# An Invetsigation on the Application of Multiple Intelligence-Based Teaching in the Process of Teaching Reading to EFL Students

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## Abstract

The article presents the results of experimental research in teaching reading which was held in Ishik University, Iraq with 95 students of prep school aged 17-19 during the academic year 2011/2012 (16 weeks). It was hypothesized that grouping students according to dominant types of their Multiple Intelligences (MI) while teaching reading and providing them with environment and activities that correspond to their intelligence type would benefit the development of reading skills. The results of experiment – testing, questionnaires, classroom observation, and interviews held in the experimental (students grouped according to MI type) and control groups (no such grouping) – all support the hypothesis about the positive impact of taking into consideration the students' dominant type of intelligence in the process of teaching reading.

## Introduction

In my previous article in this journal (Çelik, 2012) I viewed some theoretical issues concerning MI as well as some activities that can be beneficial for MI-based teaching. Let us review them in short. According to Gardner (1983), all human beings pos¬sess different intelligences in varying degrees and each individual manifests varying levels of these different in¬telligences and thus each person has a unique "cognitive profile"; that is, a) all humans possess different intelli¬gences in varying amounts; b) each individual has a differ¬ent composition of intelligences; c) different intelligences are located in different areas of the brain; d) by applying MI we can improve education; and e) these intelligences may define human species. The idea is that rather than thinking of intelligence as a unitary and general ability that can be measured and reduced to an intelligent quotient (IQ), we should acknowledge a range of intelligences. Among MI Gardner names: linguistic/verbal, logical/mathematical, spatial/visual, musical, bodily-kinesthetic, inter and intrapersonal, as well as naturalistic intelligence. Later he and his followers added some more intelligences to the main list.

There is certain disagreement on whether concentrating on students' dominant MI, learning style and other related issues has any noticeable positive impact on the quality of learning. For instance, Grasha (1984, 51) asked 'How long can people tolerate environments that match their preferred learning style before they become bored?' So his aim would be 'to teach people new learning styles or at least let them sample unfamiliar ones'. Taking into consideration these doubts and opinions (which I myself share), in the process of experiment I did not ask students in the experimental groups to use only one way of learning (comfortable for their dominant intelligence type), but to use it more often than other ways of learning.

White (2004) totally questions Gardner's theory. He quotes Gardner (1983:62): Frames of Mind states that there is no 'algorithm for the selection of intelligence, such that any trained researcher could determine whether candidate intelligence met the appropriate criteria' (p.63). Rather, Gardner goes on: it must be admitted that the selection (or rejection) of a candidate's intelligence is reminiscent more of an artistic judgment than of a scientific assessment. (p.63). Thus White concludes that the identification of intelligences appears to be a subjective matter.

Some other authors do not doubt Gardner's theory but are not sure that it can be so simplistically applied in schools. For example, in DEMOS (2004:12) it is stated that "in misguided hands, learning styles could become not a means of personalizing learning, but a new version of general intelligence that slots learners into preconceived categories and puts unwarranted ceilings on their intellectual development and achievement. Gardner (2003) himself is against such an application when development of MI became the teaching goal. "Multiple intelligences" should not in and of itself be an educational goal. Educational goals need to reflect one's own values, and these can never come simply or directly from a scientific theory. Once one reflects on one's educational values and states one's educational goals, however, then the putative existence of our multiple intelligences can prove very helpful. And, in particular, if one's educational goals encompass disciplinary understanding, then it is possible to mobilize our several intelligences to help achieve that lofty goal.

My research is not psychological and I am not testing

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Gardner's MI theory. Neither am I testing all possible pedagogical applications of MI. The goal of this research was just to find out what kind of impact has taking into consideration students' MI in the process of teaching reading in EFL as well as to check our hypothesis – whether grouping students according to their dominant intelligence type and organizing for them the respective type of activities mainly can really have a positive impact on teaching reading. This is why our research is an experimental one (a quantitative study, as skill measurements are applied).

The aims of the experiment included:

- raising the motivation of students in the experimental group by offering them activities which are in congruence with their intelligence type

- thus, making the process of reading easier and more pleasant

- to provide the individual approach to each student

- to let students use those learning strategies which are more available for them

- finally, improving their reading skills

**Selection of the Students**

The students in this experiment were in preparatory school of English at Ishik University (Iraq) where I have been working for five years. Those students had learned English for more than three years in high school. Since the education language at Ishik University is English, all students should have an adequate level of the English language. To measure their level of English, a proficiency exam which is provided by Oxford University Press is held. The students who succeed in the exam start directly to study at their departments. The passing grade in our prep program is 70 in all four skills (reading, writing, listening, and speaking in English). The students who are not successful in this proficiency examination have to study English at the prep school the goal of which is to help students reach an adequate level of English for attending lectures at their departments. Students are given a placement test examination in which again all four skills are included but easier than the proficiency examination is offered to define their level of English skills. According to the placement test results the students are grouped into classes. During this experiment, the average class size was 21. Two intermediate and two pre- intermediate classes were chosen for the study, as we needed to compare the results in two same-level classes. The study was carried out over a six month period.

The participants were placed randomly to the control and experimental group from the population because it was supposed to provide a maximum assurance that a systematic bias did not exist in the selection process and that the selected participants were representative of the population. Representative means that the sample participants have characteristics similar to that of the population and can, therefore, stand for the population. Randomly selecting the samples of the participants from the population and then randomly assigning the participants to the various groups was thought to be an adequate arrangement for the experimental study. Randomly assigning the research participants to the various comparison groups meant that each research participant had an equal probability of being assigned to each group. No one had more/less chance to be assigned to any comparison groups. It was taken into account that every individual could bring his/her certain variables. When participants were randomly selected, the variables they brought with them were also randomly assigned. Random assignment, therefore, produced control by virtue of the fact that the variables to be controlled were distributed in approximately the same manner in all comparison groups at the beginning of the experiment. The comparison groups were similar on the extraneous variables.

To minimize the Hawthorne effect, which occurs when the participants are pleased at being included in a study and unconsciously deceive themselves and researcher to ensure its success, students were not told the focus of the specific groups. Not telling them about what exactly is being studied avoids the possibility that participants would make an extra effort to help the researcher to achieve the aim of the study.

The students in this study were English preparatory school students whose majors were different. Totally there were 95 subjects in this study.

**Defining Students' Dominant Intelligences**

Since Howard Gardner (1983) proposed the theory of MI as an alternative to the unitary concept of general intelligence in his book Frames of Mind, educators around the world have been searching for an acceptable method of intelligence measurement. Although MI theory has been welcome by many educators, its practical application has been limited by the lack of a practical, reliable and valid method of measurement. Gardner's definition of intelligence and his complex descriptions of the intelligences made it difficult to create a psychometrically sound method of assessment and also, he advocated that assessments of intelligences should be conducted with the materials of each intelligence (i.e., musical intelligence should be assed with the help of musical instruments). It is not always easy and feasible for educators to use these complex tools to assess students' strengths and weaknesses. Besides, measured in different ways, the assessments were difficult to be compared and to say which intelligence is dominant for each student. That is why questionnaires were introduced which permitted – through the application of certain points assigned to each answer – to find out the student's dominant type of intelligence.

In my research I used two different types of paper-pencil based MI survey to find out the students' dominant intelligences. One survey -MI Inventory- was copyrighted by Walter McKenzie and gained from the internet web site: //surfaquarium.com/MI/inventory.htm. The other survey was MI Checklist provided by Thomas Armstrong, the writer of many books dealing with MI Theory. I contacted Armstrong via mail and asked the writer whether he could provide an MI inventory test in his research. Armstrong sent an MI Checklist to use it in the research. Also, Armstrong sent some articles and a master copy of his book entitled Multiple Intelligence of Reading and Writing. The two surveys mentioned above are used in The New School which is a very famous school in the city of Louis, Missouri in the USA, where teaching is based on MI.

Walter McKenzie's MI Inventory test was administered first study among the student's experimental groups. In the Inventory, there were nine sections and each section referred to one intelligence. In each section there were ten items which describe the students' attitudes and personality. In each section the participants chose the items that describe them best. At the end of the survey, to find the total score and their dominant intelligence, the points received for chosen items were multiplied by ten in each section. For example, in the first section, one student chose 6 items that describe him best, his score in the first section was: 6 x 10=60. Later a new questionnaire-MI Checklist-provided by Thomas Armstrong mentioned above was filled out by the participants to retest the reliability of the MI distribution in the McKenzie's questionnaire.

As the students' level of English Language was low, or not adequate for understanding the survey questions in English, this survey was translated into Turkish, Arabic, and Kurdish language, according to the student's native language. In order to be sure of the quality of translation, Kurdish and English versions of this survey were piloted with the students of the Dentistry faculty whose English levels were at the advanced mode (once administered in English and once – in their native language). The results were compared and found equivalent.

In addition to those two surveys I also carried out some different techniques to assess the learners' MI. Those techniques were observations, interviewing other teachers, and interviewing parents.

Observations: as Armstrong (2009) suggested, one good way to identify students' dominant intelligences is to observe how they misbehave in class. According to him, they show their dominant intelligences by misbehaving in the class. The strongly linguistic students would be talking out of turn, students with spatial intelligence would be doodling and daydreaming, the interpersonally inclined student would be socializing and interacting, the bodily kinesthetic students would be fidgeting, the naturalistically engaged students might bring an animal to class without any permission, musical students might be singing and intrapersonal learners would be sitting alone and might be thinking inside. All those misbehaviors of the intelligences in the classroom provide a positive feedback of the surveys.

Another good indicator of students' proclivities is how they spend their free time in school. In other words, what do they do when nobody tells them what to do? I sometimes had "choice time" in the class when students could choose from a number of activities. Highly linguistic students read books, interpersonal students built group games and gossiped, spatial students drew pictures, bodily kinesthetic students created hands-on activities. Observing the learners in those student-initiated activities provided the information about how they learn most effectively. I also kept a diary for recording these observations.

Talk with other teachers: since the teaching process at our university is skill-based, more than one teacher was teaching in each class. For instance, in the pre-intermediate experimental group four different teachers were teaching different skills. I asked the teachers to observe the students according to MI Checklist and I periodically met those teachers to consider their observations. By doing so I aimed at measuring the participants' intelligence types with different and many tools to get the most adequate result.

Talk with parents: it is believed that parents are the true experts on their child's intelligence type. They had the opportunity to see their children learning in a broad spectrum of circumstances encompassing all eight intelligences. The researcher visited parents of the students in experimental class to introduce the MI theory and provided an MI Checklist to observe and document their children's strengths at home. Although the subjects were in their early adulthood, parents provided important and information about their children's intelligence types.

The subjects' overall MI distributions according to McKenzie's test in the **intermediate experimental group** were analyzed by SPSS 19.0. The analytical results of SPSS 19.0 shows the Cronbach's Alpha is 0.748, and p is <0.0001. Therefore the results of the survey were acceptable.

The total participants of the intermediate level of English Language experimental group was 25, and 12 of them were female, 13 of them– male. As Gardner states (1983), individuals can have more than one dominant intelligence; generally females showed the intrapersonal intelligences dominantly in the first or second rank among their MI. Male participants also showed their dominant strength as intrapersonal intelligence but not as much as the female subjects do. Below the table gives the general statistical information about the frequencies of distribution of the MI in the intermediate experimental group.

| | | NATURALISTIC | MUSICAL | LOGICAL | PERSONAL | KINESTHETIC | VERBAL | INTRA PERSONAL | VISUAL |
|---|---|---|---|---|---|---|---|---|---|
| N | Valid | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| | Missing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | | 63.2 | 60.8 | 69.2 | 57.2 | 61.6 | 58.4 | 74.8 | 62 |
| Mode | | 60 | 60 | 60 | 60 | 50 | 60 | 80 | 70 |
| Std. Deviation | | 14.059 | 19.131 | 15.253 | 17.445 | 22.487 | 19.72 | 20.64 | 18.93 |
| Minimum | | 40 | 30 | 50 | 30 | 10 | 10 | 10 | 20 |
| Maximum | | 90 | 100 | 100 | 90 | 100 | 90 | 100 | 90 |
| Percentiles | 25 | 55 | 40 | 60 | 40 | 50 | 45 | 65 | 50 |
| | 50 | 60 | 60 | 70 | 60 | 60 | 60 | 80 | 60 |
| | 75 | 70 | 75 | 80 | 70 | 80 | 70 | 90 | 70 |

**Table 1.** *MI survey statistics for intermediate experimental group (McKenzie's test)*

All 25 participants responded all the items in the questionnaire in different ratios. According to this result among the 25 participants, intrapersonal intelligence (m=74.8) and logical mathematical intelligence (m=63.2) were the most dominant traits. The less dominant intelligences were interpersonal (m=57.2) and verbal (58.4) intelligences.

2 students scored all the 10 items relevant to the intrapersonal intelligence, 5 students marked 9 items and interestingly 11(44%) students marked 7 items of the intrapersonal intelligence in this questionnaire. And the other students marked 1 item which illustrates the intrapersonal intelligence. By the effect of the culture, generally all the students at the university seemed that they were intrapersonal both in their school lives and in their social lives. Many of them, also including the male students, were very shy. It was also observed that many of the participants liked working alone or with just one friend who again liked to work alone.

Later the MI Check List prepared by Thomas Armstrong (1999) was conducted to the experimental groups. The results were analyzed by the SPSS 19.0 and the results are shown in table 2.In tables 2 and 4, Intelligence (m) indicates the McKenzie's MI Survey results, while without the index (m) – the Armstrong MI Checklist results. There was a 100-point scale according to which the answers were graded. Correspondingly, the minimum, maximum, and mean points show what was the minimum, maximum or average point received by the students in the group (mini- mum, maximum – individually, and average – the result of the whole group).

|  | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| NATURALISTIC | 25 | 40 | 90 | 62.40 | 12.342 |
| NATURALISTICm | 25 | 40 | 90 | 63.20 | 14.059 |
| MUSICAL | 25 | 30 | 100 | 60.80 | 18.009 |
| MUSICALm | 25 | 30 | 100 | 60.80 | 19.131 |
| LOGICAL | 25 | 50 | 90 | 69.60 | 13.988 |
| LOGICALm | 25 | 50 | 100 | 69.20 | 15.253 |
| INTERPERSONAL | 25 | 30 | 90 | 57.20 | 17.682 |
| INTERPERSONALm | 25 | 30 | 90 | 57.20 | 17.445 |
| KINESTHETIC | 25 | 10 | 100 | 60.80 | 21.393 |
| KINESTHETICm | 25 | 10 | 100 | 61.60 | 22.487 |
| VERBAL | 25 | 10 | 90 | 58.80 | 19.858 |
| VERBALm | 25 | 10 | 90 | 58.40 | 19.723 |
| INTRAPERSONAL | 25 | 10 | 90 | 73.20 | 20.559 |
| INTRAPERSONALm | 25 | 10 | 100 | 74.80 | 20.640 |
| VISUAL | 25 | 20 | 90 | 62.00 | 18.930 |
| VISUALm | 25 | 20 | 90 | 62.00 | 18.930 |
| Valid N (listwise) | 25 |  |  |  |  |

*Table 2. The comparison of the descriptive statistics of McKenzie's MI survey and Armstrong's MI checklist for intermediate experimental group*

We can see that the results obtained by the two methods are very similar to each other.

The same procedure was carried out to the pre-intermediate level experimental group at the same time. Although their levels were different, the same activities were offered to those experimental groups. Analyses of the survey were like below:

The subjects' overall MI distributions in the pre-intermediate experimental group were analyzed by SPSS 19.0. The analytical results of SPSS 19.0 shows the Cronbach's Alpha is .807, and p is <0.0001. Consequently the results of the survey acceptable.

There were 23 participants in this experimental group between the ages of 19-21, and 11 (47.8%) of the students were male and 12 (52.2%) of them were females. As it is seen in the table below, among the 23 participants, intrapersonal intelligence (m=76.52) and logical mathematical (m=73.91) were the most two dominant intelligences. Naturalistic (54.35) and musical intelligences (56.09) were the least dominant. In the pre-intermediate experimental group, two respondents marked all the 10 items which refer to the intrapersonal intelligence; those 3 students marked 9 items, 7 students marked 8 items, and 10 students marked 7 items. It is clear that every individual has the dominant intrapersonal intelligence (See Appendix E). It is not surprising because the Middle East societies are culturally not very sociable and they are introverted learners.

| | | NATURAL ASTIC | MUSICAL | LOGICAL | INTERPER SONAL | KINESTHE TIC | VERBAL | INTRAPER SONAL | VISUAL |
|---|---|---|---|---|---|---|---|---|---|
| N | Valid | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 |
| | Missing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | | 54.35 | 56.09 | 73.91 | 60.87 | 60.43 | 55.65 | 76.52 | 57.39 |
| Mode | | 30 | 60 | 90 | 70 | 60 | 70 | 70 | 70[a] |
| Std. Deviation | | 23.321 | 13.05 | 16.986 | 17.82 | 19.881 | 15.32 | 14.016 | 21.578 |
| Minimum | | 20 | 30 | 40 | 20 | 20 | 30 | 30 | 20 |
| Maximum | | 100 | 80 | 100 | 90 | 100 | 80 | 100 | 90 |
| Percentiles | 25 | 30 | 50 | 60 | 50 | 50 | 40 | 70 | 40 |
| | 50 | 50 | 60 | 70 | 70 | 60 | 60 | 80 | 60 |
| | 75 | 70 | 60 | 90 | 70 | 70 | 70 | 80 | 80 |

*Table 3. MI survey statistics for pre-intermediate experimental group (McKenzie's test)*

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| **NATURALISTIC** | **23** | **20** | **100** | **54.35** | **23.321** |
| **NATURALISTIC(m)** | **23** | **20** | **100** | **54.3478** | **23.32110** |
| MUSICAL | 23 | 30 | 80 | 56.09 | 13.052 |
| MUSICAL(m) | 23 | 30 | 80 | 56.0870 | 13.05204 |
| **LOGICAL** | **23** | **40** | **100** | **73.91** | **16.164** |
| **LOGICAL(m)** | **23** | **40** | **100** | **73.9130** | **16.98639** |
| INTERPERSONAL | 23 | 20 | 90 | 61.74 | 18.254 |
| INTERPERSONAL(m) | 23 | 20 | 90 | 60.8696 | 17.81548 |
| **KINESTHETIC** | **23** | **20** | **90** | **60.87** | **19.520** |
| **KINESTHETIC(m)** | **23** | **20** | **100** | **60.4348** | **19.88107** |
| VERBAL | 23 | 30 | 80 | 55.22 | 15.336 |
| VERBAL(m) | 23 | 30 | 80 | 55.6522 | 15.32262 |
| **INTRAPERSONAL** | **23** | **30** | **100** | **74.78** | **15.336** |
| **INTRAPERSONAL(m)** | **23** | **30** | **100** | **76.5217** | **14.01580** |
| VISUAL | 23 | 20 | 90 | 57.39 | 21.578 |
| VISUAL(m) | 23 | 20 | 90 | 57.3913 | 21.57806 |
| Valid N (list wise) | 23 | | | | |

*Table 4. The omparison of the descriptive statistics of McKenzie's MI survey and Armstrong's MI Checklist for pre-intermediate experimental group*

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The frequency of the means and standard deviation for all the intelligences in the two surveys were nearly the same and the results of those two surveys were practically coinciding. Observation by the teacher, his discussions with colleagues and parents supported the results of questionnaires. That is why there was no need to move any students to another group. As a result, the MI Surveys can be viewed as reliable both in the intermediate and pre intermediate experimental groups.

In this way the dominant intelligence type was defined for each student of experimental groups, to group them accordingly in the process of choosing and fulfilling the activities in each sub-group.

**Method of the Study**

The research questions are specifically concerned with the students' reading comprehension performance and the contribution of the different teaching techniques -based on MI Theory. This leads itself to initially a quantitative methodology. This approach and the research hypothesis answer the research questions. The approach was shown in the diagram below.

Intermediate and pre-intermediate control group

O1----------------X1--------------O2

Intermediate and pre-intermediate experimental group

O1-----------------X2------------O2
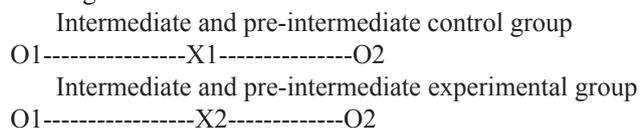
As seen above, O1 is pretest data, O2 is posttest data, and X1 and X2 are two different teaching programs. As much as possible in the circumstances all other variables (students' age, textbook used, time dedicated to reading classes, task types and difficulty level in testing, etc.)were controlled. All four groups were taught by the researcher. A pretest and posttest were used to monitor students' development with reading comprehension skills. There were differences in the way each group developed their reading skills. The experimental classes were given projects, assignments and homework corresponding to their dominant intelligence. This program focused on seeking how the Multiple-Intelligence-focused teaching program influenced the students' attitudes, motivation and improvement of their reading comprehension skills. Different teaching techniques and methods were adopted based on their different intelligences. In contrast, for the control group, the traditional method (without any emphasis on MI dominant type) was used. The students of the control group just continued to precede ordinary studying methods: reading the texts, trying to find out the unknown vocabulary and doing the comprehension questions. The same tasks were fulfilled by all students, notwithstanding their dominant intelligence type. Table 5.shows the difference between the activities used in control and experimental classes.

| | Treatment | Grouping | Assessment |
|---|---|---|---|
| **Experimental groups** | Cooperative Learning | Grouping by the dominant type of intelligence | Achievement examinations every two months and final examination. Pretest and posttest |
| **Control groups** | Traditional method, involving some individual, pair, group and whole-class work | No grouping according to dominant type of intelligence | Achievement examinations every two months and Final examination. Pretest and posttest |

*Table 5. The difference between the activities used in control and experimental classes*

**Experimental design**

The experiment (with two control and two experimental groups with a total of 95 students) was held during the academic year 2011/2012 (16 weeks), with the **control groups** taught without taking into consideration the students' dominant intelligence type, while in the **experimental groups** students were given questionnaires to find out their dominant intelligence type, then grouped according to these types and then treated accordingly in the process of teaching reading. Otherwise teaching in both types of

groups was identical – in terms of the number of hours taught (93 hours over 23 weeks), the same textbooks, and the same methods of material presentation and assessment. This was necessary to enable us to compare their results and make the data valid. The level of students' reading skills was measured via testing their reading comprehension level. Then the results of both groups were compared and corresponding conclusions were made.

"READ AHEAD 1" published by Longman Press was taught in the intermediate level classrooms, both control and experimental, and as a self-study book "MORE

to READ"(a compilation of reading texts prepared by the Foreign Language School of Middle East Technical University in Ankara/Turkey) was used.

In the pre-intermediate level groups, both control and experimental, "PASSWORD 1" published by Longman Press was used. A self-study book "READER at WORK" (which is a compilation of reading texts prepared by Foreign Language School of Middle East Technical University in Ankara/Turkey) was used. Those two books involved selected reading texts many of which were very interesting to the participants.

One of the two experimental groups was at the intermediate level of English; the other - at pre- intermediate level of English. Correspondingly, the two control groups were of intermediate and pre-intermediate skills level. This was done to increase the number of participants and to increase the reliability of the study. All the groups were taught reading by the researcher. Therefore, in the intermediate level classes both the experimental and the control group used the same course materials.

After having identified the dominant intelligences of the participants action plan was created. During the experiment the following procedure was followed to reach the result of the experiment.

## Questionnaire

Reading is essential in language learning and also it is important to improve the understanding of the nature and society. The ability to read in English is important for improvement of English language and written language. The first and foremost job of reading teachers is to teach participants to be fluent and strategic readers. However, there was a doubt whether the targeted students were aware of the importance of the reading or not. In order to see the participants' attitudes towards reading in English, a survey was administrated in the late November, and the same questionnaire was conducted as a post questionnaire at the end of the experiment to monitor the differences in their attitudes.

Questions for all students encompassed a number of ideas about their attitudes toward teaching materials, curriculum, self-study, types of classroom activities in the Learning Centers and motivation to improve reading skills. Besides, questions for the experimental groups using MI theory looked at how they saw the contribution of MI to their reading skills.

The questionnaire was used to measure the experimental subjects' feedback about the MI activities in their relation to their reading skill development and esteem. Students were asked to reflect as to whether the MI activities benefitted their reading skills and vocabulary. Another purpose of the questionnaire was to investigate the motivation toward reading skills. A Likert-type questionnaire was designed and used. The questionnaire was tried out previously with a few students from a different group to ensure that the questions were clear and unambiguous.

## The classroom observations

Classroom observations served as a useful tool for looking into the situations in class as the study was conducted. Generally, the observations were made in each class not only during the classroom time, but also in the students' free time activities out of the classroom. The researcher kept a diary record to compare the students' responses to the questionnaires and their interests in the process of teaching/learning reading. The main purpose of the observation was to get an understanding of how the theory of MI was applied, the time students devoted to different activities and whether those activities coincided with their dominant intelligences.

## Interview

After a post questionnaire about the students' attitudes towards reading skills based on MI activities for experimental groups and the traditional teaching activities for the control groups, an interview, in which qualitative data was collected, was conducted to all experiment participants. This interview allowed the researcher to speak directly to the students and have them explain their answers on the questionnaire and their reflection on the MI teaching styles and traditional teaching methods in reading.

## Arranging the Classroom environment and MI Learning Centers

One of the most important parts of the experiment was arranging the classroom environment to accommodate the needs of different kinds of learners. To gain the best result in this experiment, I fundamentally restructured the classroom "ecology" of the experiment groups based on the needs of the MI as indicated below. For instance, the classroom arrangement for Linguistic Intelligence Learners was organized as follows. Attention was paid to the spoken words used by the teacher not to be too complex or too simple for the students' level of understanding. Some samples of written language were represented on the walls through posters, quotations, and slogans. There were newspaper headings, novel names, posters, and historical documents on the walls but they were not too many and messy. There were enough documents on the walls and every week old documents were replaced with new ones. The students were empowered to develop their own linguistic materials and those materials such as posters, interesting facts about anything, articles, etc. were displayed on the class bulletin board every week.

The classroom environment for the Logical Math-

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ematical Learners, on the other hand, was quite different. The visual aids dealt with tables, schemes and formulas. An attempt was made to give opportunities to the students with dominant logical intelligence to work on long-term projects without being interrupted to carry out their activities before moving to a new topic. The class sessions sequenced to make optimum use of students' attention spans. For example, in the first lesson they were focused on academic work with their peers and in the second session time was devoted for more open- ended activities. Tasks dealing with proving one's opinion prevailed.

After having decided on the students' dominant intelligence types (see table 6) and holding the reading pretest, I created for the experimental groups eight different learning centers (sections in the room)where each one to represented one type of intelligence in the classroom. This kind of classroom arrangement still permitted the students to take part in all kind of activities, but created a special "climate" for holding the activities according to their type of intelligence. I hoped that restructuring the classroom to create '' intelligence-friendly'' activity centers would greatly expand students' reading comprehension as well as develop the parameters for student exploration in each centre.

| Dominant Intelligence type/ group | Pre-intermediate level experimental group | Intermediate level experimental group |
|---|---|---|
| Logical | 8 students | 7 students |
| Kinesthetic | 5 students | 5 students |
| Intrapersonal | 7 students | 10 students |
| Visual | 3 students | 3 students |

**Table 6.** *Distribution of dominant intelligence types among students of experimenatl groups*

The students in the groups were aware of the results of the survey and, therefore, knew each other's dominant intelligence. According to the results of the survey the teacher created four groups but since every learner has all the intelligences to some extent, it was believed that there should be eight learning centers which each of them representing different intelligences. Consequently there were eight learning centers inside the classroom. Each centre had a name such as Logic Smart (Logical Mathematical Intelligence), Body Smart (Bodily Kinesthetic Intelligence), The Independents (Intrapersonal Intelligence), The Reporters (Verbal Linguistic Intelligence), Easygoing (Interpersonal Intelligence), Music Smart (Musical Intelligence), Visual Smart (Visual-spatial intelligence) and Naturalists (Natural Intelligence). In those learning centers different learning activities and different learning processes which corresponded to their intelligence type took place during the study.

At the beginning of the experiment the groups (Logical, Kinesthetic, Intrapersonal and Visual) started by staying at their relevant intelligence learning centre. Each group stayed in their centers for one week and continued their learning with centre-related activities. The following weeks they moved to another centre with different learning activities. As a result, the teacher rotated the groups centre by centre in a clockwise manner until every group gained some experience in all eight learning centers in developing reading comprehension (students were permitted to skip some centers if they felt they wouldn't benefit at all). Later students stayed mainly in the centre adequate to their dominant intelligence.

### Pretests, achievement examinations and posttests

At the beginning of the study a proficiency pretest was administrated to all groups to see the level of their reading skills. After finishing the experiment, the post-test (also a proficiency one) was administrated. Their outcomes were compared.

But even more importantly, to see the students' progress in reading skills, three achievement tests were fulfilled by all participants to see the progress of the study. Those achievement examinations yielded significant information on the effectiveness of the program in the development of the students' learning. The quantitative analysis that was performed on this data used the statistical program, SPSS19.0.

### Experiment Results, Their Analysis and Discussion

During the experiment held in 2011/2012 academic year all the students involved in the study were administrated one pre-test, three achievement exanimations and a post-test to illustrate the changes in students' reading skills. The results of the examinations enabled us to see how MI teaching activities affected the students' progress in reading courses. From an inspection of all those examinations of the reading courses, there seemed to be significant differences arising. Both the experiment and control groups had to take the same examinations which identified the differences between the groups. The results were an important measure of how MI teaching activities affected the students' reading proficiency. SPSS 19.0 was used to analyze the results. It is shown in Table 7.

|  | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| **PRETEST (experimental)** | 23 | 42 | 84 | 68.48 | 14.145 |
| PRETEST (control) | 25 | 32 | 77 | 58.72 | 15.238 |
| **ACHIEVEMENT1 (experimental)** | 23 | 34 | 77 | 60.87 | 13.616 |
| ACHIEVEMENT1 (control) | 25 | 20 | 96 | 58.88 | 27.240 |
| **ACHIEVEMENT2 (experimental)** | 23 | 34 | 88 | 67.61 | 12.862 |
| ACHIEVEMENT2 (control) | 25 | 24 | 84 | 59.88 | 17.548 |
| **ACHIEVEMENT3 (experimental)** | 23 | 40 | 100 | 76.96 | 19.641 |
| ACHIEVEMENT3 (control) | 25 | 29 | 72 | 57.36 | 11.489 |
| **POSTTEST (experimental)** | 23 | 52 | 100 | 88.96 | 16.772 |
| POSTTEST (control) | 25 | 38 | 94 | 74.80 | 15.168 |

*Table 7. Descriptive statistics for the pre-test, achievement examinations and post-test of the control group and experimental groups at pre-intermediate level of English*

It is worth noting that at the beginning of the study the English language level of the two classes were nearly the same according to the placement test. As it is seen in the table, the experimental group showed a mean of 68.48 in the proficiency pre-test and 88.96 in the post-test (an increase of 20.48 points), while the control group showed a mean of 58.72 in pre-test and 74.80 in post-test (a less increase of 16.08).

Besides, though in the first achievement examination the mean of the experimental group was lower than the pre-test examination, probably, because until the first examination the students in the experimental group were trying to get used to the MI teaching activities, finally they received higher grades, besides, the grades were stably growing (60.87 → 67.61 → 76.96 ). In the control group the situation wasn't as good (58.88 → 59.88 → 57.36): the level of the skills didn't really increase, but just fluctuated. Analogous results were received in intermediate level experimental and control groups (see table 8).

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| **PRETEST (experimental)** | 25 | 39 | 87 | 66.44 | 11.343 |
| PRETEST (control) | 22 | 40 | 72 | 61.09 | 8.112 |
| **ACHIEVEMENT1 (experimental)** | 25 | 36 | 68 | 52.64 | 6.909 |
| ACHIEVEMENT1 (control) | 22 | 30 | 80 | 54.09 | 13.331 |
| **ACHIEVEMENT2 (experimental)** | 25 | 40 | 94 | 70.80 | 14.180 |
| ACHIEVEMENT2 (control) | 22 | 30 | 92 | 64.27 | 17.417 |
| **ACHIEVEMENT3 (experimental)** | 25 | 36 | 100 | 86.76 | 15.820 |
| ACHIEVEMENT3 (control) | 22 | 30 | 90 | 64.32 | 14.824 |
| **POSTTEST (experimental)** | 25 | 38 | 94 | 86.80 | 15.168 |
| POSTTEST (control) | 22 | 34 | 100 | 72.55 | 16.509 |

*Table 8. Descriptive statistics for the pre-test and post-test achievement examinations of the control group and experiment group in the intermediate level of English*

The comparison of proficiency pre-test and post-test in experimental group shows that the skills level in the experimental group (66.44 → 86.80 – a growth of 20.36 points) increased to a greater degree than in the control group (61.09 → 72.55 – a growth of 11.46 points).

As for achievement tests results, the experimental group was finally more successful (52.64 → 70.80 → 86.76) than the control group (54.09 → 64.27 → 64.32).

Looking specifically at the program and data on students' activities suggested some reasons why their reading skills improved. Firstly, although the curriculum was designed the same with the control group, in the experimental group there were many different activities on the same curriculum both inside and outside the classroom based on the MI theory. While the control groups were just taught in a traditional way, the experimental groups were given many different kinds of activities which were all relevant to their intelligences in the process of the study. With the help of those activities, more than half of the experimental groups' students' reading level was significantly developed. In addition, all the students in the experimental groups could go to the Learning Centers for self-study and cooperative study to complete their assignments and to do the activities as they wished. This did not mean extra time for the stu-dents of the experimental groups compared to the students of the control groups, as the students from the latter groups also could do extra studies at school on in class (thus, the controlled time variable did not change in any group). But it could have contributed to better results of experimen-tal groups (it created a positive environment not only for classwork, but also for homework).

This provided students' self-esteem and enthusiasm towards reading. Choosing to do activities which were appropriate to their intelligence type made the experimental groups' students motivated more than those from the control groups. Motivation and attitudes were further transformed to the learning action. As a result, with the additional MI activities, students' reading abilities obviously improved more than that of the control groups' students.

**The survey that was administrated to the whole participants to see their attitudes toward reading in English and its results**

The first and foremost job of reading teachers is to teach participants to be fluent and strategic readers. However, there was a certain doubt whether the targeted students were aware of the importance of the reading or not.

The students in the experiment were given a survey not from the very beginning of semester and the experiment, but in late November. Since there were different ethnicities, the survey was translated to Kurdish, Turkish, and Arabic.

The same survey was administrated to all participants after the study to see the changes in their attitudes toward reading. So the same survey was conducted as pre-survey and post-survey. The findings were analyzed by SPSS 19.0. The results of the intermediate level control group were as shown in table 3.9.

| INTERMEDIATE CONTROL GROUP | STRONLY AGREE | | AGREE | | UNDICIDED | | DISAGREE | | STRONGLY DISAGREE | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Pre survey | Post survey | Pre survey | Post survey | Pre survey | Post survey | Pre survey | Post survey | Pre survey | Post survey |
| I think I am a good reader. | 14% | 32% | 18% | 27% | 23% | 18% | 27% | 18% | 8% | 5% |
| I can tell that my teachers like to listen to me read. | 23% | 32% | 18% | 23% | 23% | 23% | 18% | 9% | 18% | 14% |
| My teachers think that my reading is fine | 23% | 41% | 27% | 36% | 14% | 9% | 23% | 5% | 14% | 9% |
| I like to read aloud | 14% | 32% | 18% | 32% | 14% | 23% | 32% | 14% | 23% | 0% |
| When I read, I can figure out words better than others | 23% | 32% | 27% | 32% | 27% | 23% | 14% | 14% | 9% | 0% |
| When I read, I don't have to try as hard as I used to | 23% | 32% | 32% | 23% | 23% | 14% | 14% | 18% | 9% | 14% |
| I seem to know more words than other students when I read | 27% | 45% | 27% | 36% | 23% | 9% | 18% | 9% | 5% | 0% |
| I understand what I read | 23% | 41% | 36% | 36% | 14% | 14% | 14% | 9% | 14% | 0% |
| Reading makes me feel happy inside | 23% | 36% | 14% | 27% | 27% | 23% | 23% | 5% | 14% | 9% |
| My teachers think I am a good reader | 32% | 36% | 18% | 41% | 32% | 18% | 18% | 5% | 0% | 0% |
| Reading is easier to me than it used to be | 27% | 45% | 14% | 36% | 32% | 9% | 18% | 5% | 9% | 5% |
| I read faster than I could before | 18% | 50% | 23% | 41% | 32% | 9% | 23% | 0% | 5% | 0% |

*Table 9. Intermediate level control group students' attitudes toward reading*

In the pre-survey of the intermediate level control group the students were not very competent readers. 35 % of the students thought that they were good at reading and 41%of the participants agreed that their teachers think those students were good readers. Less than 40%of the participants answered that they liked reading - that is a low percentage. When students compared themselves to their classmates, half of the participants had the confidence to view themselves as adequate readers who knew vocabulary as well as their peers. 59% of the students believed that they could understand well what they read. In general this pre survey of the intermediate control group reveals that students' attitudes toward reading were not very positive. On the other hand, at the end of the academic year all the students had some changes in their attitudes toward reading such as; while in the pre survey 32% of the students thought that they were good readers, in the post survey this ratio increased to 59%. Students believed that their reading pace increased: in the pre survey it was 50%. Also their assumptions about what the teachers thought about the students had changed by a very high ratio. In the pre survey 50 % of the students thought that the teachers considered that they were good readers but in the post survey this idea shifted to 72%. When we considered the pre- and post-survey results of the participants it is easy to see that there is a positive change in students' assumptions toward reading.

The results of intermediate level experimental group are shown in Table 10.

| INTERMEDIATE EXPERIMENT GROUP | STRONLY AGREE | | AGREE | | UNDICIDED | | DISAGREE | | STRONGLY DISAGREE | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Pre survey | Post survey | Pre survey | Post survey | Pre survey | Post survey | Pre survey | Post survey | Percentage | Post survey |
| I think I am a good reader. | 24% | 44% | 16% | 28% | 20% | 16% | 24% | 12% | 16% | 0% |
| I can tell that my teachers like to listen to me read. | 16% | 52% | 20% | 28% | 28% | 16% | 16% | 4% | 20% | 0% |
| My teachers think that my reading is fine | 24% | 56% | 24% | 24% | 16% | 8% | 24% | 8% | 12% | 4% |
| I like to read aloud | 12% | 40% | 16% | 32% | 16% | 16% | 28% | 12% | 28% | 0% |
| When I read, I can figure out words better than others | 20% | 64% | 24% | 24% | 28% | 12% | 12% | 0% | 16% | 0% |
| When I read, I don't have to try as hard as I used to | 20% | 48% | 28% | 36% | 20% | 16% | 16% | 0% | 16% | 0% |
| I seem to know more words than other students when I read | 24% | 40% | 24% | 44% | 20% | 16% | 20% | 0% | 12% | 0% |
| I understand what I read | 24% | 68% | 32% | 32% | 12% | 0% | 16% | 0% | 16% | 0% |
| Reading makes me feel happy inside | 20% | 52% | 16% | 32% | 24% | 8% | 20% | 8% | 20% | 0% |
| My teachers think I am a good reader | 28% | 48% | 20% | 44% | 28% | 8% | 24% | 0% | 0% | 0% |
| Reading is easier to me than it used to be | 24% | 52% | 16% | 36% | 28% | 8% | 16% | 4% | 16% | 0% |
| I read faster than I could before | 16% | 44% | 20% | 44% | 32% | 8% | 20% | 4% | 12% | 0% |

*Table 10. Intermediate level control group students' attitudes toward reading*

Upon analyzing the frequency distribution of both control group and experimental groups, when students compared themselves to each other, it is clear that the experimental group showed a more significant positive change in their assumptions in the post survey. In the post survey of the control group, while 59% of the students pointed out that they were good readers, the experimental group students' ratio was 72% in the same assumption. 81% the students in the control group thought that reading was easier now, but in the experimental group overwhelmingly, 92% of the participants believed that it was easier to read and understand. All of the students in the experimental group agreed that they could understand whatever they read in their level, while in the control group there have been some students who had some trouble in understanding the texts. According to the survey, the experimental group students had more confidence in knowing more words than the students in the control group. A higher percentage of students in the experimental group liked reading at the end of the study. On the other hand, in the control group half of the students felt unsure if they liked reading or not. Students in the experimental group were also more confident than in the control group.. By analyzing the results of this survey, it is very clear that the students in the experimental group showed significant changes in their assumptions towards reading as compared to the control group students. Although there was a positive change in the control group, the experimental group students improved their understanding more significantly, besides, their self-esteem in reading grew much more than in the control group. Consequently, applying MI teaching activities in the reading classes made a significantly positive change in the students' assumption toward reading.

The results in pre-intermediate level experimental and control groups were analogous (see Tables 11 and 12).

| Pre testPre test | STRONLY AGREE | | AGREE | | UNDICIDED | | Pre test | | STRONGLY DISAGREE | |
|---|---|---|---|---|---|---|---|---|---|---|
| **PRE INTERMEDIATE CONTROL GROUP** | Pre test | Post test | Pre test | Post test | Pre test | Post test | Pre test | Post test | Pre test | Post test |
| I think I am a good reader. | 20% | 36% | 16% | 32% | 28% | 12% | 28% | 12% | 8% | 8% |
| I can tell that my teachers like to listen to me read. | 16% | 40% | 20% | 36% | 32% | 4% | 24% | 8% | 8% | 12% |
| My teachers think that my reading is fine | 24% | 40% | 20% | 32% | 24% | 12% | 28% | 8% | 4% | 8% |
| I like to read aloud | 12% | 44% | 16% | 28% | 20% | 12% | 32% | 8% | 20% | 8% |
| When I read, I can figure out words better than others | 16% | 36% | 20% | 32% | 24% | 24% | 28% | 4% | 12% | 4% |
| When I read, I don't have to try as hard as I used to | 12% | 28% | 16% | 40% | 32% | 12% | 32% | 12% | 8% | 8% |
| I seem to know more words than other students when I read | 12% | 36% | 16% | 36% | 20% | 12% | 32% | 12% | 20% | 4% |
| I understand what I read | 16% | 28% | 24% | 44% | 28% | 4% | 28% | 12% | 4% | 12% |
| Reading makes me feel happy inside | 16% | 28% | 20% | 40% | 16% | 16% | 32% | 8% | 16% | 8% |
| My teachers think I am a good reader | 24% | 32% | 20% | 44% | 24% | 8% | 32% | 8% | 0% | 8% |
| Reading is easier to me than it used to be | 16% | 28% | 24% | 52% | 20% | 8% | 24% | 8% | 16% | 4% |
| I read faster than I could before | 20% | 48% | 20% | 32% | 32% | 8% | 24% | 4% | 4% | 8% |

*Table 11.* Pre-*Intermediate level control group students' attitudes toward reading*

| | STRONGLY AGREE | | AGREE | | UNDECIDED | | DISAGREE | | STRONGLY DISAGREE | |
|---|---|---|---|---|---|---|---|---|---|---|
| **PRE INTERMEDIATE EXPERIMENT GROUP** | pre survey | post survey | pre survey | post survey | pre survey | post survey | pre survey | post survey | pre survey | post survey |
| I think I am a good reader. | 22% | 48% | 13% | 26% | 22% | 13% | 26% | 13% | 17% | 0% |
| I can tell that my teachers like to listen to me read. | 17% | 57% | 17% | 26% | 26% | 13% | 17% | 4% | 22% | 0% |
| My teachers think that my reading is fine | 26% | 61% | 26% | 17% | 13% | 9% | 22% | 9% | 13% | 4% |
| I like to read aloud | 13% | 43% | 17% | 26% | 17% | 17% | 30% | 13% | 22% | 0% |
| When I read, I can figure out words better than others | 22% | 70% | 26% | 17% | 30% | 13% | 13% | 0% | 9% | 0% |
| When I read, I don't have to try as hard as I used to | 22% | 52% | 30% | 30% | 22% | 17% | 17% | 0% | 9% | 0% |
| I seem to know more words than other students when I read | 26% | 43% | 26% | 39% | 22% | 17% | 17% | 0% | 9% | 0% |
| I understand what I read | 26% | 74% | 35% | 26% | 13% | 0% | 13% | 0% | 13% | 0% |
| Reading makes me feel happy inside | 22% | 57% | 17% | 26% | 26% | 9% | 22% | 9% | 13% | 0% |
| My teachers think I am a good reader | 30% | 52% | 22% | 39% | 30% | 9% | 17% | 0% | 0% | 0% |
| Reading is easier to me than it used to be | 26% | 57% | 17% | 30% | 30% | 9% | 17% | 4% | 9% | 0% |
| I read faster than I could before | 17% | 48% | 22% | 39% | 35% | 9% | 22% | 4% | 4% | 0% |

By looking at the results of the surveys above, generally it is seen that students' responses on the survey were overwhelmingly positive for students believing that they were good readers. The participants did not recognize there were any problems concerning reading comprehension.

**The interview and its results**

By applying this interview I tried to explore the reasons behind the significant gain in the reading courses within the whole year. There were about 35 volunteer students from both intermediate and pre-intermediate level of experimental groups. Most of the students who were interviewed in both groups expressed an enjoyment for active participation, change, variety of different activities, self-correction and self-reflection which were all integrated into reading lessons through the use of very wide range activities that incorporated to the different intelligences in the experimental classes.

It can be seen from comments that the students felt they were growing in confidence and motivation, e.g.:

The typical comments were:

• I was a shy person, therefore I hated to read or make comments in the class, but I liked to work in the groups and felt more comfortable to participate and read in the groups. Reading aloud in the classroom was a torture for me but now I like reading more than ever.

• In the group work, when sharing learning tasks, everyone was assigned a role, I felt that I had less pressure and would like to do my best to complete the assignment and duty. This self-esteem made me a good reader and now I think that my teachers like to listen to me while I am reading.

• I was very happy with the work we do in the groups because we all had choices. We didn't have to do the same activities as the other students do. I never thought that reading would be as enjoyable as now. My parents cannot believe that I am a bookworm now.

• I liked the way of choosing projects by my interest.

• I was not a good reader in school and never liked reading either in Kurdish or English. I felt bored while reading because I was not able to figure out what the reading text was about. But I liked making songs and drawing pictures to illustrate the new vocabularies. I felt that learning by singing could attract my attention in the classroom. The most important thing was that I felt more confident to read to answer the comprehension and to guess the meaning of the words from the content even though many guesses were false.

• Though I did not get good grades in the exams, I did a very good job by performing the drama. In addition I was using the internet just for fun, but now much of the time I try to use the internet to read something interesting.

• Though my exam results were unsatisfactory, my teacher gave me a chance for assessment. I could choose my own way to present a reading project. I sang two English songs and searched a lot of pictures that had English vocabularies on them to present it in class. Now I don't think that I will forget those vocabularies. I like reading.

• Multiple intelligence based learning activities provided me a learning environment where I felt I was a necessary part in the group. Those activities helped me to like reading not only in the classroom but also when I am out of the school.

• By multiple intelligence learning activities, my classmates who were too shy to ask help from the teachers became more willing to read, speak and ask questions. This collaboration between the classmates created a positive learning environment where more or less every student became more enthusiastic not only in reading lessons but also in other classes.

• The method of multiple intelligence learning activities in reading courses provided us the opportunities to work together and share opinions, feelings, knowledge, and understanding. Those interactions helped us to feel that learning is fun.

• I learned many reading strategies from multiple intelligence based activities. To guess the meaning of a vocabulary from the context strategy was one of the best strategies that I will never forget. In addition, when we started to the lessons, I was thinking that my reading in English was awful and my teachers were unsatisfied with my reading, but now I think that I am a good reader than ever.

• Using different kinds of activities in reading courses helped me to improve my vocabulary.

• I used to think that reading was unbearable. I wasn't a good reader but, with the help of my teacher's new way of teaching and collaboration in the classroom made me a good reader.

• I am motivated to learn through visuals teacher and classmates brought to the class because I can see better what I read. I feel that I can understand the vocabularies or reading with the chart or pictures provided in class. Besides, I like to draw pictures for the English words. It can help me memorize the new words.

• We practiced reading and writing by various kinds of activities and did different homework. All of them made me feel comfortable and interested.

• I seldom had the chance to speak English and felt nervous when I needed to speak or read in English, but in the drama performance, I could talk it out without hesitation. I found it was a good way to train my oral skills. In addition, when preparing the performance of the drama everyone was assigned a role.

The important thing was that the interview was open and these comments were volunteered. From this perspective many students may have answered in this way if they were asked a specific question. All participants appreci-

ated the more dynamic atmosphere inside the classroom in the reading classes. The use of the MI teaching activities seems to be important. Besides, many students recognized that using different teaching strategies to different learners with individual work has an important role to improve the understanding of reading. It is very valuable. Students' comments to those interview questions support the results of the questionnaire findings.

During the experiment, the students brought almost more than two hundred pages of pictures collected from the subjects. According to the students' diverse interests different pictures that had English captions on them were selected to be displayed in the corridor and in the classroom. One student from the intermediate level whose intelligence was naturalistic liked to collect pictures from the natural environment and was willing to memorize new words in this way. It seemed that the students especially improved their vocabulary skills in the areas that they were interested and familiar with. In group work, each member was assigned a different assignment based on their dominant intelligence and shared one another. In addition, I received a lot of teaching materials prepared by the students. From the results of the questionnaire and interviews, it can be seen that forming new ways of teaching according to different intelligences, helped to improve students' language proficiencies –not only in reading but also other skills- and reached different teaching goals.

**Conclusions**

Thus, I can conclude that the results of experiment – testing, questionnaires, classroom observation, and interviews – all support the hypothesis about the positive impact of taking into consideration the students' dominant type of intelligence in the process of teaching reading. I, certainly, realize the limitation of the study – it deals with one university in one country. Much research has to be carried out to be able to say that it is a general regularity. However, as the experiment lasted long enough and involved many students, as all requirements to validity of results were fulfilled, and the results were rigorously treated statistically, we canspeak at least of such a tendency.

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