Invisible Obstacles on the Implementation of Multiple Intelligences Theory in K-8 Classrooms in Turkey*

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Abstract: The aim of this study was to investigate the factors affecting the implementation of Multiple Intelligences (MI) Theory in K-8 classrooms in Turkey. First, it was made meetings in small groups (3 or 4) with 38 teachers in one of the first MI schools in Turkey during the first semesters. They were 22 elementary teachers from Grades 1 to 5 and 16 teachers teaching science, mathematics, social studies, Turkish language and grammar, art and music from Grades 6 to 8. The main goal of the meetings for the first semester was to determine teachers' knowledge level about MI theory, the sources that they used to learn MI theory and their attitudes toward MI theory. During the second semester, it was focused on exploring these teachers' difficulties in implementation of MI instruction in their classrooms through the individual and group interviews. Also, classroom observations were also done to particularly understand how these teachers use MI theory in their classrooms. At the end of the second semester, some of students and their parents randomly selected were interviewed to identify their ideas and attitudes toward MI theory. The data based on the interviews and classroom observations showed that although most of these teachers, students and parents had positive attitudes toward MI theory, there had some important difficulties in the implementation of the MI theory in the classrooms. These invisible obstacles on the MI theory in Turkish K-8 classrooms were (1) external pressures imposed upon teachers by Turkish National Curriculum, (2) central assessment system, (3) the parents' concerns about their children's progress through the subjects of the National Curriculum, (4) the problem of finding time for MI activities, (5) limitations in teachers' pedagogical repertoires about MI activities, and (6) the difficulties of managing the MI activities.

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Introduction

A framework for looking at various ways that learning occurs has been described by Howard Gardner (1983, 1985, and 1993) in his theory of multiple intelligences. Multiple intelligence theory is a cognitive model that seeks to describe how individuals use their intelligences to solve problems and fashion products (Armstrong, 1994, 2000). Gardner claims that (a) each person possesses all intelligences. Some individuals have well-developed verbal-linguistic intelligence and others have spatial-visual intelligence, (b) everyone has the capacity to develop all intelligences to a reasonably high level of performance if given the appropriate encouragement, enrichment, and instruction, (c) intelligences usually work together in complex ways and are always interacting with each other, and (d) there is no standard set of attributes that one must have to be considered intelligent in a specific area. But there are core operations that underlie a specific intelligence (Gardner, 1983, 1993).

Since the *Frames of Mind the Theory of Multiple Intelligences*, many educators have become interested in the MI theory and many schools have been organized around the theory because of its capacity to serve as a framework for teachers to explore their teaching styles and to assist them in making decisions about ways to structure teaching and learning experiences for students. The Key School in Indianapolis (Blythe & Gardner, 1990), the Mather School in Boston (Hatch, 1993), and the New City School in St. Louis (Hoerr, 1992) are three examples of the first schools that have used Gardner's theory in reforming their curricula. Each school has restructured their curricula in a variety of ways because Gardner has not approved any particular program. In other words, Gardner (1993) encouraged each school to implement MI theory in a way that would work for its particular situation, and as a result of each school's uniqueness. Accordingly, implementation of the multiple intelligences curriculum might vary widely from school to school in the entire world. However, some key books (e.g., Armstrong, 1994, 2000; Campbell, Campbell, & Dickinson, 1996; Lazear, 1991, 1994) and key journal articles (e.g., Campbell, 1997; Checkley, 1997; Gardner, 1997; Goodnough, 2001; Hatch, 1997; Hoerr, 1997) on MI theory have been used to be reorganized these schools. In the current study, it was investigated the factors affecting the implementation of Multiple Intelligences (MI) Theory in K-8 classrooms in one of the first MI schools in Turkey. The research question we addressed was: *What are K-8 teachers' difficulties in the implementation of the MI instruction in their classrooms?*

Methodology

Participants

A total of 38 teachers in one of the first MI schools (private school) in Ankara in Turkey participated in this study during the 2004-2005 academic year. They were 22 elementary teachers (18 females and 4 males) from Grades 1 through 5 and 16 teachers (12 females and 4 males) teaching science, mathematics, social studies, Turkish language and grammar, art and music from Grades 6 to 8. There were also 49 students (21 females and 28 males) and 41 parents (30 females and 11 males) randomly selected to identify their ideas and attitudes toward MI theory.

Educational system in Turkey consists of basic education (elementary and middle schools, age 7-15; 8 years) that is compulsory, secondary education (senior high school, age 15-18, 3 years) and higher education (universities, 18 and older). There are currently two kinds of schools in Turkey-- public and private schools. However, all schools throughout the country are expected to use the curricula developed and inspected by the Ministry of National Education. Teaching in especially public schools in Turkey is generally traditional, which does not actively engage students in learning, and is primarily based on teacher-centered.

Procedures

In the present study, we used several methods of data collection, including individual and group interviews and classroom observations, during the second semester of this study. We focused on exploring the teachers' difficulties in the implementation of the MI instruction in their classrooms through the semi-structured interviews. All of the data reported here was obtained from the individual and group interviews and classroom observations during the second semester, although we had regular meetings with the same teachers to determine their knowledge level about MI theory, the sources that they used to learn and practice MI instruction and their attitudes toward MI theory during the first semester of this study. Each individual interview lasted about 30 minutes, while group interviews in a small group (3 or 4) with teachers teaching the same subject matter (e.g., science) or the same grade level (e.g., Grade 3) was about 4-5 hours for the whole semester. Moreover, classroom observations (N=32) were also done to particularly understand how these teachers use MI theory in their classrooms. At the end of the

second semester, students (N=49) and their parents (N=41) randomly selected were interviewed to identify their ideas and attitudes toward MI theory as well. The interviews of students and their parents were analyzed based on type of their attitudes toward MI theory such as largely negative, slightly negative, undecided, slightly positive and largely positive. Each interview with students and their parents lasted about 15-20 minutes.

All of the interviews were audio-recorded and transcribed. All data (observation notes and interview transcripts) was analyzed by using qualitative methods recommended by Coffey and Atkinson, (1996) and Glesne and Peshkin (1992). First reading of all transcripts was done to identify themes by the first author. Then, an external expert, who has been an elementary teacher in a different MI school in Ankara for 8 years, independently checked those themes. He agreed with all major themes and suggested only minor changes, which were done before analyzing the data.

Results

The results obtained from interviews carried out with teachers and classroom observations uncovered 6 themes as invisible obstacles on the implementation of the MI theory in the classrooms. They were: (1) external pressures imposed upon teachers by Turkish National Curriculum, (2) central assessment system, (3) the parents' concerns about their children's progress through the subjects of the National Curriculum, (4) the problem of finding time for MI activities, (5) limitations in teachers' pedagogical repertoires about MI activities, and (6) the difficulties of managing the MI activities.

Table 1 presents the frequencies and percentages of elementary teachers' difficulties in the implementation of the MI theory in their classrooms from Grades 1 to 5. The tabulated data indicated that all of 9 teachers from Grades 1 and 2 did not have any problem, whereas we found that parents' concerns, teachers' pedagogical limitations about MI activities, managing problems of the MI activities and time problem for the MI activities started from Grade 3 for the same elementary teachers. While these problems were continuing for Grades 4 and 5, other two important obstacles that are external pressures imposed upon teachers by Turkish National Curriculum and central assessment system were getting bigger for these teachers when they implemented the MI Theory into their classrooms. These results showed that parents' concerns

about their children's progress through the subjects of the National Curriculum dramatically changed from Grade 4. All of the Grades 4 and 5 teachers stated that parents' concerns about their children's progress through the subjects and achievement of the central exam immediately and significantly increased beginning from Grade 4. In contrast, the results showed that only music teacher had pedagogical limitations about MI activities and subsequently difficulties how to manage the MI activities in the classroom settings from Grades 1 to 5.

Table 1. The frequencies and percentages of elementary teachers' difficulties in the implementation of the MI theory in their classrooms from Grades 1 to 5.

Themes	Grade 1 Teachers (N=5)	Grade 2 Teachers (N=4)	Grade 3 Teachers (N=4)	Grade 4 Teachers (N=4)	Grade 5 Teachers (N=5)	Art and Music Teachers* (N=2)
External pressures imposed upon teachers by Turkish National Curriculum	------	-------	------	3 (75%)	5 (100%)	------
Central assessment system	------	-------	------	3 (75%)	5 (100%)	------
Parents' concerns about their children's progress through the subjects of the National Curriculum	------	-------	2 (50%)	4 (100%)	5 (100%)	------
Problem of finding time for MI activities	------	-------	2 (50%)	3 (75%)	5 (100%)	------
Limitations in teachers' pedagogical repertoires about MI activities	------	-------	2 (50%)	2 (50%)	2 (50%)	1 (50%)
Difficulties of managing the MI activities	------	-------	1 (25%)	3 (75%)	4 (75%)	1 (50%)

* Art and music teachers are teaching their subjects to the students from Grades 1 to 8.

The results of interviews concerning the mathematics and science teachers' difficulties in the implementation of the MI theory in their classrooms from Grades 6 to 8 are given in Table 2. In Grade 6, it was found that all of the mathematics teachers had limitations in their pedagogical repertoires about MI activities and following difficulties about how to manage the MI activities,

while similar results are valid for only one of the science teachers in the same grade level. For example, the classroom observations indicated that all math teachers generally had a tendency toward the use of logical-mathematical intelligence in their classrooms. Almost all of math and science teachers expressed that the problems on the implementation of the MI theory in their classrooms are getting bigger beginning from Grade 7. Overall, the results show that all of the problems that both math and science teachers had in their MI classrooms are the highest level in Grade 8.

Table 2. The frequencies and percentages of mathematics and science teachers' difficulties in the implementation of the MI theory in their classrooms from Grades 6 to 8.

Themes	**Mathematics Teachers (N=3)**			**Science Teachers (N=4)**		
	Grade 6	Grade 7	Grade 8	Grade 6	Grade 7	Grade 8
External pressures imposed upon teachers by Turkish National Curriculum	------	2 (67%)	3 (100%)	------	2 (50%)	4 (100%)
Central assessment system	------	2 (67%)	3 (100%)	------	2 (50%)	4 (100%)
Parents' concerns about their children's progress through the subjects of the National Curriculum	------	3 (100%)	3 (100%)	------	2 (50%)	4 (100%)
Problem of finding time for MI activities	------	2 (67%)	3 (100%)	------	3 (75%)	4 (100%)
Limitations in teachers' pedagogical repertoires about MI activities	3 (100%)	3 (100%)	3 (100%)	1 (25%)	2 (50%)	2 (50%)
Difficulties of managing the MI activities	3 (100%)	3 (100%)	3 (100%)	1 (25%)	2 (50%)	2 (50%)

Table 3 presents social studies, Turkish language and grammar, and art and music teachers' difficulties in the implementation of the MI theory in their classrooms from Grades 6 to 8. In Grade 6, we found that half of the Turkish language and grammar teachers had some pedagogical limitations about MI activities and classroom management problems for the MI activities. Similar results are valid for only one of the social studies teachers and one of the art and music teachers in Grade 6. In Grade 7 and 8, we found very similar results for these teachers like those of math and science teachers in the same grade levels. Almost all of the social studies and Turkish language and grammar teachers stated that the problems on the implementation of the MI theory in their classrooms are getting more serious beginning from Grade 7. Overall, the results show that all of the problems that these teachers had in their MI classrooms are the highest level in Grade 8.

Table 3. The frequencies and percentages of social studies, Turkish language and grammar, and art and music teachers' difficulties in the implementation of the MI theory in their classrooms from Grades 6 to 8.

Themes	**Social studies Teachers (N=3)**			**Turkish Language and Grammar Teachers (N=4)**			**Art and Music Teachers* (N=2)**		
	Grade 6	Grade 7	Grade 8	Grade 6	Grade 7	Grade 8	Grade 6	Grade 7	Grade 8
External pressures imposed upon teachers by Turkish National Curriculum	------	1 (33%)	3 (100%)	------	3 (75%)	4 (100%)	------	------	------
Central assessment system	------	2 (67%)	3 100%)	------	3 (75%)	4 100%)	------	------	------
Parents' concerns about their children's progress through the subjects of the National Curriculum	------	3 100%)	3 100%)	------	3 (75%)	4 (100%)	------	------	------
Problem of finding time for MI activities	------	1 (33%)	3 (100%)	------	2 (50%)	4 (100%)	------	------	------

Limitations in teachers' pedagogical repertoires about MI activities	1 (33%)	1 (33%)	1 (33%)	2 (50%)	2 (50%)	2 (50%)	1 (50%)	1 (50%)	1 (50%)
Difficulties of managing the MI activities	1 (33%)	2 (67%)	2 (67%)	3 (75%)	2 (50%)	3 (75%)	1 (50%)	1 (50%)	1 (50%)

* Art and music teachers are teaching their subjects to the students from Grade 1 to 8.

The results of interviews related to students and their parents' attitudes toward MI Theory are given in Table 4. Tabulated data showed that only 10% of the students and 19% of their parents had negative attitudes toward MI Theory, whereas 82% of the students and 71% of their parents had positive attitudes toward MI Theory. We found that only four of the students and their parents were undecided toward MI Theory.

Table 4. Frequencies and percentages (in parenthesis) of the students and their parents based on the type of their attitudes toward MI Theory.

Types of attitudes toward MI Theory	**Students (N=49)**	**Parents (N=41)**
Largely Negative	2 (4%)	3 (7%)
Slightly Negative	3 (6%)	5 (12%)
Undecided	4 (8%)	4 (10%)
Slightly Positive	19 (39%)	15 (36%)
Largely Positive	21 (43%)	14 (35%)

Discussion

The purpose of this study was to investigate the factors affecting the implementation of Multiple Intelligences (MI) Theory in K-8 classrooms in Turkey. The results of classroom

observations and interviews carried out with 22 elementary teachers from Grades 1 to 5 and 16 teachers of mathematics, science, social studies, Turkish language and grammar, art and music from Grades 6 to 8 revealed 6 categories as invisible obstacles on the implementation of the MI theory in the classrooms. They were: (1) external pressures imposed upon teachers by Turkish National Curriculum, (2) central assessment system, (3) the parents' concerns about their children's progress through the subjects of the National Curriculum, (4) the problem of finding time for MI activities, (5) limitations in teachers' pedagogical repertoires about MI activities, and (6) the difficulties of managing the MI activities.

The results indicated that elementary teachers had serious problems starting from generally Grade 4 and in especially Grade 5. All of 22 elementary teachers expressed that the parents who did not have any concern about their children's progress through the subjects of the National Curriculum noticeably changed their interest and concern as from Grade 4 and their anxiety about their childrens' achievment of the central exam was the highest level in Grade 5. All of these teachers gave a reason for this change as the central exam at the end of the Grade 5. They also expressed that the curriculum from Grades 1 to 3 was very flexible and did not have a heavy content compared to Grades 4 and 5. For example, in Turkish educational system, science education individually begins in Grade 4 (age 10/11) with short introductions of physics, chemistry and biology concepts. Additionally, teaching many abstract concepts about science (e.g., molecule, atom, heat, temperature and cell) and math continue in Grade 5. It is very well known that almost all of the students beginning from Grade 4 are also being prepared by not only their teachers and but also their parents for the central exam at the end of Grade 5. It can be claimed that other obstacles on the implementation of the MI theory in their classrooms from Grades 4 and 5 strongly depend on the parents' concerns about their children's progress through the subjects and achievement of the central exam.

With respect to middle school level, all of three math teachers had serious limitations in their pedagogical repertoires about MI activities from Grades 6 to 8. We found that they could not go behind their logical-mathematical intelligence in their lesson plans and classrooms. In addition to this, both math and science teachers had the same idea that Grade 8 is the hardest level to implement the MI activities because of the second central exam at the end of the Grade 8. Accordingly, they stated that they did not have enough time for MI activities in their

classrooms as from Grade 7 and especially Grade 8 because the fact that questions that students always had difficulties in the second central exam were more related to math and science topics was a big problem for math and science teaches. The results related to teachers of social studies, and Turkish language and grammar from Grades 6 to 8 revealed very similar problems like those of math and science teachers. We concluded that half of the Turkish language and grammar had a tendency to use activities of the verbal-linguistic intelligence in their classrooms. It can claimed that the structure of their field and their old experiences of teaching the subject based on dominantly linguistic and verbal intelligence for a long time might cause their pedagogical limitations. The findings of interview with the students and their parents showed that many students (82%) and their parents (71%) had positive attitudes toward MI Theory. We found that only 10% of the students and 19% of their parents had negative attitudes toward MI theory because of especially their concern and anxiety about their children's success in the central exams. Many parents said that they got enough information about MI theory from the school. The parents having negative attitudes toward MI theory stated that they were not so sure that their children learned a lot during MI activities. However, most of the students expressed that they were enthusiastic about the MI activities in their classrooms.

In the light of the findings of this study, we concluded that external pressures imposed upon teachers by Turkish National Curriculum and especially its central assessment system are the most important barriers for the implementation of the MI theory in K-8 classrooms in Turkey. In this connection, Armstrong (1994) states, "Learning in eight ways is fun, but it comes to our bottom line—evaluating students' learning progress—we have got to get serious again and the test the way we have always tested" (p. 115). Thus, MI theory proposes a fundamental restructuring of the way in which teachers assess their students' learning progress through especially MI portfolios including various assessment ways. However, traditional assessment ways such as generally multiple-choice tests have been used to differentiate between students and rank them according to their achievement in the entire world. We noticed that to successfully implement the MI theory was strongly based on the consistency between teaching and assessing ways in the classrooms. Furthermore, we arrived at a conclusion that the negative effects of the heavy curriculum and the central exams have created another two factors negatively affecting the implementation of MI theory in the classrooms. They were first the

parents' concerns about their children's progress through the subjects of the National Curriculum, and then the problem of finding time for MI activities. All of these four obstacles on the implementation of the MI theory in K-8 classrooms can also be categorized as external problems that teachers may not probably solve. Other two problems that are limitations in teachers' pedagogical repertoires about MI activities, and their difficulties of managing the MI activities can be categorized as internal problems that teachers may probably solve. The relationships among all of these external and internal problems on the implementation of the MI theory in the classrooms are given in Figure 1 as a concept map.

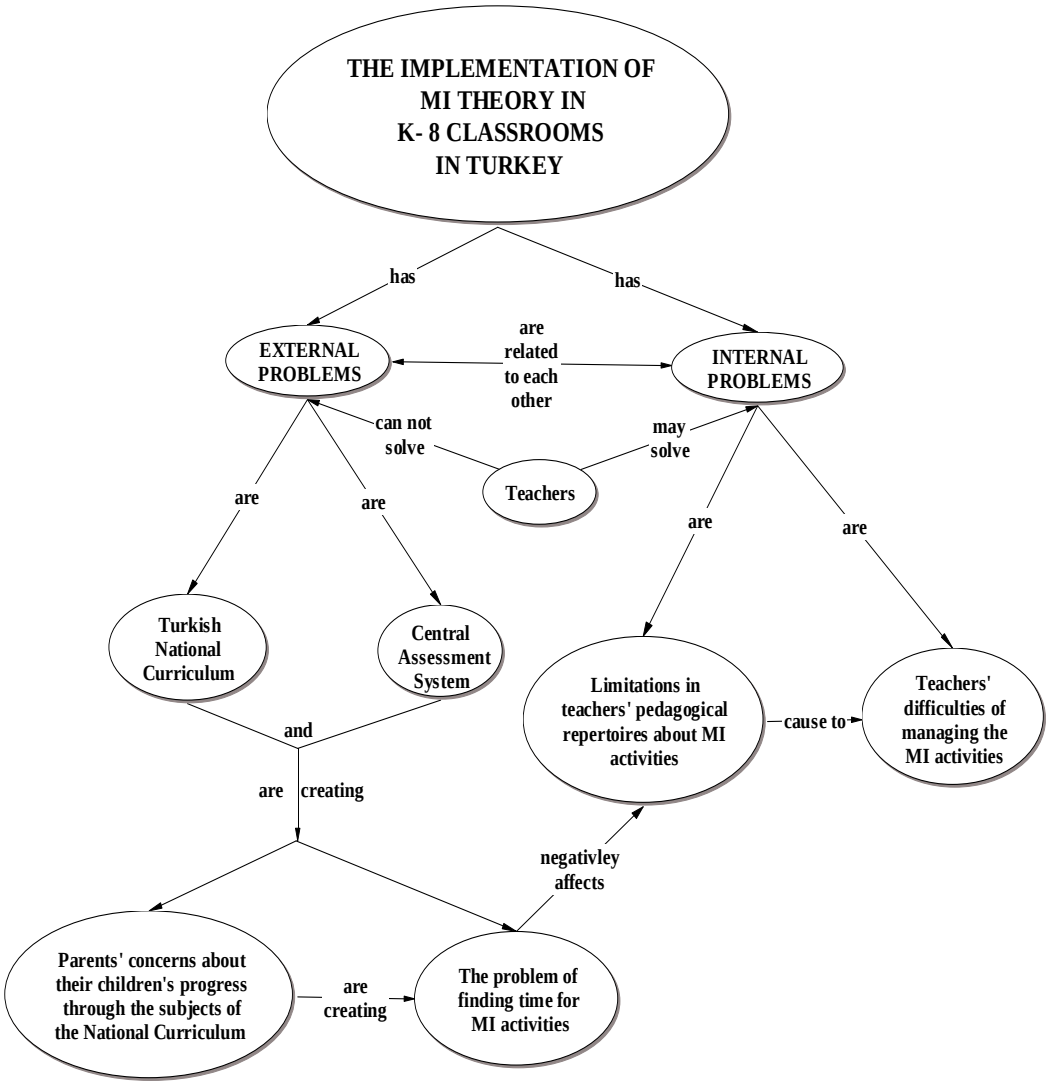

Figure 1. Relationships among all of these external and internal problems on the implementation of the MI theory in the classrooms.

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