Abstract

The purpose of this work is providing applicable ideas for English teachers on designing materials using "Needs Analysis" concerning "Multiple Intelligence Theory" (MIT) which broadened conception of "intelligence" by proving the existence of several intelligences that may seem independent though work in coordination. Since the theory bases on encouraging learners to use intelligences simultaneously to complement each-other, this study also sets its sights on using the stronger types of intelligences as a stepping stone to boost weaker ones as the students develop new language skills. To serve this goal, the textbook which is being used was adapted using the data gathered by a Multiple Intelligence Inventory (MII). The participants were thirty-seven eighth grade students attending Private Evrensel Schools in Ankara. Collected data were analysed by first keeping tallies for each student, class and for entire group; second by graphing the range of intelligence types for each and both classes. The inventory disclosed that the prominent types of intelligences are the "Bodily-Kinaesthetic" and "Interpersonal". As the next step the group was given tutorials first without taking into consideration the research findings and second by presenting redesigned materials through gathered data. Right after each tutorial, students were given tests which were identical in complexity and genre, to state whether a significant difference appears or not. Finally, the test results were compared and they revealed that a curriculum and materials interwoven with students' needs can remarkably change students' perception of language learning and cognitive processes in this respect.

Keywords: multiple intelligence theory (MIT); needs analysis (NA); textbook adaptation; material design

* Corresponding author. E-mail address: evren.gurkaynak@gmail.com
1. Introduction

Recently a student-centered teaching model has been found more useful among teachers following current trends in English Language Teaching (ELT). One of the most important components of learner-centered teaching is “Needs Analysis (NA)” which gives the teachers the opportunity to learn about their students clearly, scientifically and in a detailed way. Although stating the needs of students is this vital, it is rarely conducted by teachers in Turkey. Furthermore, the course-books used might fall short in tapping into students’ learning needs; since the prime material of teaching is “human” and since this requires a multidimensional way of thinking. In this manner, working on a detailed analysis of needs becomes a prerequisite for teachers. With respect to its results; adapting current materials and designing additional ones to provoke students’ strengths and enhance weaker traits will constitute another must. This work is one of those studies setting its goals to draw the general profile of the participants in terms of Multiple Intelligence Theory (MIT). In order to clarify the basis of the study, it is vital to give detailed information about what NA means, the scope of it, the general structure of MIT and its place in ELT before going deeply into the research results and implications.

2. Literature Review

2.1. Needs Analysis (NA): Definition and the Scope

The emergence of the term NA; in today's perspective and with respect to language teaching; goes back to 1970s. It was the result of the extensive studies conducted by the Council of Europe Team. (Alshumaimeri, 2001:1) (as cited in Gürkaynak, 2010:60) The team felt that successful language learning resulted not only from mastering linguistic elements, but also from determining exactly what the learner needed to do with the target language. (Alshumaimeri, 2001:1) (as cited in Gürkaynak, 2010:60)

Since those days many definitions of NA have been made. According to Iwai et al. (1999) (as cited in Songhor, 2008:2) and Gürkaynak, (2010:60)) for instance, NA generally refers to the activities to collect information that will serve as the basis for developing a curriculum that will meet the needs of a particular group of students. On the other hand, Fatihi (2003:39) (as cited in Gürkaynak, 2010:60) says "NA is an information gathering device to know the learners’ necessities, needs, and lacks in order to develop courses that have a reasonable content for exploitation in the classroom. NA is therefore a process for identification and defining valid curriculum and instructional and management objectives in order to facilitate learning in an environment that is closely related to the real life situations of the student." Johns (1991), (as cited in Songhor, 2008:3) and Gürkaynak, (2010:60) close to Fatihi’s view, says that, NA is the first step in course design and it provides validity and relevancy for all subsequent course design activities.

In the light of the definitions above, in Gürkaynak E. (2010:61) NA is defined as a data gathering process to gain information about the needs of students in order to design a strong curriculum, choose rich course books with useful supplementary and supporting materials and to develop a teaching program point shots these needs.

Indisputably, the coverage of the term “needs” is very wide. For that reason, this study focused on only “Learning Needs” that involves motivational features, learning styles, Multiple Intelligences (MI), learning strategies, cultural needs, etc. which constitute valuable information telling who our real materials; learners are (Gürkaynak, 2010:61). To serve this goal, some concrete information about the major types of intelligences was gained by using an inventory of multiple intelligences. Before giving information about the findings, it will be better to give place to the definition of MIT and its place in ELT either.

2.2. MIT and Its Place in ELT

Clearly "intelligence" carries a very heavy meaning and it is hard to give a complete definition. As cited in Lin, Po-Ying (2005), Dr. Howard Gardner has postulated a definition of intelligence based on a radically different view of intelligence. According to him, intelligence entails the ability to solve problems or fashion products that are of consequence in a particular cultural setting or community (1993:15) (as cited in Ying L.). There are many, not just one, different but autonomous intelligence capacities that result in many different ways of knowing, understanding,
and learning about our world. Gardner also asserts that all people have all of these intelligences, but in each person one (or more) of them is more dominant.

Gardner's Theory of Multiple Intelligences suggests that there are eight native intelligences. Richards and Rodgers, (2001:116) describes Linguistic Intelligence as the ability to use language in special and creative ways, which is something lawyers, writers, editors, and interpreters are strong. The Logical-Mathematical as the ability to think rationally, often found with doctors, engineers, programmers and scientists. The Spatial as the ability to form mental models of the world, something architects, decorators, sculptors and painters are good at. The Musical which is about having good ears for music, relates to strong singers and composers. The Bodily Kinaesthetic as having a well-coordinated body, something found in athletes and craftsperson. The Interpersonal as the ability is to be able to work well with people, which is strong in salespeople, politicians and teachers. The Intrapersonal as the ability to understand oneself and apply one’s talent successfully, which leads to happy and well-adjusted people in all areas of life. And finally the Naturalist is referred as the ability to understand and organize the patterns of nature.

Regarding the place of MIT in ELT, Lin, Po-Ying (2005) says: “It seemed to us that ever since the arising of the learner-centered instruction, every ELT method/technique with its specific emphasis has been developed to meet students' different needs, or interests (somewhat as Gardner's intention of developing and/or using different kinds of "intelligences")”. The Silent Way, for example, emphasizes the development of students' inner thinking (intrapersonal intelligence); Total Physical Response, however, emphasizes language learning through physical action (bodily/kinesthetic intelligence); Suggestopedia, on the other hand, emphasizes the use of music (musical intelligence) to facilitate language cognition; both the Communicative Approach and Cooperative Language Learning emphasize the importance of interpersonal relationship (interpersonal intelligence) to language learning; and the Whole Language Learning not only emphasizes the wholeness and reality of language (verbal/linguistic intelligence) but also believe the coordination of bodily/kinesthetic, interpersonal, and intrapersonal intelligences to promote language learning.”

In addition, Christison and Kennedy (1999) (as cited in Ibnian & Hadban, 2013:294), identified four ways in which the MI theory can be used in the classroom. First, as a tool to help students develop a better understanding and appreciation of their own strengths and their preferred ways of learning. Second, as a tool to develop a better understanding of learners’ intelligences. Third, as a guide to provide a greater variety of ways for students to learn and to demonstrate their learning. Fourth, as a guide to develop lesson plans that address the full range of learners needs.

We can clearly understand from these views that MIT has been namelessly part of our teaching for years but with its emergence it enlightened our way much more tangibly by giving very much value on personal differences, putting emphasis on nourishing weaker traits with the stronger ones, encouraging teachers to think multi-dimensionally and help their students do so and doing all of these in a non-restrictive, creative, not only emotional but also rational manner.

3. Methodology

3.1. Setting, Participants and Instruments

The study is conducted in Private Evrensel Schools in Ankara. The participants of the study were thirty eight eighth grade students, suggesting that they are B2 level students preparing for PET (Preliminary English Test). This age group was chosen since the questions asked in the questionnaire required abstract thought and self-reflection.

In order to reach concrete scientific data, first an inventory of Multiple Intelligence adapted from the inventory provided in Uzman (2005:199-205) was used. It included forty items to assess eight types of intelligences and consisted of five statements for each specific intelligence type. Second, there used two identical tests to assess students’ learning performances. Both the inventory and the tests were applied in English. No pilot studies were held because of the limitation in time to complete the study. Additionally, it was planned to video the lessons, however it could not be possible since some of the parents of the students did not allow us to do so.
3.2. Data Collection Procedure

The respondents were given the questionnaires on November 19, 2014. It was obligatory to answer all of the questions asked. They were given a twenty-minute time to answer all of the items. The data were analysed in three main steps. First, they kept tallies by using tables for each student, class and for entire group. Then, the range of intelligence types for each and both classes were graphed by using the number of students for each type of intelligence. As the next step the two groups were given tutorials first without taking into consideration the research findings and second by presenting redesigned materials through gathered data. Right after each tutorial, students were given tests which were identical in complexity and genre, to state whether a significant difference appears or not. Finally, the test results were compared. The SPSS procedure could not be followed because of the technical problems occurred in entering the data.

4. Findings

4.1. Results of MII

According to the results of the MII in Class 1, it is significant that the most improved types of intelligences among the 19 students are “Bodily-Kinesthetic and Interpersonal” with 10 “very improved” and 9 “improved” students in each. With 0 “very improved” but 14 “improved” students, “Linguistic Intelligence” constitutes another major intelligence type. These three are followed by “Spatial, Musical, Logical-Mathematical and Naturalist Intelligences” with 8 to 9 “very improved” students in each. Looking at the “Intrapersonal Intelligence”, it is seen that there are 5 “very improved” and 9 “improved” students.

Considering the results in Class 2 on the other hand, it is significant that the most improved type of intelligence among the 18 students is “Interpersonal Intelligence” with 9 “very improved” and 8 “improved” students. With 8 “very improved” and 8 “improved” students “Bodily-Kinaesthetic and Naturalist Intelligences” follows that. “Musical Intelligence” on the other hand constitutes other major intelligence type with 7 “very improved” and 9 “improved” students. “Spatial and Logical-Mathematical Intelligences” follows these four with 7 to 8 “very improved” and 7 to 8 “improved” students in each. Finally “Intrapersonal Intelligence” with 5 “very improved” and 8 “improved” students and “Linguistic Intelligence” with 4 “very improved” and 9 “improved” students are the ones needing a little more improvement.
With respect to the results in both classes it is clearly seen that the major types of intelligences serving as the stepping stones and sources of energy to boost and nourish the other types of intelligences are “Bodily-Kinaesthetic and Interpersonal” among the 37 students participated in the inventory. Frankly, some of the intelligence types such as “Logical-Mathematical, Spatial and Musical Intelligences” also are very near to the improved ones with respect to the number of “very improved” and “improved” students. So these types are cooperators of the stronger traits. The types which are a little weaker are “Intrapersonal, Naturalist and Linguistic Intelligences” compared to the others. They could be called as care-seekers.

5. Implementations and Discussion

In order to understand the efficacy of the implementations and materials been made, discover our limits of creativity and productivity and more important than this see if the adapted materials really make any difference or not, only the first chapter of the book was adapted through the research findings. But, considering the remarkable changes in students’ learning performances, this was just the initial step been taken and more adaptations of the book is on the way.

The book been adapted was Complete PET by Cambridge University Press. The title of the first chapter was “Homes and Habits” including some expressions and vocabulary items about homes and habits, some cultural information about daily habits in different countries, grammar points revising frequency adverbs, prepositions of time and place, present simple, present continuous, state verbs, quantifiers with countable and uncountable nouns and finally question forms.

The chapter starts with Listening Part which consists of six activities. These activities remained the same since they are directly related to the students’ needs and give the opportunity to nourish nearly all types of intelligences except “Bodily-Kinaesthetic, Intrapersonal and Naturalist Intelligences”. In the first activity students are expected to work in pairs needing “Interpersonal Intelligence”, do some picture talk requiring “Spatial Intelligence” and make some guessing with reasons necessitating “Logical-Mathematical Intelligence”. Indisputably, not only the first, all of the activities require and nourish “Linguistic Intelligence”. Since the listening activities require a good ear, this will give the students the chance to improve their “Musical Intelligence” too. The thing which was done different from the sequence of activities presented in the book was the one that wants the students to discuss a set of questions by using specific expressions. Since the students needed to be a bit more improved in “Intrapersonal Intelligence”, this was done right after the third activity of the Listening Part and without a limitation to use certain expressions.

While the students were tuned enough to “listen” and ready to focus on what they “hear”, the first grammar point “prepositions” were introduced by a song which was found from https://www.youtube.com/watch?v=LnSOoTDgwKs. This was because “Musical Intelligence” needed more improvement compared to major types of intelligences among the class. Students were first presented the semi-structured lyrics of the song and made to guess what could be suitable for the gaps. This part also served a lot for their proficiency in PET. Then, they listened to the song and tried to fill out the blanks and finally discovered the grammar topic of the day; “Prepositions”. By using the lyrics of the song, they formed their own grammar reference on their notebooks by drawing a chart of “Prepositions” (Time & Place) which nourished their “Spatial Intelligence” either. Within the activities concerning “Prepositions”, the fourth activity remained the same to some extent. Since the students were presented the “Prepositions of Time and Place” together, three more lines were added to the activity so that the sequence of the lines were changed either. And the fifth one which wants the students to work in pairs and put the expressions into the correct column which are “at, in and on”. This was totally omitted and an “interpersonal” group work activity was added. Students worked in groups of 4-5. In 3 minutes time they tried to write as many expressions as they can using prepositions of time & place. This was not a competition but a cooperation activity to share knowledge, to feel as a qualified member of a group, to feel as one. When they are finished, the groups visited each other and finally formed a big prepositions example page to be hanged on the class notice board which also played an important role to nourish their “Spatial Intelligence”. This activity was not done as a competition with a prize; because that would contradict with the spirit of Multiple Intelligence Theory.
In the book the next part is for Grammar: Frequency Adverbs; Question Forms. All of the exercises concerning them were omitted. Instead the students were engaged in a non-cursory chain drill with some charts and cards placed on the board as it is shown in the following figure.

![Shuffled Frequency Adverbs on Cards](image)

Fig. 4. Board Sketch of the Frequency Adverbs Chain Drill

The drill started with a question of the teacher (e.g. “How often do you do sports? / Do you ever go to the theatre?”). Then, the first student answered the question by using a “frequency adverb” on the board. S/he also had to place that frequency adverb to the correct percentage then ask another question (similar to the teacher’s) to the next student. They could not ask the same question or give the same answer. And the chain went like this. Here, not only the adverbs provided by the book but also some extras were used to teach more. Also, the last question asked and its answer were written on the board to work on the meaning and form of frequency adverbs. In this activity, students’ “Spatial Intelligence” was nourished by the visuals and charts used, “Interpersonal Intelligence” was strengthened with the chain drill, and finally their “Logical – Mathematical and Linguistic Intelligences” was fostered by working on the meaning and the form of the grammar topic in an analytical way by making reasoning.

Since the Reading Part of the book starts with a picture talk and requires a lot of personal reflections this first activity remained the same to strengthen “Spatial Intelligence”, but mostly to foster “Intrapersonal Intelligence”. Also the following activities of the part were very well designed to help students develop in PET. In terms of the theory of Multiple Intelligences the reading comprehension part was found really useful to employ “Linguistic Intelligence”. Also the fourth activity which requires some guessing was thought to be a great tool to set the “Logical – Mathematical and Linguistic Intelligences” to work. Short but effective activity five is also used to brush up previously learned grammar and vocabulary in order to help students put their “Logical-Mathematical Intelligences” into action by encouraging students to make inductions and decisions by the help of the given questions. For all of these reasons these activities remained the same.

Mostly the students are kinaesthetic. So, after the reading activities in which the students sat still, we needed some movement. We made a big empty space for our giant chart in the room. On big cards there were five titles put on the floor: “Present Tenses”, “Present Simple”, “Present Continuous”, “Stative Verbs” and “Action Verbs”. The students were divided into four groups; each were mixed-ability. They were given big papers. Groups were named as “Permanents”, “Temporaries.”, “Statives” and “Dynamics”. They were assigned with the grammar points to be studied. They had to write examples, work on form and meaning by writing short simple notes. Then, each group was invited to stick their work on the floor to the correct place and share their knowledge with the classmates. By the help of their “Logical – Mathematical, Linguistic and Interpersonal Intelligences” they decoded the rules of a linguistic game called grammar, felt the emotional satisfaction of being “one”, and helping weaker classmates and improved their both spoken and written linguistic skills. By putting this group activity, we omitted activities one, and five to make room for kinaesthetic ones since those two were found mechanical requiring word order and a very short reasoning part. Activity two wanting the students to put the verbs in brackets in the correct form of the verb remained the same since they also have to do a similar thing in PET. The other changed activity was the third one wanting the students to find the state verbs among a box of verbs. Instead of this, a very simple but enjoyable game; even for adults; was designed. The room was divided into two parts. The back of the classroom was spared for Stative verbs and the front for Dynamic verbs. Each student were given a verb; state or dynamic. They lined up in the middle of the class. One by one each student told the verb and went to the correct part of the room. They had to finish the activity in 30 seconds. Too, activity four and six were integrated. The fourth one which consists of two parts requires the students (in pairs) ask questions using state verbs and answer them. The students who asks the questions should note down the answers and as the next part of the activity the students change their partners and ask questions about their first partner. Since this was found a bit mechanical and restricting with a particular
grammar point, it was combined with activity six which is thought to be richer. So, as a result, the first part of activity four remained the same and activity six was carried as a whole as the second part of activity four. With the integrated version it is thought to deploy “Intrapersonal Intelligence” using an “interpersonal” activity.

The vocabulary activities concerning countable and uncountable nouns were found really useful since they relate to students own lives which could help improve “Intrapersonal Intelligence” and they require grouping the furniture into relevant rooms somehow by forming abstract pictures in their minds which will empower “Spatial Intelligence” and finally make students do some dictionary work and help them recognise symbols for countable and uncountable nouns which will add a lot to their “Linguistic Intelligence”.

The grammar activities concerning “Quantifiers” remained the same since the grammar rules were formed by the students with a fairly creative activity. Also the activity in which the students fill in the blanks with a suitable quantifier is thought to help students do practice in preparing for PET.

Since an activity covering all types of prepositions were done on previously, the third activity of the grammar part and the second activity of the speaking part were totally omitted. Activity four was turned into a group project. And its scope was also changed. Rather than talking about where they live in, they were expected to dream an eco-friendly house. The students were divided into groups of 4-5. They first did brainstorming for their house and took notes about all its qualifications (furniture, garden, material, source of energy, etc.) As the second step of the project they had to draw or design a maquette or a scale model of their dream house. They also wrote the advertising copy for their work which needed to be a bit attractive. They used some metaphors for instance. They also had to use as much vocabulary items and quantifiers as possible. As the final step, each group presented their work and their classmates decide to buy or not to buy by stating concrete reasons and giving personal comments. With this activity, students tasted the joy of working in a team and tried to persuade other people by using their communicative skills (Interpersonal Intelligence), thought quickly and creatively to make new connections in their brain, played with English by using creative writing and using particular grammatical items (Linguistic Intelligence), they thought about ecological issues, found solutions and finally they put them into practice by bringing their dreams into existence with tangible models (Naturalist, Logical – Mathematical, Intrapersonal and Spatial Intelligences).

Except the second activity the speaking part remained the same; because it provides practice in giving personal information which is vital in PET and improves “Intrapersonal Intelligence”. Also, the final writing part was left untouched since it directly relate its activities for PET candidates.

6. Conclusion

6.1. Results of the Tests

In order to check whether a significant change appears or not, the students were given a test after each tutorial. The first test showed that the success rate of the students is 60 % in Class 1 and 50 % in Class 2. Considering the results of the second test given, this rate has remarkably increased in both classes with 90% in Class 1 and 85% in 2.

6.2. The Finish Line of the Study

Considering the results of the tests above, it is concluded that the materials, which were designed according to the research findings, tapped exactly into students' needs and served a lot to increase the strength of the major type of intelligences and foster the weaker ones. As important as this, the students were more motivated to learn, create and live with a new language when they were engaged in the additional activities designed truly for them. Thus and so, it will not be wrong if we say that a curriculum and materials interwoven with students' needs can remarkably change students' perception of language learning and cognitive processes in this respect.

In addition to point shooting the needs of the students, the other most important goal of this study was to provide applicable ideas for English teachers on designing and adapting materials. Indisputably, the implications provided here cannot and should not be generalized for all students or contexts. This might also be perceived as one of the limitations of the study. However, does not the theory of Multiple Intelligences exactly take its nourishment from this uniqueness of human and contexts?
Last but not least it is the biggest dream that this study pioneers other colleagues conduct these kind of analytical studies and enlighten our ways for further studies.

Acknowledgements

I gratefully acknowledge the support of Mr. Cavit GÜRSOY – founder of Private Evrensel Schools – and Semra BÜYÜKAĞAOĞLU – General Principle of Evrensel Schools – without whom this study could not have been completed. Too, my special thanks go to Mrs. Tijen İÇİNÇİ and our valuable students for allowing me to work with them. And finally many thanks should go to my dear husband F. Altuğ GÜRKAYNAK for his patience and not only emotional but also the technical support he gave in every step of the way.

References


