	0 -	92 100 %
Right path to English (2)	108 69.23	42 26.92	5 3.2	0 -	1 0.64	0 -	0 -	156 100 %
Right path to English	97 80.16	13 10.47	8 6.61	2 1.65	1 0.82	0 -	0 -	121 100 %

As it is obvious from table 1, each one of the ELT textbooks caters predominantly for verbal/ linguistic intelligence. Between 64.13 -80.16% of the activities suits for the learners who are verbally-linguistically oriented. The second most frequently used intelligence type is visual/spatial covering the range of 10.47-27.17 % of the activities. Logical/mathematical intelligence stands for the next most frequently addressed kind of intelligence comprising between 2.17-6.61% of the activities. The fourth widely used intelligence in grade 1 is interpersonal intelligence (6.25%) followed by logical/mathematical (2.17%). Other intelligences including musical, bodily/kinesthetic, intrapersonal and naturalistic intelligence were not found in Right Path to English for grade 1.

In grade 2 textbook, the third most addressed kind of intelligence is logical/mathematical (3.2%) followed by intrapersonal intelligence (0.64%).

Musical, bodily/kinesthetic, interpersonal and naturalistic intelligences were not found in grade 2 textbook. Logical mathematical intelligence (6.61%) stands as the third widely used kind of intelligence

followed by interpersonal (1.65%) and intrapersonal intelligences (0.82%). Other intelligences like musical, bodily/kinesthetic and naturalistic intelligences were not found in grade 3 textbook. As it can be seen clearly in table 1, three kinds of intelligence including musical, bodily kinesthetic and naturalistic intelligence were not used in any percent. Among the catered for intelligences, intrapersonal type was the least used kind of intelligence. The textbook of grade 3 addressed five kinds of intelligences including verbal/linguistic/ logical mathematical, visual spatial, interpersonal and intrapersonal. Grade 2 used four intelligences neglecting intrapersonal intelligence used in the textbook of grade 3. Grade 1 also addressed four kinds of intelligences neglecting interpersonal intelligence used in grade 3. One point worthwhile to be mentioned is that verbal/linguistic and visual spatial intelligences used as the most prevalent intelligences were mixed in activities like "look at the pictures and follow the model", "look at the pictures and ask questions with every day" and "look at the picture and answer the questions".

The findings of this study suggests that verbal/linguistic and visual/spatial predominate the intelligence profile of the investigated books followed by a fair percentage of other intelligences like logical/mathematical, interpersonal and intrapersonal types. The important fact about this study is the absence of musical, bodily/kinesthetic and naturalistic intelligence in the textbooks.

4 Discussion

In the present study we examined three domestically designed ELT textbooks applied in Iran state guidance school education from the perspective of Multiple Intelligence theory to determine intelligence profile reflected through different activities and tasks. The results of the study showed the extent of each intelligence applied in the textbooks. The findings are consistent with previous studies (Botelho,2003;YaseminKırkgöz,2010) and suggest that the verbal/linguistic and visual/spatial intelligences are the most prevalent catered for intelligences in the analyzed textbooks. Although logical mathematical, interpersonal and intrapersonal intelligences were found in much lower ratios, it is crucially important to consider the fact that musical, bodily/kinesthetic and naturalistic intelligences were the least ones which were not found in any percent. Generally speaking, the analyzed textbooks have not been written to be used based on the theory of multiple intelligences. So, there is still much to be studied about the relationship between the theory of multiple intelligences and the textbooks locally designed for foreign language teaching in Iranian guidance school.

Followings are some pedagogical implications of this study:

- Students have different learning styles and individual differences and it is crucial to consider these differences in designing the textbooks.
- Since all of the teachers lack the creativity in designing their own multiple activities and exercises, it is useful for the textbooks to include an amalgam of activities and exercises based on multiple intelligences.
- Students have different intelligences and their needs should be addressed through designing textbooks including as many of the intelligences as possible.
- It is important for ELT teachers to have a basic knowledge of MI theory and apply it in the classroom.
- It is necessary for teachers to carefully analyze the textbooks, their teaching method and students' needs in the light of intelligence profile.
- Teacher should consider all intelligences as equally important which is in sheer contrast to traditional education systems, which typically place a greater emphasis on the development and use of linguistic and mathematical intelligences.
- Regarding the age of the guidance school students (teenagers), it is very helpful to apply activities based on bodily/kinesthetic and musical intelligences to expeditee their learning.

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Appendix
List of activities, techniques, materials and descriptions of each intelligence.

Verbal/linguistic
1.Note taking
2. Riddles
3. Worksheets
4. Listening to lectures
5. Word play games
6. Listening to talking books
7.Reading books
8.Discussions
9.Story telling
10.Journal keeping
11.Debates
12.Memorizing
13.Writing

The ability to use words effectively both orally and in writing. Remembering information, convincing others to help and talking about language itself

Logical/mathematical
1.Science demonstrations and experiments
2.Logic puzzles and games
3.Story problems with numbers
4.Logical/sequential presentation of subject matter
5.Logical argumentation
6.Problem solving

The ability to use numbers effectively and reason well. Ability to predict, understand basic properties of numbers and principles of cause and effect. Recognizing abstract patterns, creating codes.

Spatial/visual
1.Illustrations
2.Graphs
3.Tables
4.Using charts and grids
5.Videos, slides and movies
6.Using arts
7.Maps
8.Photos
9.Using graphic organizers
10.Imaginative story telling

11.Painting/picture/collage
12.Mind maps
13.Telescope/microscope
14.Visual awareness activities
15.Students' drawings

Bodily/kinesthetic
1.Hands-on activities
2.Field trips
3.Role plays
4. Creative movements
5.Mime
6.Body language
7.Classroom aerobics
8.Cooperative group rotation
9.Cooking and other "mess" activities

The ability to use the body to express ideas and feelings and to solve problems.
Skills: coordination, flexibility, speed and balance.

Musical
1.Singing
2.Songs
3.Playing recorded music
4.Playing live music
5. Jazz chants
6. Music appreciation
7. Student made instruments
8. Background music

Sensitivity to rhythm, pitch and melody. Recognizing simple songs and being able to vary speed, tempo and rhythm in simple melodies.

Interpersonal
1.Pair work
2.Peer teaching
3.Board games
4.Group brainstorming
5.Project work
6.Work cooperatively
The ability to understand another person's moods, feeling, motivations and intentions. Skills: responding effectively to other people, problem solving and resolving conflict.

Intrapersonal
1.Activities with a self-evaluation component
2.Interest centers
3.Options for homework.
4.Personal journal keeping
5.Checklist
6.Inventories
7.Individualized projects
8.Doing things by yourself

The ability to understand yourself, your strength, weaknesses, moods, desires and intentions. Skills: understanding how someone is similar to or different from others, reminding oneself to do something, knowing how to handle one's feelings, knowing about oneself as a language learner.

Naturalistic
The ability to recognize and classify plants, minerals and animals including rocks, glass and all variety of flora and fauna. Classifying and categorizing activities.