INTEGRATING ICT IN THE ARABIC GRAMMAR LESSONS AT THE ELEMENTARY SCHOOL: ATTITUDES AND EFFECT!

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Abstract

Teaching grammar aims to encourage learners to achieve accuracy in language. However, learning Arabic grammar is difficult for Arabic-speaking pupils at all teaching levels due to its complicated structures, forms and derivatives. This study explores the impact of information communication technologies (ICT) in teaching Arabic grammar on the achievement of elementary school pupils at Arab schools and their attitudes towards learning Arabic grammar. Findings show that ICT has been found to have remarkable potential for promoting achievement in Arabic grammar. Following the computerized tutorials, there was significant improvement in pupils' achievement in Arabic grammar and in their attitudes towards learning Arabic grammatical rules.

Introduction

Language, whether spoken or written, is the medium through which the individual can understand and communicate with other members of his society in different situations and attitudes. Language is considered one of the most important components of the individual and collective national and cultural identity. It has a fundamental role in the individual's life because through it, he can express his feelings, thoughts, tendencies, and needs on one hand, and enjoy and acquire knowledge and facts on the other (Amara, 2013).

Education is considered the most prominent preserver of the legacy of nations and its transferor from one generation to the other, and language is the medium for that process. The importance of a certain language emerges from the care of its speakers to it, as it is their representative; it grows through their growth, develops with their development, weakens with their weakness, decays with their decay, and dies with their death (Madkour, 2005).

If language is a system of communication between people, grammar in any language is the skeleton and frame of this system. If acquisition of oral and written skills of a certain language is the goal of its acquisition, grammar is one of the most important tools to achieve this goal because it represents the accurate measurement with which words are measured when they are put in a sentence to produce meaning.

Arabic

Arabic is the largest group of Semitic languages from the point of view of the number of its speakers, and one of the most dispersed languages in the world. More than 300 million people speak it, and its speakers live mainly in the Arab world and many other neighboring countries. Arabic has a great

importance among Moslems, as it is the language of the two main sources of legislation in Islam: the Holy Koran and the traditions (Hadith) of Prophet Mohammad Abu- Nofal, B. (2006).

Arabic is also a main liturgical language among a number of Christian churches in the Arab world. Besides, a large number of the important Jewish religious and intellectual works in the Middle Ages were written in Arabic. Following the spread of Islam and the establishment of Islamic states, the status of Arabic became higher, and Arabic became the dominant language of politics, science, and literature for many generations in the countries where Moslem Arabs ruled. Arabic consists of 28 letters that are written in 119 forms and it is written from right to left. The Arabs call Arabic "the Language of the Dhad" because they believe it is the only language that has the letter 'dhad / ض. (Al-Tha'alibi, 2002).

Arabic Grammar

Arabic is one of the oldest languages that have kept its characteristics of lexis, syntax, grammar and literature. What characterizes it most is that it has grammatical rules that control it and has diacritic marks that keep it from decadence. The study of its grammar is indispensable, because the aspect of grammar (I'rab) and it's parsing by applying case markers to its verbs, nouns and adjectives, indicates its meaning and lends it special linguistic and lexical beauty.

In view of this, acquisition of grammatical and syntactic concepts and terms is an essential thing because that will help the learner to understand and absorb the basics of the grammatical system of the language and enables him to analyze the syntactic and grammatical structure of the words and their meaning, which is based on their position in the sentence. However, learning Arabic grammar is not an easy task due to its complicated structures, forms and derivatives. For example, the verb in the present tense is derived from the past tense by adding one of the letters that signify Present, e.g. a (أ) for the first person singular speaker (أذهب=ذهب؛); n (ن-) for the first person plural speakers (نذهب=ذهب; y (ي-) for the third person singular (يذهب=ذهب; t (ت-) for the second person singular, and third person singular feminine (تذهب=ذهب) (Al-Afghani, 2003).

Problem Statement. Arabic is the official language in the Arab countries and in Israel, though not at the same level of treatment. It is the language of teaching and learning in the different teaching stages. Although the purpose of learning grammar is to encourage the learners to achieve accuracy and apply the learned grammar in their daily life in writing and speaking, their weakness in grammar is obvious. Complaints are repeatedly heard about the learners' weakness in Arabic grammar. Teachers and parents complain about general weakness and low level of the pupils in Arabic linguistic rules (Al-Mas'udi, 2000).

Some of the traditional methods of teaching Arabic are considered the main causes of such weakness in Arabic in general and grammar in particular. The traditional teaching method, the role of the teacher and the textbook contents

affect the pupil's ability to absorb grammar. The teaching process crams knowledge in the pupils' brains rather than makes him interact with the language and use it correctly and spontaneously (Abdul-Salam, 2006). This type of teaching is based on three main axes: the teacher, the learner and the textbook. The teacher is considered the source of information and most teachers adopt the traditional methods. Traditional teaching methodology appeared in ancient times and is still practiced in many parts of the world, including the Arab countries. In fact, it is impossible to give it up categorically as it also has some advantages, mainly in the teacher-pupil direct interaction and face to face passing of knowledge. Voice and image are mixed with feelings and senses interact and mutually affect the teaching situation. In this way, the learning process and interaction take place with interest.

However, modern changes and the information explosion in the field of computer and technology have proved that the actual effective teaching process and its requirements cannot be met and achieved only by traditional teaching methods that are insufficient to bring about the desired changes and solve the chronic problems. Besides, the traditional methods do not support the new teacher who is able to interact with the new developments of modern teaching methods that concentrate on the employment of information communication technologies (ICT) that have more potential to make positive changes in the teaching and learning processes (Huppert, Yaakobi, & Lezarovits, 2001).

Studies that have been conducted on pupils of different age-groups (elementary and secondary school ages) have proved that the employment of computerized software is better and more effective than the employment of traditional methods, especially in teaching less-able learners with lower achievements (Abdul- Rahim, 2010; Al-Neyadi, 2009; Jaber, 2007). It was found that the average of pupils' results who studied by the employment of computerized software programs rose significantly from 50% to 65% (Al-Jabban, 2009).

The teaching process has been accelerating in its development since the introduction of information technology into the educational field. The development can be attributed not only to the employment of technological tools, but to a new way of thinking, working and teaching. The teacher's role and the learner's role have changed in the era of teaching by technology (Mioduser, Nachmias, Forkosh, &Tobin, 2003). The significance of the teacher's role appears more in creating teaching conditions and circumstances that involve the pupils and help them in solving problems more than in the role as an explainer of knowledge, information or facts. As a result of this development, the teacher has been obliged to acquire the necessary technological skills to employ in performing his/her teaching role.

Relevant Research. Several studies have investigated the effect of using computerized tutorials on the pupils' achievements, whether in the field of Arabic or other subjects such as sciences, mathematics, English and others. Those studies point out the importance of employing ICT and its innovations

in improving the teaching process and the pupils' achievements (Abdul-Rahim 2010, Al-Omary 2010, Al-Neyadi 2009, Jaber 2007, Joy 2000).

In addition to the identified weakness in the pupils' achievements in Arabic grammar, the studies point out the existence of negative attitudes among pupils towards learning Arabic grammar rules (Abu-Nofal, 2006; Abdul-Rahim, 2010). The researchers maintain that this weakness and these negative attitudes have roots in the elementary school. Such attitudes result from the Arabic teachers' and pupils' suffering from the traditional instruction of Arabic grammar. Al-Mas'udi, (2000) concluded that the subject is new to them, and that the elementary school period is an important stage of teaching Arabic more than acquiring knowledge of other subjects.

Purpose of the Study. In view of what has been said concerning traditional grammar instruction, the low achievement of elementary school pupils in Arabic grammar, student complaints about learning it and their inability to apply grammatical rules in speaking and writing; this study aims to compare the effects of ICT in teaching Arabic grammar on the achievement of elementary school pupils at Arab schools with the traditional method. It aims also to investigate the effect of ICT in teaching grammatical rules on pupils' attitudes towards learning Arabic grammar.

Findings of the study are may enrich the professional literature about teaching Arabic grammar, and pave the way for similar studies in other subject matters at different stages of teaching. The results are expected to benefit the teachers of Arabic grammar and the planners of Arabic curriculum and to contribute to the development of methods of teaching grammar skills by using computerized tutorials as a new strategy that encourages motivation and excitement as main elements, and provides an interactive environment that takes into consideration the individual differences of the learners.

Hypotheses

Study objectives were tested with reference to four expectations/hypotheses:

1. There will be no significant differences between the achievements of pupils in both groups-- experimental-group and control-group-- in the preliminary test that examines the achievement in Arabic grammar.
2. Significant differences will be found in the achievement levels of pupils in the control-group and the experimental-group in the test that examines achievement in Arabic grammar at the end of the intervention. Children in the experimental-group will demonstrate higher levels of knowledge in achievement in Arabic grammar compared with children in the control-group.
3. Significant differences will be found in Arabic grammar achievement among pupils of the experimental-group before and after the intervention.
4. There will be no significant differences in attitudes towards learning Arabic grammar among pupils in both groups before intervention.

5. Significant differences will be found in the attitudes towards learning Arabic grammar of pupils in the control-group and the experimental-group at the end of the intervention. Children in the experimental-group will demonstrate attitudes towards learning Arabic grammar that are more positive than children in the control-group are.

Methodology

A quantitative approach was taken in the present study in order to test the research hypotheses. Examination of the relationship between the variables of the study contributed to the discussion of the processes that developed through the intervention program and their effects on the topics of the study. It also contributed to the discussion about challenges in addressing development and prediction of future behavior of Arabic-speaking pupils, when they learn Arabic grammar and start acquiring linguistic skills (Bernbaum, 1993).

Sample. The sample included 120 elementary Arabic-speaking pupils in the fourth grade: 58 boys and 62 girls, being taught in four classes. The pupils are of normal intelligence, healthy; and grew up in families with a socio-economic level that ranges from moderate to low. The pupils were divided into two groups, consisting of 60 pupils:

1. The experimental-group, where the intervention program was implemented was composed of 28 boys and 32 girls.

2. The control-group, where the children were taught according to the traditional method was composed of 30 boys and 30 girls.

The sample is one of convenience (Zamir & Beit Marom, 2005). Due to constraints of ethical procedures, we chose available pupils that were available to the researcher at the right time and right place. While this sample is not representative of the entire population, it allows us to obtain basic data and trends regarding this study without the constraints and complications of using random sampling methods.

Data Collection

Three different instruments--achievement test, computerized educational program, attitude questionnaire—were used to compare the two groups. A ten-step procedure provided the structure of the research design.

Instruments. The first instrument is an *achievement test* prepared by the researcher. The pupils' competence in Arabic grammar was tested before and after the intervention by the use of an *achievement test.* The test measures pupils` achievement in Arabic grammar in three cognitive levels: remembering, understanding, application, and focus on two subjects: the subject and object. It consists of three parts (according to student learning): multiple choices questions; verify whether the sentence is true or false; complete the following sentences by appropriate object. While checking the test one mark was given to correct answer and zero for wrong answer.

The second instrument is a *computerized tutorials program* that includes the subject and object units from Arabic language curriculum for fourth grade. The computerized program and educational units placed in the Arabic language site of the school. The program used power point presentations including animated and non-animated images and attractive sound effects. Instructions were added on each slide in the program, to help students to use the material independently. In addition, the units have been introduced by film to help pupils to understand the subject matter. The program has been presented to some specialists in the field of Arabic language teaching and education technology and teachers to ensure the of the content and objectives.

The third instrument is an *Attitude Questionnaire* towards learning grammatical rules. It is taken from a study that examined the impact of using computer in teaching Arabic grammar on the achievement of eleventh-grade students and their attitudes towards it (Abu Shatat, 2005). The questionnaire contains 30 statements and it was suited to the population of the research. Responses were measured using a five-point Likert scale (1 to 5), with 1= "completely disagree" and 5= "completely agree."

Procedure. The study was conducted in four main stages. The first stage included: (a) selecting appropriate units of teaching the subject and object from Arabic language curriculum for fourth grade and (b) preparing a computerized tutorial program for teaching the subject and object. The second stage included: (a) selecting appropriate rooms where tools and devices necessary for the implementation of the intervention program and (b) choosing a suitable test for the study. The third stage included: (a) conducting a pre-test on subject and object units in two groups and (b) examining pre-attitudes towards learning Arabic grammar rules in both groups. The fourth stage included: (a) activating the intervention program by the use of computerized tutorials in the experiment-classes, and activating the traditional program in the control-classes; (b) conducting a post-test on subject and object units in the two groups; (c) examining post-attitudes towards learning Arabic grammar rules in both groups and (d) organizing and analyzing the data.

In order to compare between the achievements of the two research groups, we used the *t-tests* in two independent samples.

Findings and Discussion

The findings of the study are introduced here with reference to the objectives and hypotheses of the study. It shows that pupils who belong to the two groups of the study have a similar level of achievement in Arabic grammar at the beginning of the experiment: $\bar{x}$=7.78 for the experimental group and $\bar{x}$=7.91 for the control group. The pre-test results of achievement in Arabic grammar show no significant differences between the pupil's achievements in the experimental-group and the pupil's achievements in the control-group (hypothesis 1). In the test that checked the achievement in Arabic grammar after the intervention, i.e., the use of ICT in teaching Arabic grammar; there were clear differences between the achievements of the pupils in the experimental-group and the achievements of the pupils in the control-group in

the two units: the subject ($t=4.345, p<0.05, \bar{x}=15.46$) and object ($t=4.468, p<0.05, \bar{x}=14.63$) (hypothesis 2). There was improvement in the achievement in grammar rules of the pupils in the experimental-group and their achievements were higher than the achievements of the pupils in the control-group . This finding is compatible with the findings of previous studies that found positive correlation between the use of ICT and the improvement of grammar skills in Arabic language (El-Omary, 2010; Awidi, 2009; Hamadneh & Sliman, 2009; Gaber, 2007; Lafy, 2007; and Joey, 2000). These studies show significant differences in the role of computerized tutorials in increasing student achievement in linguistic skills compared to the normal way in teaching.

The findings indicated significant differences in the achievements of the pupils of the experimental-group in the two units of the subject and object (hypothesis 3). As a result of using computerized tutorials, there was a significant improvement in the final grade of the pupils of the experimental-group in subject unit ($t=14.3, p<0.05, \bar{x}=15.45$), and in object unit ($t=13.6, p<0.05, \bar{x}=14.61$). This result is consistent with the results of studies of Abdul-Rahim (2010), Al-Neyadi (2009) and Zliei (2008), which showed statistically significant differences between the pre-test results and the post-test results. These studies indicate the effectiveness of using ICT in teaching Arabic grammar rules and improving student's achievement in this topic. This result is due to the advantages the computer has and its contribution to increasing student achievement, such as the inclusion of a color and sound and image, providing feedback, suspense, attracting student to the learning material, and providing opportunities for students that cannot be available in traditional teaching environment, which increases student motivation towards learning.

No significant differences in attitudes towards learning Arabic grammar were found among pupils in both groups before intervention (hypothesis 4). However, after implementing the computerized tutorials, significant differences were found in the attitudes of pupils in the control-group and the experimental-group ($t=4.308, p<0.05, \bar{x}=118.78$). Pupils in the experimental-group demonstrated attitudes towards learning Arabic grammar, which are more positive than children in the control-group, are (hypothesis 5). This finding is compatible with the study of Lafy (2007), which found that the attitudes of students towards learning Arabic language skills changed after using ICT in teaching the topic. This change in attitudes can be interpreted as a result of the effective involvement of pupils in the teaching and learning process, and in accordance with their abilities. The experimental group pupils showed motivation and willing to learn the topic more than pupils in the control group did.

The findings of the current study are consistent with the findings of previous studies, whose authors have argued that the use of ICT as innovative teaching method in teaching Arabic grammar rules contribute more effectively than traditional teaching methods towards developing Arabic language skills achievements among Arab pupils in elementary school. The contribution stems from the activities provided in the computerized tutorials specifically

the feedback, which helps pupils, diagnose their strengths and weaknesses; providing a positive promotion which helps pupils to evaluate themselves and reach the stage of mastering the subjects taught; and the pupils sense of enjoyment and excitement during their study by the computerized tutorials. All these contribute to the achievement in Arabic grammar, and to the attitudes towards learning it.

Summary

The current study was designed to examine the contribution of ICT by computerized tutorials to improve the achievement of Arab elementary school in Arabic grammar. In addition, this study aimed to develop positive attitudes amongst Arab pupils towards learning Arabic language and specifically towards learning grammatical rules.

A quantitative approach was taken in the present study in order to test the research hypotheses. The sample included 120 fourth grade pupils, all of who were attending one Arab school in Israel. The pupils were divided into two groups: an experimental group and a control group.

The research hypotheses were confirmed, and the data show a major contribution of computerized tutorials to the improvement of the achievement of Arab elementary school pupils in Arabic grammatical rules and in their attitudes towards learning the topic, even though learning Arabic grammar is not easy because it is sophisticated and has a complicated system. Pupils in the experimental group exhibited a more significant change in their achievement in Arabic grammar and more positive attitudes towards learning it than pupils in the control group.

The findings indicate remarkable potential of ICT in the educational process, which is embodied in computerized tutorials and multimedia programs designed to advance learning linguistic skills. The combination of visual and auditory activities, the immediate feedback and the positive promotion, enhances the desire of pupils for learning. This, in turn, greatly influences the development of grammatical expertise and the attitudes towards learning grammatical rules.

In the light of the study issue and its findings, it is recommended to perform a comprehensive empirical study concerning the problems of Arabic language teaching and learning, and in contrast, to examine the effectiveness of digital tutorials as innovative method to teach linguistic skills for pupils in different level ages. It should be noted that an efficient integration of technology affordances along with the human aspect in education would contribute significantly to the realization of the educational goals.

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