An Assessment of the implementation of the Multiple Intelligences

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Key Words: Learning types, Teaching English for freshmen at University, Multiple Intelligences (MIs) and Methods of Teaching.

Abstract

It has been claimed that the freshmen or the first stage students who study general English (GE) do not reach their standards concerning levels of proficiency (language objectives). The students of different departments at Salahaddin University are expected to have the ability to be successful of the general English (Garnet course) and content objectives before enrolling in second grades at the universities; sophomore, junior and senior students in different departments at university claim their levels of English language performances. The study is aimed at the assessment of the implementations of the Multiple Intelligences at Non-departmental who study English language as a foreign and academic language. It has been hypothesized that the proper implementation of Multiple Intelligences, that help the teaching and learning efficiencies by the side of teaching process are not adapted appropriately. The participants are the first grade students of the college of Basic Education/ Salahaddin University. There are two instruments, the first one is for the survey of the students' Multiple Intelligences, and the second one is for the extent of the implementation of the Multiple Intelligences. The general background contains the comparison between learning styles, thinking skills and some details of the Multiple Intelligences are investigated and restated. It has been found out that the implications and implementations of the Multiple Intelligences are not appropriate.

General Background and Preliminaries

Although, learning and teaching are two sides of a coin, but they are different. Students' learning is different from teachers teaching. Teacher personality, motivation and methods of teaching affect teachers' teaching. Learner types regarding thinking skills, intelligences, strategies, knowledge, body skills and affective factors influence learning. Therefore, it is inevitable for teachers to know, distinguish and understand the learners' learning types.

Previously, different types of learning were adopted by different scholars. Some of them are modern and effective. On one hand, the distinction between learning styles and thinking skills are required. On the other hand, the classification of the types of learning of Bloom's

taxonomy, the Tennant's A.S.K. and Gardner's multiple intelligences is required; they are also inevitable and crucial for every educationalist, applied linguist and language teacher. This knowledge is critical in teaching at the kindergarten level to higher education.

Learning style (LS) and MIs are different concepts in educational psychology as Gardener states:

> Style refers to the customary way in which an individual approaches a range of materials—for example, a playful or a planful style. Intelligence refers to the computational power of a mental system: for example, a person whose linguistic intelligence is strong is able readily to compute information that involves Language (Gradner, nd, p.4).

LS are the various ways in which a learner takes in or gains information (Fleetham (2006, p.12). They are called "Neuro-linguistic programming by Revell and Norman (1997)" they are ''persistent and instinctive ways the individuals process information when faced with learning situation''. Sensory modes of the memory such as read and write, auditory, tactile or touch, kinesthetic or body movement and visual are learning styles, they characterize learner types, individual learners modulate one or a combination of two or three of learning styles, in this case, they are known as multimode learners. Language LS are called field dependent (sensitivity) and field independent, the former refers to the learners who are better able to see the trees within the forest while the latter refers to the learners who are better able to find concealed pictures disguised within the larger picture, as well as the sample of both types have been proven intelligent in language learning (Sárosdy, et.al,2006, p. 32; Horwitz, 2008, p.12).

Thinking skills (TS) are the different ways in which a learner processes, stores and retrieves information (Fleetham (2006, p.12). Edward De Bono (1985) presented the six thinking hats; see appendix 2:

> '' "hats to think" allow us to lead our thought, as a director could direct his orchestra……is a tool that can empower teachers of any grade and or subject matter to motivate students to use critical thinking and problem solving skills, while expressing inner creativity'' (Drevitch, Kathleen. et al. nd & De Bono, Anon, p. 4).

Similarly, B. S. Bloom, an American educationalist set out three taxonomies for organizing measurable students' outcomes. The taxonomies or dimensions are Knowledge-based goals, Psychomotor (skills-based goals), Affective (values, attitudes and interests) goals. So, the taxonomies are mainly used to set the objectives of education as well as evaluation and assessment, see appendix 1 (Richards and Schmidt, 2002& Anon. nd. Bloom's Taxonomy). It can be said that the table of bloom's taxonomies could be both adopted and adapted in the processes of Education, teaching, learning, evaluation and syllabus design. But also, the process of socialization that leads to cooperative working in the classroom settings possibly needs to be added.

Correspondingly, Tennant (1995) classifies types of learning as it is represented in the acronym A.S.K.: A stands for ''Attitude'' or affective learning in which it is the turning towards the academic abilities of learners with disabilities. And, S represents ''Skills'', psychomotor or manual learning, the example is to develop a skill by operating adaptive technology. While K stands for ''knowledge'', that is cognitive learning is the actual concept used for mental skills like recall of information, the example is the knowledge of information on available resources associated to disability concerns (Anon, nd, Types of Learning).

On the contrary, multiple intelligences (MIs) theory is presented by Howard Gardner, during 1983 to 1999 he developed five intelligences to nine. His concept to intelligences was different from Stnforsd-Binet's Intelligence Quotient (IQ), in which the IQ based on the idea that intelligence is a solitary, unchanged, inborn capacity. While Howard's estimation about

the intelligence is that everybody owns multiple intelligences, but each one is abler and influenced by one and/or two or more. MIs can be used both in general education and language teaching (Richards and Schmidt, 2002 & Gardner, 2004). The idea of MIs in Howard's words:

> ''The theory is a critique of the standard psychological view of intellect: that there is a single intelligence, adequately measured by IQ or other short answer tests. Instead, on the basis of evidence from disparate sources, I claim that human beings have a number of relatively discrete intellectual capacities. IQ tests assess linguistic and logical-mathematical intelligence, and sometimes spatial intelligence; and they are a reasonably good predictor of who will do well in a 20th (note: NOT 21st) century secular school'' (Gradner, nd, p.1-2)

So, the MIs theory is completely different from the IQ theory. MIs (Competences or strengths) are the different skills and talents a learner uses to make products and solve problems to prove and show learning (Fleetham (2006, p.12). Gardner defines intelligence as "the capacity to solve problems or to fashion products that are valued in one or more cultural setting" (Gardner & Hatch, 1989) cited from (Khalaf Ibnian & Hadban, 2013, p.294) in this regard intelligence is an ability of learning, getting in to and understand the life. The diagram of the appendix 2 by Fleetham (2006, p.12) explains the fuzzy boundaries between the learning style, thinking skills and multiple intelligences.

Correspondingly, it has been proved that MIs has scientific implications, Gardener quotes:

> ''The intelligences constitute the human intellectual toolkit. Unless grossly impaired, all human beings possess the capacity to develop the several intelligences. At any one moment, we will have a unique profile, because of both genetic (heritability) and experiential factors'' (Gradner, nd, p.2).

Thus, MIs is verified scientifically, but then again has educational implications, regarding the action of the MIs Gardener says:

> ''…there are two principal educational implications: Individuation and Pluralization. The first, individuation (also termed personalization), suggests that since human beings have their own unique configuration of intelligences, we should take that into account when teaching, mentoring or nurturing. As much as possible we should teach individuals in ways that they can learn and we should assess them in a way that allows them to show what they have understood and to apply their knowledge and skills in unfamiliar contexts'' (Gradner, nd, p.3).

These show the roles of both of the abilities and capabilities of individuals and their society or community in the learning and developing the standards of life. The Gardner's MIs are the following:

1-Linguistic Intelligence: it includes the ability and mastery of the use of language. It means to express oneself effectively, creatively, rhetorically or poetically. It also allows one to use language as a means to remember information. The possible work group is the strength that is advantaged with lawyers, writers, editors, interpreters, public, speakers and poets.

2-Logical/mathematical: involves rational thinking and the ability to detect patterns, reason deductively and think logically. It is most often associated with scientific and mathematical thinking. The possible work group is the strength that is often privileged with mathematicians, logicians, doctors, engineers, programmers and scientists.

3-Spatial Intelligence: it is the ability to form mental models of the world. It gives one the ability to manipulate and create mental images in order to solve problems. It is not limited only to visual domains. Gardner notes that spatial intelligence is also formed in blind children. The possible working group is the strength that is often privileged with architects, decorators, sculptors, painters, navigators, pilots, surgeons and chess players.

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4-Musical Intelligence: it refers to a good ear for music. It encompasses the capability to recognize and compose musical pitches, tones, and rhythms. (Auditory functions are required for a person to develop this intelligence in relation to pitch and tone, but it is not needed for the knowledge of rhythm). The possible working group is the strength that is found with musicians, singers, composers and recording engineers.
5-Bodily/kinesthetic: It is the ability to use one's mental abilities to coordinate one's own bodily movements. This intelligence challenges the popular belief that mental and physical activities are unrelated. Having a well co-ordinated body is something found in athletes, craftsperson, dancing, acting, artistically, or in building and construction.
6-Interpersonal Intelligence: It refers to the ability to be able to work well with people. It is the ability to understand and discern the feelings and intentions of others. And, it is strong in salespeople, politicians and teachers, clinicians and religious leaders.
7-Intrapersonal Intelligence: It is the ability to understand oneself and apply one's own feelings, motivations and talent successfully, which leads to happy and well-adjusted people in all areas of life. It is found with Philosophers, counselors, and many peak performers in all fields of endeavor have this form of intelligence. The Interpersonal and the Intrapersonal intelligences are separate from each other. Nevertheless, because of their close association in most cultures, they are often linked together.
8-Existential Intelligence: sensitivity and capacity to tackle deep questions about human existence, such as the meaning of life, why do we die, and how did we get here. The philosophers, thinkers and theorists are the example of working group.
9-Naturalist Intelligence: It refers to those who understand and organize the patterns of nature. It designates the human ability to discriminate among living things such as plants, animals, besides sensitivity to other features of the natural world such as clouds, rock configurations. The possible working group is the strength that is found with hunters, farmers, gardeners, artists, poets, social scientists and marketing professionals who promote the small differences between competing products and farmers; it continues to be central in such roles as botanist or chef. Similarly, it is speculated that much of our consumer society exploits the naturalist intelligences, which can be mobilized in the discrimination among cars, sneakers, kinds of makeup, and the like (Gardner, 2004; Richards and Schmidt, 2002; Khalaf Ibnian and Hadban, 2013, p.293; Wall et al, nd pp. 462-3; & Fleetham,2006). At this instant, the distinction between the three learning types are clear.

The Problem

University students have problems in English language learning. The study tries to answer these questions:
-What are the recent multiple intelligences?
- Are they properly implemented in our classroom settings?
-How are MIs implemented in the classroom settings of EFL teaching and learning?

The Purpose

The study is aimed at the investigation of the MIs theory, its implementations and usefulness. It is mainly intended to help University instructors to use MI in the Teaching and Learning processes by surveying the students' MI and the Implementation in the English language classroom settings.

The Hypothesis

It has been hypothesized that the MIs as a theory of Education and especially of Language teaching is not implemented intentionally and properly.

The Significant

The study is beneficial for the development of curriculum, course book, education in general, teaching and learning from the kindergarten to the university level, all teachers and instructors can survey their learners MIs then adopt, adapt and implicate the required technique compatible with the MIs implementations.

The Environment

As it has been investigated from the background of the MIs theory can be adapted in all English language classrooms regardless of the age and sex of the learners. Since, all the people own the MIs.

The Frustrations

One of the weaknesses of the implementation of the MIs is that there are various and different intelligences. In this case, the learners are heterogeneous regarding their intelligences. So, the teaching process involves and forces different methods and techniques and it is not easy and practicable for all teachers to cope with the dissimilar and unrelated aspects of the classroom environment.

The Overcomes

Surveying the learners' MI and feedback to verify their abilities and needs is one way to overwhelm and defeat the hindering.

Methodology

The tools of the researching are two questionnaires designed and set up from Gardner (2004) and Khalaf Ibnian and Hadban (2013, pp.292-5), they are handed out to two specialists and subjected to pilot test for both face validity and practicality. The first questionnaire is for gaining information about the participants' intelligences in which the likert scale is ''Yes'' ''Sometimes'' and ''No''. The first is for having the certain intelligence; the second is for uncertainty while the third is for not owing certain intelligence. Whereas, the second questionnaire is for finding the extent of the implementation of the MI in teaching English language, the likert scale is (4) Always (100%), (3) Often (75%), (2) Sometimes (50%), (1) Rarely (25%) and (0) Never (0%). So more than 2 is positive and less than 2 is negative. The data was collected in 2015-2016. The participants were 52 students of the first grade students of the departments of Kurdish, Mathematics, General Science, Social Science and Kindergarten (non-departmental) at the College of Basic Education / Salahaddin University. The males were 152 and the females were 302, the summation of the participants is 427 students while the participants were 52, in this case, the participants are more than 12%. The participants were free to take part or refute. The purpose of the study was explained to them; the items were clarified and even translated in to their first language.

Data Analysis and Results

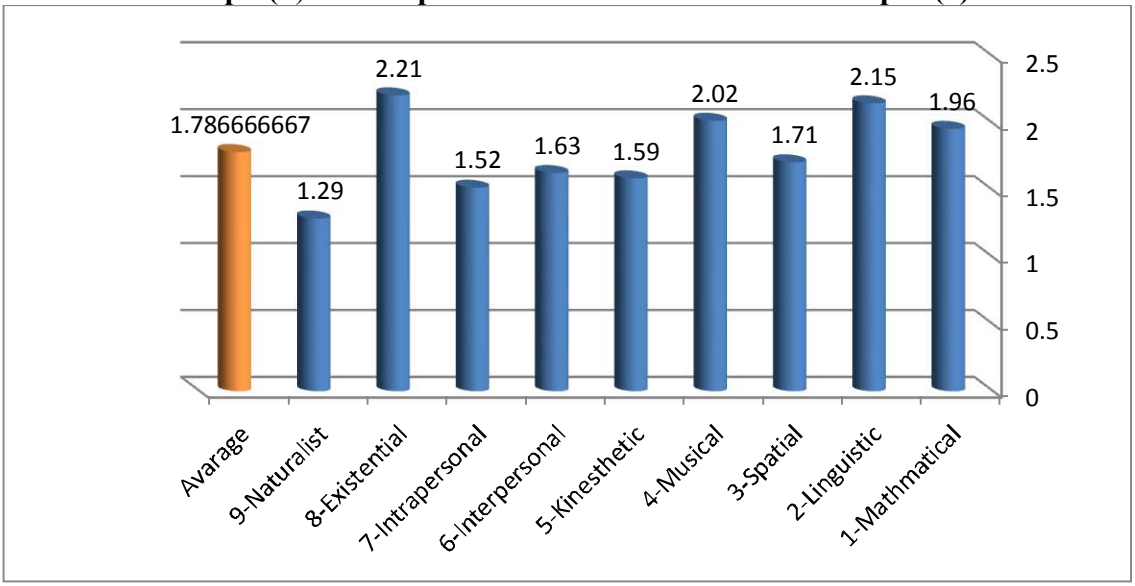
The following two tables and graphs contain the survey, the results and the extent of the implementation of the MIs.

Table (1) the Statistical Survey of the Students' Intelligences

Items	Yes	Sometimes	No	Valid	Missing	Mean	Std. Deviation
1-I am able to detect patterns, reason deductively and think logically. I am very good at Science and Mathematics. **توانای تێبینیکردنی شێوازەکان، لێکدانەوەی هۆکارەکان و بیرکردنەوەی لۆجیکیم هەیە. زۆر باشم لە زانست و بیرکاری.**	17	19	15	51	1	1.96	.799
2-I am able to effectively manipulate language to express myself rhetorically or poetically. **کاریگەرنە، توانای بەکارهێنانی زمانم هەیە بۆ دەربڕین بە قسەزانانە و بە شێوەی شیعرئامێز. زۆر باشم لە بەکارهێنانی زمان.**	13	18	21	52	0	2.15	.802
3- I am able to manipulate and create mental images in order to solve problems. **بە توانام لە بەکارهێنان و داهێنان و وێناکردنی هزری بۆ تێگەیشتنی وانەکان و چارەسەر کردنی کێشەکان.**	26	14	11	51	1	1.71	.807
4- I am able to recognize and compose musical pitches, tones, and rhythms. I can use my auditory functions to learn. **بە توانام لە ناسینەوەو دارشتنی دەنگەکانی میوزیك، تۆنەکان و ئاوازەکان. بە باشی دتوانم بە بیستن فێربیم.**	17	15	18	50	2	2.02	.845
5-I am able to use my mental abilities to coordinate my own bodily movement. I like to move when I learn. **توانای هاوئاهەنگکردن و هاوتاکردنی توانا هزری و جولەییەکانی خۆم هەیە، زۆر حەزم لە وەرزشە بۆیە حەزدەکەم لەکاتی فێربوون و خوێندن بجوڵێمەوە.**	29	14	18	51	1	1.59	.753
6-I am able to understand and discern the feelings and intentions of others. I like to learn and study with others. **توانای تێگایشتن و جیاکردنەوەی هەستەکان و مەبەستەکانی کەسانی ترم هەیە، حەز دەکەم لەگەڵ کەسانی تر و بە گروپ بخوێنم.**	27	16	8	51	1	1.63	.747

7- I am able to understand my own feelings and motivations. I like to study alone. توانای ئاراستەکردنی هەست و پاڵنەرەکانی خۆم هەیە، حەز دەکەم بە تەنها بخوێنم.	31	15	6	52	0	1.52	.700
8- I own the sensitivity and capacity to tackle deep questions about human existence, such as the meaning of life, I like philosophy. هەست و توانای وەڵامدانەوەی پرسیارە قوول و فەلسفیەکانی دەربارەی بوونی مرۆڤم هەیە، حەزم لە فەلسەفەیە.	14	13	25	52	0	2.21	.848
9-I have the ability to discriminate among living things (plants and animals) as well as sensitivity to other features of natural world (clouds, rock configurations). I like to be in nature. تواناو حەزی فێربوون و جیاکردنەوەی شتە زیندو نا زیندوەکانم هەیە(ڕوەك و ئاژەڵەکان) (هەورەکان و شێوەی بەردەکان)، حەزم لە سروشتە.	41	7	4	52	0	1.29	.605

Graph (1) the Simplified Results of the Table of Output (1)



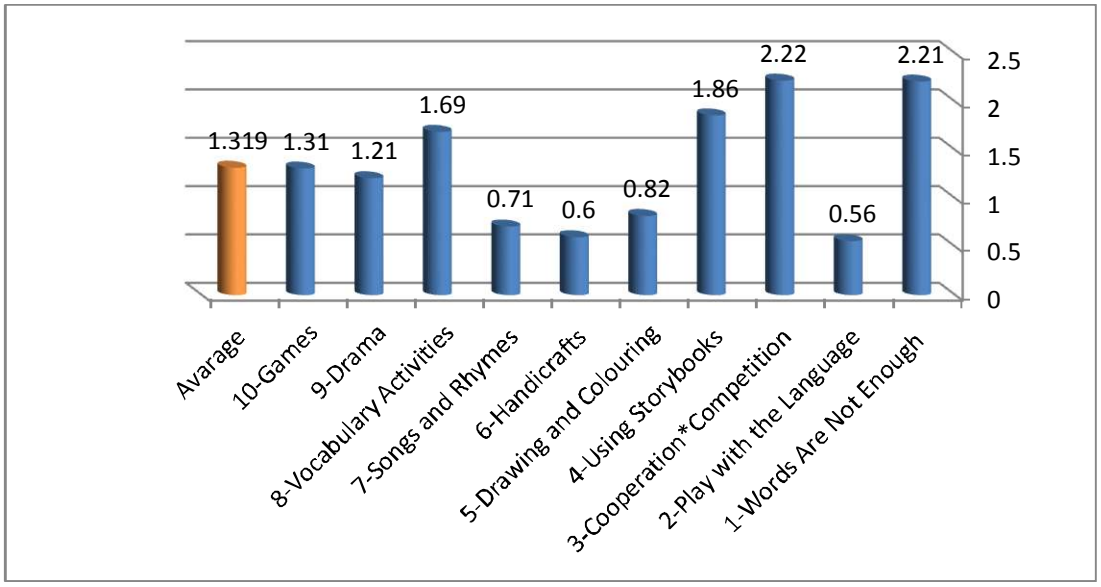
The above output shows that all the intelligences are owned with the students. More students owe the existential and linguistic intelligences, the naturalist Intelligence is least acknowledged. This indicates that the implementation of the MIs could not be avoided or neglected. It also point towards implementing various methods, techniques and strategies of teaching and learning depending on the MI implementation, this is because all the intelligences are found among the participants.

Table (2) the Statistics (Frequencies) of the Implementation of the Multiple Intelligences in the Classroom

Items	100% Always	75% Often	50% Sometimes	25% Rarely	0% Never	Valid	Missing	Mean	Std. Deviation
1- Teaching and Learning English language did not only rely on spoken words but also included movement and involved the senses, colors and sounds. وتنەوەو فێربونی زمانی ئینگلیزی تەنها بە قسە و وشە نەبو، بەڵکو بە جولەو هەست و دنگ و ڕەنگ بوو واتە بە کردەوەش بوو.	7	18	10	13	4	52	1	2.21	1.194
2-We (the whole group) played with language by making up rhymes, singing songs, telling stories, etc. in the classroom. هەموو قوتابیان لە پۆلدا زمانی ئینگلیزیمان بە یاری کردن وەك هەلبەست، گۆرانی و چیرۆك گێڕانەوە هتد بە کار دەهێنا.	2	1	3	12	34	52	1	.56	.978
3-We did not compete; instead we all students are instructed to cooperate and made the classroom for shared experiences. ئێمە لە فێربووندا پێشبڕکێی دژی یەکمان نەدەکرد، بەڵکو ئێمە هەمومان فێر دەکراین کە هاوکاری یەکتری بکەین و بە هاوبەشی فێری زمانی ئینگلیزی ببین.	11	9	14	14	3	51	2	2.22	1.238
4-We used story telling for learning English language and the log book includes stories that are a little beyond my current level of competence. چیرۆك گێڕانەوەمان بەکار دەهێنا بۆ فێربوونی زمانی ئینگلیزی وە پەرتووکەکەمان چیرۆکی تێدابوو کە زۆر بە ئاسانی لە زۆربەی تێی دەگەیشتین و کەمێك لە ئاستی زانیاریم بەرزتر بوون	5	13	12	12	9	51	2	1.86	1.265
5-We drew and colored such as characters and maps using English vocabularies for labels and illustrations. وێنەمان دەکێشا وەك کەسایەتیەکانی ناو چیرۆکەکان و شتی تر... ڕەنگمان دەکردن و وشە و نمونەو نوسینی ئینگلیزیمان بەکار دەهێنا	5	0	7	8	31	51	2	.82	1.276

6-There were enough materials for the handicraft activities in the classroom. The craft activities are made by the teacher first and then we did the handicraft activities in pairs and /or groups, that is to say we made things such as posters by our hands. ماددەو کەلوپەلی تەواومان لەبەر دستدا بوو بۆ کاری دەستی. کارە دەستیەکان وەك هەویرکاری و پۆستەر و نامە نوسین ... یەکەمجار لە لایەن مامۆستا ئەنجام دەدران پاشان ئێمە بە جووتە و بە کۆمەڵ ئنجاممان دەدا.	1	3	4	10	34	52	1	.60	.995
7-We sang songs in English using nice rhymes. گۆرانی ئینگلیزیمان بە ئاوازی حۆش دەگوتن.	2	3	6	8	33	52	1	.71	1.126
8-We used English-English dictionary and learned vocabularies by having our own note taking dictionary and we sometimes pictured words in the dictionary. فەرهەنگی زمانی ئینگلیزی-ئینگلیزیمان بەکار دەهێنا بۆ فێربوونی وشەکان و حۆمان فەرهەنگمان دادەنا لە تێنوسی تێبینیەکانمان و زۆر جاریش بە وێنە وشەکانمان دەردەبڕی.	6	10	9	16	11	52	1	1.69	1.322
9-We acted out (drama) either the short stories we had studied in the log book or other plays. ئەو چیرۆکانەی دەمانخوێندن چ ئەوانەی ناو کتابی وانەی ئینگلیزی چ ئیدی بە نواندن پێشکەشمان دەکردن.	4	3	13	12	20	52	1	1.21	1.242
10-We played games for learning English in the classroom. هەندێ جار، بە ئەنجامدانی یاری پەروەردەیی فێری زمانی ئینگلیزی دەبوین لە پۆلدا.	5	7	8	11	21	52	1	1.31	1.380

Graph (2) the Result of the Table of Output (2)



The above output shows the extent of the implementation of the MI techniques in the processes of teaching and learning. The average of the means of the items is 1.319 and it is less than 2. So, it points out that the MIs theory in not appropriately implemented. Merely, the third way which corresponds with the mathematical intelligence and the second way which corresponds with the linguistic intelligence are often implemented. So, in ten components of the MIs only two of them are positively implicated while the rest are negatively acknowledged. Likewise, graph 1 show that the numbers of the existential and linguistic intelligences (students) are got the highest acknowledgement. Therefore, it can be said that the MIs implementation is contradicting with the MIs survey. It indicates that the MIs theory is not recognized as a modern and scientific method of teaching and learning.

Graph (3) The Comparison between Multiple intelligences and their Implications

Conclusions

It has been found out or learnt that the modern and pedagogical theory of Multiple Intelligence is not implemented methodically and systematically. Every teacher/instructor, every year, can first assess his/her students by means of adapting a survey of Multiple Intelligences to know the Intelligences of the individuals of the whole group. After that, the required way of teaching contingent to the Multiple Intelligences could be implemented. This provides efficient teaching and learning, that is both the processes of teaching and learning will be conducted with more success and efficiency but with less effort, time and economy. The study could have been more inclusive to involve more different institutional settings, but then again the study has the advantages of implicating and implementing the Multiple Intelligences in an easy and academic manner. The recommendation is that the Multiple Intelligence theory and practice should be implemented in all the levels and grades of education in Kurdistan in the processes of teaching, learning, curriculum design, evaluation and assessment. The students should be assisted to know and realize their own intelligence/s in order to enroll in their future studies and carriers on the basis of their own intelligences natural and instructive abilities not only on the basis of marks. After the ninth grade, the educational authorities should provide the students access to a variety of free of charge of vocational and academic branches of study such as medical, economical, agricultural, scientific, literary, athletic, mechanical and so forth so good fields to be continued to higher education i.e. universities not only institutions. In this case, our country will have productive and constructive people that can depend on themselves for development.

پوختە

لێکۆلینەوەکە دەربارەی جێبەجێکردنی کرداری بیردۆزی فرە زیرەکیەکانی زانا هاوەرد گاردنەرە. لێکۆلینەوەکە سودی زۆری بۆ پەروەردەو وانەوتنەوەو فێربوون هەیە. مامۆستایان دەتوانن لە سەرەتا ی دەستکردن بە وانە وتنەوە لە پۆلێکی نوێ پشکنین و پێوانە بۆ زیرەکیەکانی هەر تەلەبەیەك بکەن ئینجا رێگای وانە وتنەوەو فێربوونی گونجاو بە گوێرەی لایەنی کرداری بیردۆزەکە پەیڕو بکەن. لێکۆڵینەوەکە بۆی دەرکەوت کە رێگای وانە وتنەوەی فرە زیرەکی بە شێوەیەکی زانستی و ئکادیمی پەیڕو ناکرێ لە ئاستی خوێندنی زمانی ئینگلیزی لە زانکۆ. پێشنیار ئەوەیە کە تیوری فرە زیرەکی بەکاربێت لە هەموو ئاستەکانی خوێندندا، بە کاربێت لە پڕۆسەکانی فێربوون، فێرکردن، هەڵسەنگاندن و وەرگرتن لە بە شەکانی خوێندن و کردنەوەی بەشی نوێ لە دوای قۆناغی بنەڕەتی بە گوێرەی فرە زیرەکیەکانی کەسەکان نەك تەنها بە پشت بەستن بە نمرەی ئەزموونەکان.

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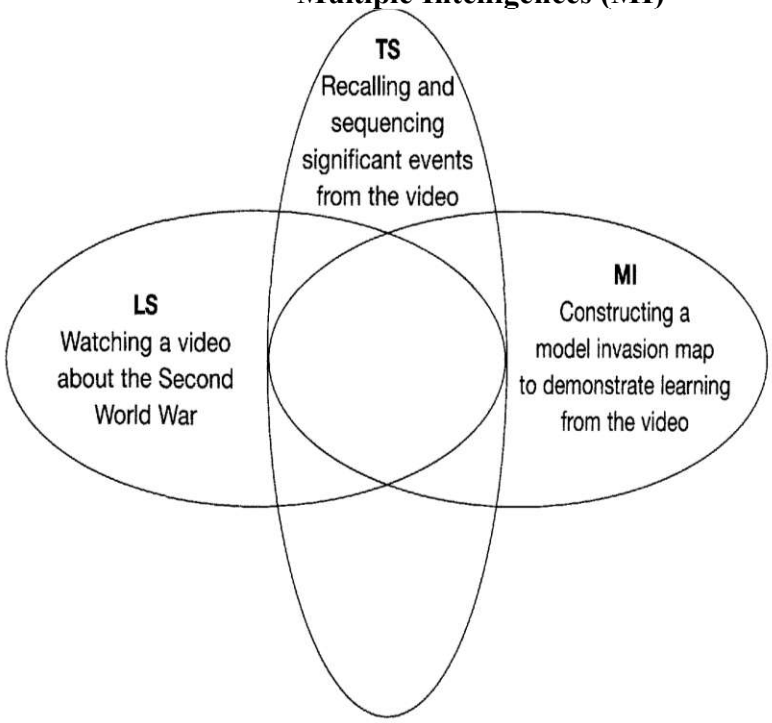
Appendices

Appendix 1 The Bloom's Taxonomies

A	Knowledge-Based Goals	B	Skill-based goals	C	Affective-based goals
6	Evaluation	6	Adaptation	5	Characterization by a Value or Complex
5	Synthesis	5	Complex Overt Response	4	Organizing
4	Analysis	4	Mechanism	3	Valuing
3	Application	3	Guided Response	2	Responding
2	Comprehension	2	Set	1	Receiving
1	Knowledge	1	Perception		

Appendix 2 The Relationship between the Learning Style (LS), Thinking Skills (TS) and Multiple Intelligences (MI)



Appendix 3 The Six Thinking Hats

						
What is the current information on the issue or problem?	How does everyone feel about the current situation, issue or problem?	What are the positive aspects of the current situation, issue or problem?	What are the negative aspects of the current situation, issue or problem?	What are new creative ideas or alternatives in solving the issue or problem?	How does everyone feel now that we have worked on the issue or problem?	What conclusions or summaries can we make in moving forward on the issue or problem?

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