

AN INVESTIGATION INTO TYPES OF MULTIPLE INTELLIGENCE USED BY STUDENTS OF ENGLISH DEPARTMENT AT COLLEGE OF BASIC EDUCATION.

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ABSTRACT: *The main purpose of the study was to investigate English department students' multiple intelligences according to their preferences and how the multiple intelligences differ in terms of gender and grade of students. The study is restricted to the 3rd and 4th year Basic Education College students during the academic year 2017-2018. The total number of the whole population is (80) which is distributed into two types: pilot and main sample. This research was conducted in English department Basic Education College. Multiple Intelligence questionnaires were applied to the students. The data obtained from the study were analyzed statistically by using Statistical Package Program through the use of descriptive statistics, and independent Samples T-Test. The results of the study showed that the students of English department students showed a variety of multiple intelligences according to gender and grade types. Finally, the students perceived activities related to bodily/ kinesthetic intelligence to be the least useful activities.*

Keywords: Investigation, Multiple Intelligences, and Basic Education College Introduction.

1. THE PROBLEM OF THE STUDY AND ITS SIGNIFICANCE

Researchers define intelligence as the ability to acquire knowledge; many of them believe that it is necessary to make an effort in developing study programmed and teaching methodologies in accordance with students' learning styles and their preferences. They also believe that the teachers should take into consideration the individual differences between students. This opinion is to agree with the scientific studies and their results that support the notion of variations among students and their ability to learn better, if the study programs, courses and methodologies are well designed in accordance with their own types of intelligence. The present study is an attempt to shed light on the types of intelligence among the students of English Department, Basic Education College and also to provide the teachers with appropriate ways to select the teaching methodologies that enable the student to learn easily.

1.2 AIMS OF THE STUDY

This study aims to understand which Multiple Intelligence types are dominant among the students as well as to explore the relationship between Multiple Intelligences and the variable of gender and grade of students. In order to achieve the aim of this study, the study tries to answer the following questions:

1. Which multiple intelligence types are dominant among students of English department?
2. Is there a difference between male and female students in terms of their dominant multiple intelligence types?
3. Is there a difference between 3rd grade and 4th grade students in terms of their dominant multiple intelligence types?

1.3 LIMITS OF THE STUDY

This study is limited to the investigation of types of multiple intelligences used by students of English Department at College of Basic Education in the academic year 2018-2019.

1.4 DEFINITIONS OF BASIC TERMS

1.4.1 Multiple Intelligence

Researchers define the intelligence is a general process of gathering and analyzing the information in the minds of the human [12]. Defines intelligence as the capacity to acquire knowledge, the ability to think and reason in the abstract, and the capability for solving problems.

maintain that intelligence is the main factor in predicting success or failure in school [13].

2. THEORETICAL BACKGROUND

2.1 MULTIPLE INTELLIGENCE TYPES deals with eight intelligence are as the follows [1]:

Linguistic: The ability to use words effectively, in case of writing or orally. The play writing and a storyteller are examples of the linguistic intelligence. This intelligence involves the capacity to manipulate the structure of syntax, semantics or meanings of the language of language practice.

Logical-mathematical: The ability to use numbers effectively. An example of using this intelligence as in; computer programmer. (e.g., as a mathematician, tax accountant, or statistician).

Spatial: The capability to realize the visual-spatial world accurately. (e.g., scout, or guide of a hunter.). This intelligence includes sensitivity to color, shape, form, space, line, and the relationships that exist between these elements.

bodily-kinesthetic: It is the ability of someone to use one's whole body to express feelings and ideas or someone who use one's hands to generate or convert things (e.g., as a mechanic, sculptor or surgeon). This intelligence involves specific physical skills such as strength, flexibility, coordination, balance, and speed.....etc.

Musical: The capability to realize the sound of different kinds of music as well as the ability to discriminate or critic some musician in their performance (e.g., as a musical doing), discriminate (e.g., as a music critic), transform (e.g., as a composer), and express (e.g., as a performer) musical forms. This intelligence involves sensitivity to the pitch, rhythm, or melody, and timbre or tone color of a musical piece.

Interpersonal: The capacity to realize and make distinctions in the motivations, intentions, and feelings of other people. This can involve sensitivity to facial expressions, voice, and gestures; the ability for discerning among many different types of interpersonal cues; and the capability to react effectively to those cues in some pragmatic way.

Intrapersonal: Self-knowledge and the capability to act flexibility on the basis of that knowledge. This intelligence includes having a close picture of oneself (one's strengths and limitations); the person in this intelligence become

aware of inner moods, motivations, intentions, temperaments, and is also having the capacity for self-understanding self-discipline, and self-esteem.

Naturalist: It means the ability of someone to realize and classify of the numerous species—the flora and animals—of an individual's environment. This also involves sensitivity to other natural phenomena (e.g., land, cloud formations, mountains, etc.)

2.2 APPLICATION OF MULTIPLE INTELLIGENCE THEORY IN EDUCATION the Multiple Intelligence Theory in education consists of information on the application of this theory in classrooms, curriculum design, assessment as well as proposals for students, teachers, and students' parents. The theory can be very beneficial in education because it involves subjects that address the ways of thinking, and several intelligences, as well as teaching methods that speak to individual differences, and assessments that go beyond the standard, short-answer language [6]. There are many educators and researchers who have analyzed and considered the application of Intelligence Theory in different educational settings. The Multiple Intelligence Theory has become a "philosophy of education" [10]. He adds that the application of Multiple intelligence Theory has led to the developing of new assessment methods, the formation of curriculum and instruction as well as positive experiences and close connection with students and their parents.

focused on the benefits of the theory in graduate education classes. He said the multiple intelligence theory increased the ability of students to engage in the problem-solving task as well as give the students experienced the meaning from a different aspect, stayed effective during the discussions, and had valuable experience working with partner and feel of the happy learning environment [3].

was preferable the using of Multiple Intelligence Theory in the education because he claimed that it has "put magic" to teaching. He furthest explained that this Theory helped to extend teaching instruction and assessment strategies [5]. clarified the effects of using multiple intelligence-influenced instructions in adult education classes by giving a large diversity of educating tasks and activities and knowledge about the student's "preference of learning and interactions. He also indicated to them, one of the teacher's opinions about Multiple Intelligence theory in education was: "In the end, it's all about looking at everyone from a strengths viewpoint. We all have strengths [11].

Finally, it is concluded that educators have claimed that the employment of Multiple Intelligence Theory in classrooms and education certainly has positive effects in terms of learner motivation and success. Moreover, implementing the Multiple Intelligence Theory in syllabus and curriculum design has been found to develop and improve teaching practices and assessment techniques.

2.3 APPLICATION OF MULTIPLE INTELLIGENCE THEORY IN ELT

The Multiple Intelligence Theory has important results for English language learning and teaching. Application of this theory in ELT can be considered very important for both students and teachers as well as for the instructional strategies, curriculum design, textbooks, and materials used in learning and language teaching. Many of studies have been done to search on the application of the theory in an English class.

mentioned that people apply different blends of intelligence when they carry out daily tasks. For example, driving a vehicle requires a combination of bodily-kinesthetic, intrapersonal, logical- mathematical, spatial, and interpersonal intelligence. Therefore, it is necessary to develop both dominant and less dominant, because people are needed to apply a diversity of blends of intelligence in their every-day activities [14].

She also states that the development of all of our intelligence can be done if we get to positive educational and environmental circumstances.

said that the importance of using the Multiple Intelligence Theory in ELT classrooms so as to create an individualized learning setting and assist the students with varying abilities to develop their multiple intelligences. She also, added that the theory of Multiple Intelligence supplies EFL teachers' chance to look at their teaching practices from individual diversity view [4].

Teachers must consider all the intelligence equally important. This is very different from traditional education systems, where learning and teaching improvement have been strongly focused on linguistic and logical-mathematical intelligence. Thus, the theory of multiple intelligences proposes that educators got to realize and teach to a wide range of students' skills and talents. Another implementation is that the teachers need to construct a class which engages most of or all of the intelligence. Example, when the teachers need to teach students about the Revolutionary War, "a teacher can display students with war songs, battle maps, play revolutionary, regulates a role play of the signing of the Declaration of Independence, and have the students read a narration about life during that period" [2].

proposes that in addition to having positive environmental and educational circumstances, educators should first focus on students' strong areas and then concentrate on those areas that are less strong. Teele adds that this approach builds students' self-esteem and helps them to become realize of their capacities and talents. Subsequently, students could "be taught how to translate from their dominant intelligence to their less dominant intelligence [14].

This theory includes eight bits of intelligence: linguistic, spatial, bodily-kinesthetic, musical intelligence, interpersonal, intrapersonal, and naturalist. It aims at in making the process of learning more easily [7].

3. METHODOLOGY

3.1 POPULATION AND SAMPLE SELECTION

The whole population of the students in the morning studies at the English Departments / College of Basic Education is 80. The total number of students is chosen to be the sample of this study. The sample of the study consists of 80 students. Each Grade includes 40 students represent 3rd and 4th academic stage of studying at the English Department College of Basic Education / Maysan University. The sample of this study is distributed as follows:

Total (55) students; (35) female and (20) male students representing the main sample, and (25) students as pilot sample.

3.2 INSTRUMENTS

In order to achieve the objectives of the study, a questionnaire has been constructed to be the main instrument used.

3.2.1 Construction of the Questioner

The Multiple Intelligence (Multiple Intelligence) used in this paper is based on Gardner’s Theory of Multiple Intelligences. It has (48) items with a five-point Likert scale. The items aim to measure students’ the multiple intelligence preferences. The multiple intelligence fields of this study consist of verbal/linguistic, logical/mathematical, visual/spatial, musical, bodily/kinesthetic, interpersonal, naturalistic, and intrapersonal.

3.2.1.1 Face Validity of the Questionnaire

An instrument is considered to have face validity in case that its items are well accepted by other testers, moderators, teachers [9]. In order to ensure the face validity of the questionnaire, its first version has been exposed to a number of specialists in the fields of linguistics and methodology of teaching EFL. The experts have been requested to judge whether the components of the questionnaire are suitable or not. In the light of the experts’ views, some items have been added and others have been omitted. However, the final form of the students’ questionnaire consists of 48 items.

3.2.1.2 Reliability of the Questionnaire

Reliability refers to how consistent evaluation results are from one measurement to another [8]. However, the questionnaire has been read ministered to the same pilot sample after two weeks. The statistical manipulation of the data has been obtained from the two administrations. By using the Pearson Correlation Coefficient formula, the result yields 0.86, whereas, by using Alpha Cronbach Formula the result yields 0.87.

3.3 ADMINISTRATION OF THE QUESTIONNAIRE:

After the questionnaire has gained its validity and reliability qualification, it has been applied to the selected sample which consists of 55 students on the 9th, October 2018. The researcher has distributed the questionnaire to the sample so as to compute the Verbal/Linguistic Intelligence, /Mathematical Intelligence, Visual/Spatial Intelligence, Musical Intelligence, Bodily/Kinesthetic Intelligence, Interpersonal Intelligence, Naturalistic Intelligence, and Intrapersonal Intelligence. Later on, the questionnaires are collected to be calculated.

3. 4 THE STATISTICAL TOOLS:

The data gathered from the questionnaires were analyzed by using various procedures of analysis. It was analyzed statistically by using the Statistical Package for Social Sciences (SPSS, version 16.0). Descriptive statistics, independent Samples T-Test.

4. RESULTS, CONCLUSIONS, RECOMMENDATIONS

4.1 Results Related to the first question:

Q1- Which multiple intelligence types are dominant among students of English department Basic Education College?

To find out the answer to this question, mean values for each intelligence type was tabulated on SPSS, which they were put in order of descending order of mean values. Table (1) presents these mean values.

Table (1): Activities Perceived to Be Useful in English Classes in Terms of Multiple Intelligence Fields

Multiple Intelligence types	Number	Mean	Std. deviation
Verbal Intelligence	55	2.20	1.924
Interpersonal Intelligence	55	2.15	1.703
Natural Intelligence	55	2.14	.951
Visual Intelligence	55	2.13	.785
Musical Intelligence	55	2.06	.752
logical/Mathematical Intelligence	55	1.98	.772
Bodily/kinesthetic Intelligence	55	1.92	.805
Intrapersonal Intelligence	55	1.88	.758

It is clear from the table (1) that the students demonstrated a strong preference for the activities which presented in verbal/linguistic intelligence which is (M= 2.20). The other means scores of the other intelligences are arranged according to the preferable students as the following: activities which represented by an interpersonal intelligence which is (M=2.15), activities presented in natural intelligence which is (M=2.14), visual-spatial intelligence (M=2.13), Activities related to the musical intelligence (M=2.06), logical-mathematical (M=1.98), bodily/kinesthetic intelligence (M=1.92), and Intrapersonal Intelligence (M=1.88). Students preferred different activities as useful. To analyze this, activities presenting different multiple intelligence fields were discussed one by one according to the multiple intelligence fields as the following:

1. VERBAL/LINGUISTIC INTELLIGENCE

It is clear from table (2) that the first activity. i.e. verbal/linguistic intelligence was examined. The mean values of this activity were shown in the table 2.

Table (2): Mean Values of Activities Related to Verbal/Linguistic Intelligence

Activity content	Number	Mean	Std. deviation
1- I love reading and writing in English.	55	2.15	1.703
2- I like to read many English books.	55	2.04	.759
3- I usually pronounce the words correctly.	55	2.02	.749
4- I like word games, as far as I know.	55	2.00	.784
5- I Listen to radio or TV to be better in listening.	55	1.98	.772
6-I never forget the name of places, cities etc.	55	1.92	.756

The mean values of activities of (Table 2) are arranged according to higher, and lower mean values: Activity number one has (M=2.15) this activity represents the most beneficial one in this table. It is related to "I love reading and writing in English" Whereas activity (6) has (M=1.92) which represents the least beneficial. Generally, the students thought that the activities in verbal/linguistic intelligence are beneficial.

2. INTERPERSONAL INTELLIGENCE

Students prefer activity number (7) in this intelligence, this fact is concluded from the mean value of this activity which is (M=2.13). i.e." I like to help my friends' problems". While activity number (12) seems less effective than activity number (7). This result is concluded from the mean value of this activity which is (M=1.94). This activity is related to "My friends see me as a leader in class" See table (3).

Table (3): Mean Values of Activities Related to Interpersonal Intelligence

activity content	Number	Mean	Std. deviation
7-I like to help my friends' problems.	55	2.13	.785
8- I give advice to friends who have problems.	55	2.06	.752
9-I frequently call my friends.	55	2.04	.759
10-I enjoy playing with my friends.	55	2.00	.784
11-I prefer to help my friends' problems.	55	1.98	.722
12- My friends see me as a leader in class.	55	1.94	.770

3. NATURALIST INTELLIGENCE

The mean values of the naturalist intelligence activities are shown in Table 4. Considering these mean values, activity 13- "I like all the seasons of year" is the most useful (M=2.11) activity, whereas activity 18- "I like plant feeding as much as possible" (M=1.92). This activity is less useful in this table. See table.4

Table (4): Mean Values of Activities Related to Naturalist Intelligence

activity number	Number	Mean	Std. deviation
13-I like all the seasons of year.	55	2.11	.766
14-We are very interested in nature events.	55	2.06	.752
15-I am very curious about animals.	55	2.04	.833
16-I always feed my animals at home.	55	2.00	.784
17-I love to arrange the plants in my garden.	55	1.98	.722
18-I like plant feeding as much as possible.	55	1.92	.770

4. VISUAL/SPATIAL INTELLIGENCE

Visual/spatial intelligence is one of the intelligence fields in this study. The participants prefer activity 19- "I feel pleasure in establishing relationships with my friends" as the most useful activity (M=2.09) in the visual/spatial intelligence. But the students believe that the activity 24- 'I perceive Map, table-type materials more easily" as the least useful activity (M=1.91). See Table (5).

Table (5): Mean Values of Activities Related to Visual/Spatial Intelligence

activity content	Number	Mean	Std. deviation
19-I feel pleasure in establishing relationships with my friends.	55	2.09	.766
20- I like to see new pictures of authors.	55	2.08	.726
21- I love sharing my friends in painting of some things in my college.	55	2.02	.772
22- I draw pictures of some authors of English language.	55	2.00	.760
23-. All my friends think, I have good imagination.	55	1.92	.805
24- I perceive Map, table-type materials more easily.	55	1.91	.791

5. MUSICAL INTELLIGENCE

According to mean values of the musical intelligence. Participants think that the activity number 25 is the more useful one in this table according to mean score which is (M=2.08) whereas they consider activity 30 which is(M=1,91) is less useful in this intelligence. i.e. 'I always sing beautifully". See table 6.

Table (6): Mean Values of Activities Related to Musical Intelligence

activity content	Number	Mean	Std. deviation
25- I always like to listen to music while I am working.	55	2.08	.726
26- I lovely like music lessons.	55	2.06	.752
27- I love the sound of birds in my garden	55	2.04	.759
28- I like to share some songs with my friend.	55	2.02	.754
29- I would love to play or play musical instruments.	55	2.00	.784
30- I always sing beautifully.	55	1.91	.791

6.LOGICAL/MATHEMATICAL INTELLIGENCE

Table (7) shows that the students demonstrated strong preference (M=2.6) in activity 31- ‘I always prefer computer games’. But participants demonstrated weak preference (M=1.75) in activity 26- ‘I always ask some questions about how the machines work correctly. See table 7

Table (7): Mean Values of Activities Related Logical/Mathematical Intelligence

Item content	Number	Mean	Std. deviation
31- I always prefer computer games.	55	2.06	.752
32- I prefer math and science in my life.	55	2.02	.754
33- My favorite game is math games.	55	1.98	.720
34- I enjoy playing chess in my house.	55	1.96	.784
35- I prefer logic puzzles, brain gymnastics.	55	1.94	.770
36- I always ask some questions about how the machines work correctly.	55	1.75	.782

7.BODILY/KINESTHETIC INTELLIGENCE

Table 8 indicates that the mean values of activities in bodily/kinesthetic intelligence are analyzed as follows. Activity 37- ‘I like to run, jump and walking every day’ is chosen as the most useful activity (M=1.98) in this intelligence field. The participants believe that the activity 42 ‘‘I prefer to play physical games with my friends ‘‘(M=1.80) is less useful. See table 8

Table (8): Mean Values of Activities Related to Bodily/Kinesthetic Intelligence

Item number	Number	Mean	Std. deviation
37-I like to run, jump and walking every day.	55	1.98	.722
38-I like to learn by doing some things.	55	1.94	.770
39-I want to spend my free time outside.	55	1.88	.758
40- I am more comfortable with my thoughts and behaviors.	55	1.87	.768

41-I prefer to make the body movements while walking.	55	1.84	.798
42- I prefer to play physical games with my friends.	55	1.80	.799

8.INTRAPERSONAL INTELLIGENCE

The last activity as demonstrated by students of English department of Basic Education College i.e. activities in intrapersonal intelligence .The mean scores of the activities in this intelligence are arranged as follow: Activity 43 ‘I know what I do in my college’ was perceived to be the most beneficial activity (M=1.88) whereas activity 48- ‘I like to be independent from other students’ was perceived to be the least beneficial activity (M=1.77). Table 9 shows the mean values of activities related to Intrapersonal Intelligence.

Table (9): Mean Values of Activities Related to Intrapersonal Intelligence

Item number	Number	Mean	Std. deviation
43- I know what I do in my college.	55	1.88	.758
44- I like to be alone in the college.	55	1.87	.768
45-I like working alone.	55	1.85	.779
46- I do not like to share my work with my friends in my department.	55	1.81	.779
47-I do not consult wisdom with anyone of my classmates.	55	1.80	.799
48-. I like to be independent from other students.	55	1.77	.800

4.2 RESULTS RELATED TO SECOND QUESTION

Q2- Is there a difference between male and female students in terms of their dominant multiple intelligence types?

To find out, whether the students’ gender affected the difference among the mean scores of multiple intelligences, an independent samples t-test analysis was conducted. Results can be seen in Table (9)

Table (10): gender differences of students in the multiple intelligence type

Multiple Intelligence types	Gender	Number	Mean	Std. deviation	Mean difference	T. test	Df
Verbal linguistic intelligence	female	35	1.79	.713	.025	.114	51
	Male	20	1.76	.781			
logical/ mathematical intelligence	female	35	2.05	.705	.209	.969	51
	Male	20	1.84	.767			
Visual/Spatial Intelligence	female	35	1.85	.808	.107	-444	51
	Male	20	1.74	.872			
Musical Intelligence	female	35	1.79	.713	.054	-242	51
	Male	20	1.84	.808			
Bodily kinesthetic Intelligence	female	35	2.00	.745	.062	-276	51
	Male	20	2.06	.801			

Natural Intelligence	female	35	2.05	.780	.271	1.152	51
	Male	20	1.78	.832			
Interpersonal Intelligence	female	35	2.00	.816	.231	.136	51
	Male	20	1.97	.782			
Intrapersonal intelligence	female	35	1.79	.713	.106	-443	51
	Male	20	1.85	.808			

It is clear from Table (10) that the male students perceived Bodily kinesthetic Intelligence (M=2.06), Interpersonal intelligence (M=1.85), and Musical Intelligence (M=1.84) respectively, as their most dominant intelligences. Female students perceived more intelligent than students in the following intelligence types: Natural Intelligence (M=2.05), logical mathematic intelligence (M=2.05), Interpersonal intelligence (M=2.00), Visual/spatial intelligence (M=1.85), and verbal linguistic intelligence (M=1.79) respectively. It is obvious that female student's most dominant intelligence types than those male students in this table.

4.2 RESULTS RELATED TO SECOND QUESTION

Q3- Is there a difference between 3rd grade and 4th grade students in terms of their dominant multiple intelligence types?

In order to answer this question, an independent samples t-test analysis was conducted. The results showed that the third-grade students perceived strong preference than fourth grade multiple intelligence fields. The Mean scores of the two grades are stated as follow : Third grade perceived the Interpersonal Intelligence which is (M=2.09), Visual/Spatial Intelligence which is (M=1.93), Natural Intelligence which is (M=1.90), Bodily kinesthetic Intelligence which is (M=1.87),and Musical Intelligence which is(M=1.78) respectively, these mean scores represent that the third grade has the most dominant intelligence than the fourth grade .Nevertheless , the fourth grade has the most dominant intelligence in the logical/ mathematical intelligence (M=1.79),and Verbal linguistic intelligence (M=1.78),respectively. See table (11)

Table (11): Grade differences of students in the Multiple intelligence type

Multiple Intelligence types	Grade	Number	Mean	Std. deviation	Mean difference	T. test	Df
Verbal linguistic intelligence	3 rd	30	1.73	.740	-049	-225	51
	4 th	25	1.78	.850			
logical/ mathematical intelligence	3 rd	30	1.77	.817	-016	-071	51
	4 th	25	1.79	.795			
Visual/Spatial Intelligence	3 rd	30	1.93	.785	.281	1.343	51
	4 th	25	1.65	.714			
Musical Intelligence	3 rd	30	1.78	.774	-016	-076	51
	4 th	25	1.77	.736			
Bodily kinesthetic Intelligence	3 rd	30	1.87	.900	.128	.534	51
	4 th	25	1.74	.810			
Natural Intelligence	3 rd	30	1.90	.885	.161	.699	51
	4 th	25	1.74	.752			
Interpersonal Intelligence	3 rd	30	2.09	.793	.087	-374	51
	4 th	25	2.00	.871			

5. CONCLUSIONS

1. It is concluded that that the students of English Department Basic Education College demonstrated strong preference for the activities which presented in verbal/linguistic intelligence.

2. Female students have demonstrated the most intelligence types in this study, i.e. Natural Intelligence, logical mathematic intelligence, Interpersonal intelligence, Visual/spatial intelligence, and verbal linguistic intelligence. Whereas, the male students perceived Bodily kinesthetic Intelligence, and Musical Intelligence, as their most dominant intelligence.

3. There are differences between third and fourth grade students of English department in demonstrated most variety of intelligence types, the higher mean scores of the intelligence activities get back to the third grade, whereas

the fourth grade are less demonstrated of intelligence activity in this study.

6. RECOMMENDATIONS

1. Since the students of English Department Basic Education College demonstrated a strong preference of the activities which presented in verbal linguistics intelligence, so it is necessary for the teachers inside Department of English to give those students great attention to the verbal linguistic intelligence, because those students want to be efficient in learning English language.

2. Gender differences have often been affected learning and teaching process. Therefore, it is necessary for the teachers to take into considerations that the gender may play a negative role in the learning process especially in the higher education. Moreover, the teacher should put in his

mind the general needs that agree with preferable needs and intelligence of the students in the class.

3. Generally, the age of students plays an active role in learning and give the students a chance to variety type of intelligence, this fact agrees with many studies in this field. Therefore, younger student is more active in learning than those of the older one in this study.

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