Full Length Research Paper

Multiple intelligences' profile of the students of the Faculty of Home Economics in King Abdul-Aziz University

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Abstract

This study aimed at identifying the Multiple Intelligences of the students of the Faculty of Home Economics in King Abdul-Aziz University. It also aimed at investigating whether the profiles of the Multiple Intelligences of students differ according to their specializations. The method of this study is a survey, so the population consisted of students of the faculty of Home Economics in king Abdul Aziz University enrolled in the second year 2013, the study sample consisted of (288) students who are studying the seven Sections of the faculty: Educational Economics, Childhood Studies , Islamic Arts, Food and Nutrition, Textiles and Clothes and Housing ,and Interior design .The researcher prepared a scale which consisted of (90) items divided into (9) dimensions, each dimension represented a specific type of intelligence . The scale was validated and the factor of reliability Cornbach's Alpha was calculated it was (0.88) which is considered to be accepted for research purposes. Then the means and the standard deviations of the answers of the students for each dimension with all its items were calculated. The results showed that the most prevalent intelligences among the students of the Faculty of Home Economics in King Abdul-Aziz University are the following ones, arranged according to prevalence: the existential, the personal, the spatial, the bodily, the natural, then the verbal, while the lowest mean is that of the musical intelligence. Also the results showed that there are differences among the students of the Faculty of Home Economics in King Abdul-Aziz University in Multiple Intelligences profiles according to specialization in the university. To know the significance of these differences, Scheffe Test for Post Comparisons was used the results revealed that there are statically significant differences in favor of students of Islamic Arts compared with those of Food and Nutrition. Furthermore, the students of Educational Economics were better than those of childhood studies, Nutrition and Housing While the students of Islamic Arts were better than childhood studies, Nutrition, clothes and Housing.

Keywords: Multiple intelligences, Faculty of Home Economics, King Abdul-Aziz University, profile of the students

INTRODUCTION

As a matter of fact, the development of brain research in the last two decades of the twentieth century lead to the emergence of many ideas and psychological theories related to IQ. Until the seventies of the 20th century intelligence was viewed as one ability or two, but this approach was changed as a result of deep thorough studies about brain conducted by Howard Gardener at the beginning of the eighties of that century Gardner's theory of MI was based on the results of neurological research and cognitive approach which showed the multi functions of the brain such as organizing thinking according to these different functions (Gardner, 2003).

Moreover, Gardner's theory is based on a group of factors and criteria derived from: case studies of

individuals who possess abilities and endowed with some outstanding gifts in a certain area. They are derived from studies on individuals who suffer from brain damage which affects certain ability. Studies on psychological scales, experts in different areas besides individuals from different cultures (Gardner, 1983).

As a beginning we have to reflect on how he defined intelligence in a different comprehensive way , to him " An intelligence is the ability to solve problems , or to create products , that are valued within one or more cultural settings "(Gardner ,2004, p .xxiv) . Gardner made use of the results of neurological research to define seven different types of intelligences (Hart, 1996), then he added other two ones (Gardner, 1999). We need to mention that this theory refers to the idea that inside each intelligence there is a unique system of processing information (Sousa, 2001).

If educators reflect on the developmental knowledge about the individual profiles of intelligences they'll feel that it   is a real challenge to all the educational systems and educators in the twenty first century as they can no longer   assume that everyone can learn the same materials in the same way and that a universal method can measure students' learning. Instead , they'll feel that there is a must to apply different means and different methods to promote meaningful learning .

The main abilities which constitute MI can be described according to Funderstanding as follows: (Funderstanding, 2001):
1. Non- dependent on other abilities.
2. Having a basis group of procedures of processing information.
3. Having a distinguished history of developmental stages which every individual passes.
4. Having acceptable roots in developmental history.
Gardner defines each intelligence and clarifies the acts of those who possess each as follows :(Gardner, 1999)

Verbal linguistic intelligence

Those who possess this ability are , creative writers and speakers , they are usually fond of words ,and they use them creatively ,they usually :
- write novels, stories or essays using the arts of writing.
 - have the ability to use clear language, can communicate with others and express their ideas verbally and in writing.
- can learn new vocabulary and think by using words.
- spend their time in reading, writing poems and stories.
- take part in discussions, debates, preaches, and telling anecdotes.
- express their ideas precisely and in details.

Logical Mathematical

Those who possess this ability usually use logical thinking and mathematics in solving the problems they

may face, they usually:
-use reasoning and calculating.
-can see and explore patterns and relationships.
-like to experiment and solve puzzles,
- think in an abstract, conceptual way and have the ability to discover patterns and relations which might not be discovered by other people.
-like to discover and try to solve puzzles and tackle difficult problems so as to solve.
- deal with numbers and mathematical processes.
- think scientifically and logically and can use inductive and deductive thinking.

Spatial- Visual Intelligence

Those who possess this ability usually make mental images of places and perceive the visual world accurately, surgeons, architects , engineers ,and sailors, usually have this kind of intelligence, these people:
- are influenced by physical space
-care for the environment and aware of the surroundings
-can draw puzzles, and read maps
- use pictures and imagination.
- are interested in things, shapes and colors in surroundings
- like to form mental images in different situations.

Musical Intelligence

Those who possess this ability are usually aware of rhythm and sound. They love music, but they are also sensitive to different sounds. They may study better with musical background. These people usually:
- read musical notes play and compose music.
- are aware of sounds of their environment like the sound of wind, sea, running water.
- repeat any tune or rhyme after listening to it only once.
- like to listen to different sounds and tunes
-are affected by music and this effect can be seen on their facial expressions and bodily movements.

Bodily/ kinesthetic intelligence

Those who possess this ability   can perform motor actions more efficiently than others. They can use their bodies effectively, they have body awareness. Also, they like: movements, making things, and touching. They communicate well through body language .Good examples of these people are dancers or a surgeons. Bodily people usually:
- use their bodies to play games and physical skills.
-like playing roles and acting
-learn through hands-on learning
 - communicate through body language and body gestures
- can imitate what they see

Intrapersonal Intelligence

This kind of intelligence is related to personal trait and self-characteristics; it requires the ability of being   aware

of yourself your intuition and motivation and being able to communicate with it, individuals who have this ability usually understand their own interests and goals. They're in harmony   with their inner feelings; they are wise, they have a strong will, they can be taught through independent study and introspection ,they are the most self -dependent people, usually they:
- understand themselves,
-are aware of their motives and behaviors.
- like to practice introspection and self- awareness.
- understand their inner feelings, their values and beliefs
-are aware of their mental processes
- are smart and have creative views

Interpersonal Intelligence

Those who possess this ability can communicate with others and acquire the skills of participating in dialogues and debates, individuals who have this ability usually:
-can feel with others and can deal with different motives.
-understand and interact with others.
 - learn through interaction.
- have many friends, and can empathize with others.
- can be taught through group activities, seminars, and dialogues
- learn through communications with others and prefer collective activities
-develop different types of friendship with people
- show empathy with others
-are skillful in counseling others and encouraging them to participate in discussions
- can solve disputes, and mediate to solve problems

Naturalist Intelligence

Those who possess this ability usually deal with things in their natural environment; they study then classify these things such as trees, rocks, plants, mountains, and flowers, they usually:
-prefer walking, fishing, and spend their time in landscape
- observe the nature of things, and can classify things in nature easily.
- care for their clothes , their impressions on the other and their appearance.

Existential Intelligence (Nofal, 2007; Hussein, 2003):

Those who possess this type of intelligence have tendency to raise questions about life, death, religion, ethical issues and similar things, they usually;
- like to ask questions and think reflectively
- ask big questions about death, life, life after death.
-think and ask about the possibility of different forms of life on other places and other planets.
- ask about how the existence was millions of years ago.
- ask about invisible things in the universe.

Problem of the Study

The aim of this research paper is to investigate the profile

of MI among the students of the second year of the Faculty of Home Economics in the Female part of King Abdul-Aziz University

Questions of the Study

The problem of this study can be stated in the following questions**:**
1. What are the prevalent Intelligences among the second Year Students of the faculty of Home Economics in King Abdul Aziz University?
2-Do the profiles of multiple intelligences of students of the 2nd year of the Faculty of Home Economics in King Abdul-Aziz University differ according to their specializations?
3-Are there significant differences among students' estimations for each type of the multiple intelligences according to their specializations?

The Importance and the Purpose of the study

This research paper is important for the following reasons:
1- Only few studies in the Arab world tackled the multiple intelligences of university students.
2- The results of this research may help to define areas of strength and weakness in the performance of Arab university students so as to provide university teachers and curriculum planners with principles to address diversity among Arab university students.

Limits of the Study

The results of this study can be generalized according to the following:
1. The sample of this study is the students of the 2nd year of the Faculty of Home Economics in King Abdul-Aziz University   from all specializations.
2. The tool to measure MI has been checked to make sure of the psychometric characteristics of the tool.

Previous Studies

-Meneviş and Ozad conducted a study (Meneviş & Ozad, 2014) to know whether age and gender influences multiple intelligences or not, they aimed to find whether or not there is a correlation between the nine intelligence types and individuals' age and gender. The results showed that there are statistically significant differences for verbal, kinesthetic, existential, musical, interpersonal, intrapersonal, and naturalist intelligences according to gender and statistically significant differences for visual, logical, intrapersonal, naturalist, and existential intelligences according to age.
   Some researchers conducted an important study (Soleimani, etal, 2012) about the results of teaching according to multiple Intelligences theory on the attitude

and Learning of English. The aim of the study was to find the effect of teaching according multiple intelligence (MI) theory on attitude and learning of English among students of Islamic Azad University, Kermanshah. The results of the study indicated that there was a difference in improving English between experimental group and control groups. Students of the experimental group were better in structure, vocabulary and reading comprehension Also, the students of the experimental group were better in their   attitude towards learning.

- Al Muhaidib conducted a research paper (Al Muhaidib, 2011) to identify the differences among Saudi female school learners. The purpose of the study was to explore multiple intelligences in the classroom and its application in the Saudi Arabia The findings showed that the significant differences of capabilities must be taken into consideration and, learners must be helped to fulfill their potential. Her study is different from this study as the population of this study is university female students.

-Also, Omran conducted a research (Omran, 2006) aimed at identifying the differences among the students of Bahrain University in multiple intelligences according to their specializations, the sample of the study were (238) from (13) different specializations. The results revealed that there is harmony between the students' intelligence and their specialization. Also it showed that the most prevalent intelligences among all the students are interpersonal and intrapersonal Moreover, it showed that there is an impact of gender in bodily, and spatial intelligences in favor of males besides an impact of specialization on MI.

   It is clear from the review of literature above that the aim of some of the studies was to   investigate the effect of instruction based on Multiple intelligence (MI) theory on attitude and learning of certain courses, and to explore its application in the Saudi context. Others aimed at examining multiple intelligences domains and identifying the differences among the students of University in multiple intelligences according to their specializations. This study is different from all these studies as it investigates the multiple intelligences profile of the students of the faculty of Home Economics in the Female Part of King Abdul-Aziz University and it follows the descriptive, survey method.

METHOD AND PROCEDURES

This part deals with detailed description of methodology , variables , population of the study ,the sample, tools used by the researcher ,the procedures , the statistical treatment which was used to analyze the results .

METHODOLOGY

The descriptive, survey method is used in this study

Population of the Study

The method of this study is a survey, so the population consists of students of the faculty of Home Economics in king Abdul Aziz University enrolled in the second year 2013. The total number of the population of this study is (350) students.

Sample of the Study

The sample consists of (288) distributed in the seven Sections of the faculty of Home Economics : Educational Economics, Childhood Studies, Islamic Arts, Food and Nutrition, Textiles and Clothes, Housing, and Interior design The first table shows the distribution of the students according to their sections (Table 1)

Table 1: The sample of the study

Number of students	Univ. Specialization
25	Educational Economics
84	childhood studies
76	food &nutrition
7	clothes &textures
59	housing
17	Islamic Arts
20	Interior design
288	Total

Data Collection Tools

The tool used in this study is Multiple Intelligences Scale

Components of the Scale

Based on the theoretical framework of the MI theory and after reviewing some scales and their translations, the researcher prepared this scale which consists of (90) items divided into (9) dimensions, therefore each dimension represents a specific type of intelligence. Here follows the intelligences and the numbers of items they represent

   In the following list there are the different types of intelligences and the items which represent each:

1. (Verbal \Linguistic Intelligence): 1, 10, 19, 28, 37, 46, 55, 64, 73, 82

2. lacigoL \ Mathematical Intelligence): 2, 11, 20, 29, 38, 47, 56 65, 74, 83

3. Spatial Intelligence): 3, 12, 21, 30, 39, 48, 57, 66, 75, 84

4. Bodily \ Kinesthetic Intelligence): 4,13, 22, 31, 40, 49, 58, 67, 76, 85.

5. Musical Intelligence): 5, 14, 23, 32, 41, 50, 59, 68, 77, 86

6. (Interpersonal/ Social Intelligence): 6, 15, 24, 33, 42, 51, 60, 69, 78, 87

7. (Intrapersonal Intelligence):7, 16, 25, 34, 43, 52, 61, 70, 79, 88:8, 17, 26, 35, 44, 53,62, 71, 80, 89.8. (Natural Intelligence).

Table 2: Means of the scores of the students for Each Type of Intelligence

Intelligence	Mean	Std. Deviation
Verbal	0.4833	0.1876
Logical	0.5264	0.2120
Spatial	0.5983	0.1923
Bodily	0.5927	0.1964
Musical	0.4073	0.2328
Intrapersonal	0.5774	0.2163
Personal	0.5983	0.2028
Natural	0.4851	0.2052
Existential	0.6514	0.2063

9. (Existential Intelligence): 9, 18, 27, 36, 45, 54, 63, 72, 81, 90

Validity of the Scale

This scale was validated by the following steps:

- The researcher selected ninety items from different scales of MI and from different electronic references besides many available English references which deal with the nine intelligences .After preparing the scale it was given to three referees whose specializations are :Arabic and educational psychology ,and general education to check the degree of its relevance and fitness to the target and to check the correctness and precision of the language .

--The views of the referees were studied then taken into consideration ,some items had been modified accordingly so as to be fit to the target .

- This scale has been used for a sample from the students of the faculty of Home Economics (60 students), to make sure that the items were clear and comprehended by the students. Some items of the scale were modified accordingly.

The Reliability of the Scale

The questionnaire was used for ninety students from different levels then the factor of reliability Cornbach's Alpha was calculated, it was (0.88)which is considered to be accepted for research purposes.

Correction Method

The data was analyzed by computer, and then the suitable statics were applied.

Method of Implementation

- Copies of the scale were distributed among the students then the instructions of answering were clarified, they must put (√) on the item which applies to them, the objectives of using the scale were also explained. The students were asked to answer within half an hour.

Procedures

To gain the results of the study, the researcher followed the following steps:

1-A permission to conduct the study was taken from the Administration of The Faculty of Home Economics in King Abdul-Aziz University.

2. Implementing the questionnaires on the students.

3-The data was statically analyzed, the following statics were used:

- Calculating the means and the standard deviations
- T test for the independent samples
- ANOVA analysis
- Scheffe test

The questions of the study are:

1-What types of Intelligences are prevalent among Second Year Students of the faculty of Home Economics in King Abdul Aziz University?

2--Do the profiles of multiple intelligences of students of the 2nd year of the Faculty of Home Economics in King Abdul-Aziz University differ according to their specializations?

3-Are there significant differences among students' estimations for each type of the multiple intelligences according to their specializations?

To answer The First Question, the means and the standard deviations of the answers of the students for each dimension with all its items were calculated. Table 2 shows the results.

Table 2 shows that the highest mean of all intelligences is the existential, followed by the personal and the spatial, then the bodily, the natural, the verbal, while the lowest mean is that of the musical intelligence.

To answer the second question of the study this is:

Do the profiles of multiple intelligences of students of the 2nd year of the Faculty of Home Economics in King Abdul-Aziz University differ according to their specializations?

To answer this question, the means and the standard deviations of the scores of the students on the inventory of the MI were calculated according to the independent variable (the specialization), Table 3 shows The Means and the standard deviations of the Scores of the Sample of the Study.

Table 3 shows that item 10 got the highest mean of verbal intelligence (I can hear the words in my head before reading, saying or writing them) while the lowest

Table 3: Verbal / Linguistic Intelligence

No.	Item	Mean	Standard. Deviation
1	Books are important to me	0.5868	0.4933
10	I can hear the words in my head before reading, saying or writing them	0.7674	0.4232
19	I understand what I hear from radio or recorded material better than T.V or movies	0.2431	0.4297
28	I'm good at playing word games , word puzzles and secret word games	0.4965	0.5009
37	It is interesting for me to write poems, participate in debates, conversations, and to play with words	0.4687	0.4999
46	While speaking, the listeners stop me to ask about the meanings of the words I use in writing and speaking	0.4132	0.4933
55	When I was at school ,subjects like: English, social studies and history were easier to me than math and science.	0.3785	0.4859
64	When I walk in an open road I become aware of words written on boards more than views.	0.4826	0.5006
73	When I speak to people, usually I refer to things I read or heard about	0.6354	0.4822
82	I recently wrote things of which I'm proud and they deserve to be read.	0.3611	0.4812
Total	0.4833		0.1876

Table 4: Means and standard deviations of Logical / mathematical intelligence

Std. Deviation	Mean	Item	No.
0.5008	0.5069	I can calculate numbers easily in my mind	2
0.4955	0.5729	Math and/or science were my favorite subjects when I was at school	11
0.4643	0.6875	It is interesting for me to play mental games or solve problems which require logical thinking	20
0.4960	0.4306	I like to prepare experiments which consist of "what if …."Such as: What will happen if we weekly double the amount of water used to irrigate the flowers?	29
0.4913	0.5972	My mind seeks for patterns, organization, and logical sequence of things.	38
0.4950	0.4236	I care for the recent developments in science	47
0.4210	0.7708	I think that nearly everything has a logical interpretation	56
0.4434	0.2674	I think of abstract concepts without words or images.	65
0.4950	0.4236	I like to find logical gaps in what people say or do (at home or in my work).	74
0.4939	0.5833	like to classify things and analyze or assess them	83
0.2120	0.5264		Total

is item no.(19)(I understand what I hear from recorded material better than T.V or movies.

Table 4 shows that , the highest item of logical l intelligence according to the mean is no(56)(I think that nearly everything has a logical interpretation), while the lowest   is item no . 65(I think of abstract concepts without words or images).

Table 5 shows that , the highest item of visual spatial intelligence according to the mean is no(3)(when I close my eyes I can see images and pictures while the lowest is item no .(66)(At school, geometry was easier to me than algebra).

Table 6 shows that, the highest item in Bodily/ kinesthetic intelligence according to the mean is no.49 (I use hand gestures or any kind of body language when I speak to people), while the lowest is item no (4) (I am involved regularly in at least one physical activity).

Table 7 shows that, the highest item in musical intelligence is the mean of   no.50 (Sometimes I make sounds or tabs or whistles while studying or learning a new thing. while the lowest according to the mean is no (32) (I can play musical instruments).

Table 8 shows that according   to Intrapersonal Intelligence the highest mean is item (51)   (I feel happy when someone or a group of people ask me to teach them how to do a certain thing which I know) while the lowest according to the mean is item no. 60 (I consider myself a leader or the others consider me so).

Table 5: Means and standard deviations for Visual /Spatial

No.	Item	Mean	Std. Deviation
3	When I close my eyes I can see images and pictures	0.8090	0.3938
12	I have high senses of colors	0.7361	0.4415
21	I use ordinary camera or video camera to record what I see.	0.6042	0.4899
30	It is interesting for me solve picture puzzles, jig saw and other visual puzzles.	0.6667	0.4722
39	I've got vivid dreams which are full of activity	0.7326	0.4434
48	I can find my way in a road even if the area is not known to me.	0.4375	0.4969
57	.I like to draw and scratch .	0.6875	0.4643
66	In school geometry was easier to me than algebra.	0.2986	0.4584
75	It is easy for me to imagine things in space in different directions (up-side- down)	0.4201	0.4944
84	I prefer to look at read material which contains a lot of illustrations	0.5903	0.4926
Total	0.5983		0.1923

Table 6: Means and standard deviations for Bodily/ kinesthetic intelligence

No.	Item	Mean	Std. Deviation
4	I am involved regularly in at least one physical activity	0.3368	0.4734
13	It is difficult for me to stay sitting for a long time	0.6076	0.4891
22	I like to do manual work like: sewing, weaving carving carpentry or architectural drawing.	0.4722	0.5001
31	Good ideas come to me while I'm walking Or jogging or while being involved in physical activities.	0.5625	0.4969
40	I like to spend my spare time out door	0.5347	0.4997
49	I use hand gestures or any kind of body language when I speak to people	0.7986	0.4017
58	I need to touch things so as to learn more about them.	0.6493	0.4780
67	I like dangerous games or exciting experiences.	0.6389	0.4812
76	I can describe myself as organized and coordinated	0.5937	0.4920
85	To acquire a skill , I prefer training to reading or watching a video film about it.	0.7326	0.4434
Total	0.5927		0.1964

Table 7: Means and standard deviations for Musical intelligence

No.	Item	Mean	Std. Deviation
5	I've got a nice voice	0.4549	0.4988
14	I can define when a musical note is out of rhythm	0.2604	0.4396
23	I find it interesting to listen to music through radio , record player or c.ds	0.5243	0.5003
32	I can play musical instruments	0.1528	0.3604
41	I think my life will be worse without music	0.1875	0.3910
50	Sometimes I make sounds or tabs or whistles while studying or learning a new thing	0.6597	0.4746
59	I can compose a musical passage by some simple instruments.	0.2361	0.4254
68	I know the tune of different songs or musical passages	0.5347	0.4997
77	I can sing a musical passage after listening to it once or twice	0.5486	0.4985
86	Sometimes I make sounds or tabs or whistles while studying or learning a new thing	0.5139	0.5007
Total	0.4073		0.2328

Table 9 shows that, the highest item personal Intelligence according to the mean is no.43 (I have some important goals which I regularly think of how to achieve them) while the lowest is item no (61) (I prefer to spend my weekend (holiday) alone (in isolation) to spending it with other people).

Table 10 shows that, the highest item Natural Intelligence according to the mean is no.44 (I believe that

Table 8: Means and standard deviations for Intrapersonal Intelligence

No.	Item	Mean	Std. Deviation
6	I'm from the type of people whom others (neighbors or colleagues) ask for advice.	0.5833	0.4939
15	I prefer collective games such as: tennis, football, and basketball to individual ones like: swimming or jogging.	0.4722	0.5001
24	When I face a problem I usually ask someone to solve it for me instead of solving it by myself.	0.5417	0.4991
33	.I've got at least three close friends.	0.7326	0.4434
42	I prefer team games for recreation like :monopoly , the bridge to individual games like : video games or solitaire	0.6215	0.4859
51	I feel happy when someone or a group of people ask me to teach them how to do a certain thing which I know.	0.8125	0.3910
60	I consider myself a leader (or the others consider me so)	0.4132	0.4933
69	When I'm among people , I feel comfortable	0.4167	0.4939
78	I like to join social activities which are related to my work , or in worship places , or in public society	0.4896	0.5008
87	I prefer to spend the evening in vivid social meetings to being alone at home.	0.6910	0.4629
Total	0.5774		0.2163

Table 9: Means and standard deviations for personal Intelligence

No.	Item	Mean	Std. Deviation
7	I regularly spend some time alone thinking reflectively in important questions about life.	0.6389	0.4812
16	I like to participate in counseling sessions or developmental sessions to know myself more	0.6667	0.4722
25	I've got my own ideas which isolate me from people.	0.6736	0.4697
34	.I have a hobby and some personal favorites which I keep for myself.	0.7014	0.4584
43	I have some important goals which I regularly think of how to achieve them	0.7674	0.4232
52	I have a realistic view to my strengths and weaknesses (which has been formed through feedback from different sources.	0.5903	0.4926
61	I prefer to spend my weekend (holiday) alone (in isolation) to spending it with other people	0.2708	0.4452
70	I consider myself as an independent –minded person with a strong will.	0.6389	0.4812
79	I keep a personal record to write the personal events of my life.	0.3993	0.4906
88	I work for my own or at least think seriously to work for my own in the future.	0.6354	0.4822
Total	0.5983		0.2028

keeping our national parks clean is an important thing) while the lowest is item no (89) (I spend long time outside my house).

Table 11 shows that the highest item in Existential Intelligence according to the mean is no (27) Religion is important for me ,(while the lowest according to the mean is item no.(63) (It is interesting to me to read about ancient and recent philosophers.

Then the researcher calculated the Means and the standard deviations of the Scores of the Sample of the Study According to their Specializations as seen in Table 12.

Table 12 shows that there are differences among students in estimating MI according to specialization in the university. To know the significance of these differences , the variance analysis was used as seen in Table 13.

Table 13 shows that there are differences among students in estimating MI according to specialization in the university. To know the significance of these differences Scheffe Test for Post Comparisons   was used, Table number (14) shows these results.

It is clear from Table 14 that there are differences in favor of students of Islamic Arts compared with those of Food and Nutrition.

To answer the third question: Are there significant

Table 10: Means and standard deviations for Natural Intelligence

No.	Item	Mean	Std. Deviation
8	I find it interesting to classify things according to the common characteristics among them	0.6806	0.4671
17	Environmental issues are important for me	0.4479	0.4981
26	I like to walk for long distances and to spend my time in camping	0.5486	0.4985
35	It is enjoyable for me to spend my time working in the garden	0.5312	0.4999
44	I believe that keeping our national parks clean is an important thing	0.8576	0.3500
53	Putting things in a hierarchical shape makes things meaningful to me	0.4306	0.4960
62	Animals are important to me	0.3437	0.4758
71	In my house I use recycling, to make vases and antiques from empty cans and bottles	0.2847	0.4521
80	It is interesting for me to study biology, zoology, and the science of plants	0.4861	0.5007
89	I spend long time outside my house	0.2396	0.4276
Total	0.4851		0.2052

Table 11: Means and standard deviations for Existential Intelligence.

No.	Item	Mean	Std. Deviation
9	It is important to find a role for me in this existence	0.7153	0.4521
18	It is interesting for me to discuss problems related to life.	0.7500	0.4338
27	Religion is important for me.	0.8854	0.3191
36	I find joy in looking at wonderful pieces of art.	0.7083	0.4553
45	I consider relaxation and reflective thinking as reinforcement for me.	0.7604	0.4276
54	I like to visit exciting sites in nature.	0.6806	0.4671
63	It is interesting to me to read about ancient and recent philosophers.	0.3264	0.4697
72	Learning new things becomes easier to me when I understand their importance and their value	0.7847	0.4117
81	I wonder if there are other kinds of smart life in this existence.	0.5174	0.5006
90	Studying history and ancient cultures helps me to have my own point of view.	0.3854	0.4875
Total	0.6514		0.2063

Table 12: Means and the standard deviations of the Scores of the Sample of the Study According to their Specializations

Univ. Specialization	N	Mean	Std. Deviation
Educational Economics	25	0.5572	0.0937
Childhood Studies	84	0.5498	0.1063
Food & Nutrition	76	0.5111	0.1332
Clothes & Textiles	7	0.5529	0.1671
Housing	59	0.5398	0.1707
Islamic Arts	17	0.6065	0.1160
Interior Design	20	0.6245	0.1586
Total	288	0.5468	0.1361

Table 13: Analysis of Differences among Students ' scores according to specializations.

Source	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.285	6	0.04749	2.654	0.016
Within Groups	5.029	281	0.01790		
Total	5.314	287			

differences among students' estimations for each type of the multiple intelligences according to their specializations, variance analysis was done to compare students' estimations for each type of intelligences according to students' specializations, the following table shows the results.

It is clear from the results that there are significant differences among students' estimations for verbal,

Table 14: Results of Scheffe Test for Post Comparisons

Specialization	childhood studies	Food &Nutrition	Clothes & Textiles	Housing	Islamic Arts	Interior Design
Educational Economics	0.0074	0.0462	0.0043	0.0174	- 0.0493	- 0.0673
Childhood Studies	-	0.0387	- 0.0031	0.0099	- 0.0567	- 0.0747*
Food &Nutrition	-	-	- 0.0418	- 0.0288	- 0.0954*	- 0.1134*
Clothes & Textiles	-	-	-	0.0130	- 0.0536	- 0.0716
Housing	-	-	-	-	- 0.0666	- 0.0847
Islamic Arts	-	-	-	-	-	- 0.0180

Table 15: Results of variance analysis to compare students' Estimations for Each Type of Intelligences According to Students' Specializations

intelligence	Source	Sum of Squares	df	Mean Square	F	Sig.
verbal						
	Between Groups	0.173	6	0.02887	0.817	0.557
	Within Groups					
9.927	281	0.03533				
Total						
10.100		287				
Logical						
	Between Groups	0.863	6	0.144	3.356*	0.003
	Within Groups					
12.037	281	0.04284				
Total						
12.899		287				
ᶦSpatial						
	Between Groups	0.933	6	0.156	4.518*	0.000
	Within Groups					
9.676	281	0.03443				
Total						
10.609		287				
Bodily						
	Between Groups	0.224	6	0.03726	0.965	0.449
	Within Groups					
10.851	281	0.03862				
Total						
11.075		287				
Musical						
	Between Groups	0.212	6	0.03536	0.648	0.692
	Within Groups					
15.343	281	0.05460				
Total						
15.555		287				
Interpersonal						
	Between Groups	0.321	6	0.05355	1.148	0.334
	Within Groups					
13.102	281	0.04663				
Total						
13.423		287				
Intrapersonal						
	Between Groups	0.308	6	0.05133	1.254	0.279
	Within Groups					
11.501	281	0.04093				
Total						
11.809		287				
ᶦNatural						
	Between Groups	0.700	6	0.117	2.880*	0.010
	Within Groups	0.04052				

Table 15 continued

11.386	281	0.04052			
Total 12.086	287				
⁞Existential					
	Between Groups Within Groups	0.414	6	0.06897	1.642	0.136
11.806	281	0.04201			
Total 12.219	287				

Table 16: Logical Intelligence

Specialization	Childhood Studies	Food & Nutrition	Clothes & Textiles	Housing	Islamic Arts	Interior Design
Educational Economics	0.1100*	0.0961*	0.1611	0.1040*	- 0.0489	- 0.0310
Childhood Studies	-	- 0.0138	0.0512	- 0.0059	- 0.1589*	- 0.1410*
Food &Nutrition	-	-	0.0650	0.0079	- 0.1450*	- 0.1271*
Clothes & Textiles	-	-	-	- 0.0571	- 0.2101*	- 0.1921*
Housing	-	-	-	-	- 0.1529*	- 0.1350*
Islamic Arts	-	-	-	-	-	0.0179

Table 17: Spatial Intelligence

Specialization	Childhood Studies	Food &Nutrition	Clothes & Textiles	Housing	Islamic Arts	Interior Design
Educational Economics	0.1058*	0.1313*	0.0331	0.0777	- 0.0122	- 0.0540
Childhood Studies	-	0.0255	- 0.0726	- 0.0281	- 0.1180*	- 0.1598*
Food &Nutrition	-	-	- 0.0981	- 0.00536	- 0.1435*	- 0.1853*
Clothes & Textiles	-	-	-	0.0446	- 0.0454	- 0.0871
⁞ Housing	-	-	-	-	- 0.0899	- 0.1317*
Islamic Arts	-	-	-	-	-	- 0.0418

Table 18: Natural Intelligence

Specialization	Childhood Studies	Food &Nutrition	Clothes & Textiles	Housing	Islamic Arts	Interior Design
Educational Economics	0.0152	0.0647	0.0057	0.0234	- 0.0094	- 0.0600
Childhood Studies	-	0.0495	- 0.0095	0.0082	- 0.0247	- 0.0752
Food &Nutrition	-	-	- 0.0590	- 0.0413	- 0.0741	- 0.1247*
Clothes & Textiles	-	-	-	0.0177	- 0.0151	- 0.0657
Housing	-	-	-	-	- 0.0328	- 0.0834
Islamic Arts	-	-	-	-	-	- 0.0506

spatial and natural intelligences. To find out the significance of these differences, Scheffe Test for Post Comparisons Table 15

It is clear from the results in Table 16 that the students of Educational Economics were better in logical intelligence than those of Childhood Studies, Food & Nutrition and Housing. While the students of Islamic Arts were better than those of Childhood Studies , Food & Nutrition, Clothes and Textiles and Housing

It is clear from the results in Table 17 that in Spatial intelligence and according to specialization, the students of Educational Economics were better than Childhood Studies, and Food &Nutrition While the students of Islamic Arts were better than those of Childhood Studies

and Food &Nutrition, but the students of Interior Design were better than Childhood Studies and Food &Nutrition and Housing.

It is clear from the result that in natural intelligence interior design is better than nutrition Table 18

DISCUSSION OF RESULTS AND RECOMMENDATIONS

This study aimed at identifying the Multiple Intelligences of the students of the Faculty of Home Economics in King Abdul-Aziz University. It also aimed at investigating whether the profiles of the MI of students differ according to their specializations. .The results indicated that the most prevalent intelligences among the students are verbal, spatial and natural intelligences, and this result goes with the characteristics of their stage. It is clear from the results that in Spatial intelligence and according to specialization, the students of Educational Economics were better than Childhood Studies, and Food &Nutrition While the students of Islamic Arts were better than those of Childhood Studies and Food &Nutrition, but the students of Interior Design were better than Childhood Studies and Food &Nutrition and Housing due to the nature of their specializations.

RECOMMENDATIONS

The researcher recommends the following:

-There should be different types of university activities which consist of musical intelligence and natural intelligence such as: journeys, physical exercises, celebrations, and cultural competitions.

-The main principles and the implications of the multiple intelligences theory must be taken into consideration when the decision makers and supervisors of students plan for students' activities.

- Comparative studies to identify diversity among female students in different Saudi Arabian universities can be suggested for future studies.

-There is a need for evaluative studies to evaluate to what extent class activities in universities address areas of intelligence of the students.

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