The Effectiveness of E – Book in Secondary Stage Students Use of Syntactic Structures and Meta Cognitive Skills

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ABSTRACT: The problem of this study is represented by one main question: what is the effectiveness of e-books in using syntactic structures and meta cognitive skills of second year high school students?
This main question includes the following minor questions:
1. What are the meta cognitive skills there are suitable for teaching syntactic structures to second year high school students?
2. What is the form of the e-book used in developing the meta cognitive skills of second year high school students?
3. What is the effect of the e-book used in developing meta cognitive skills on teaching syntactic structures to students?

KEYWORDS: E – Book, Secondary Stage Students, Syntactic Structures, Meta Cognitive Skills.

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REALIZING THE PROBLEM OF THE STUDY:

The researcher observes that there are a lot of students (especially secondary school students) [1] who suffer from weakness and difficulties in learning and applying rules of the Arabic syntax. This is due to a number of reasons such as:

- There are some defects in the traditional methodology which is still used in teaching the rules of the Arabic syntax.
- In addition, teachers are not interested in developing the different thinking skills of students when teaching them syntactic rules.
- Not to mention students' lack of some meta cognitive skills.

The findings of previous studies by (Abdel-Rahman Kamel, 2014, pp 8-13) [1] (Gina Jaeger, 2011, p 6) [18] &(Li- Li Lin, 2008, pp 4-5) [19] & (Gulin Yolageldili & Arda Arikan, 2011, pp 219-222) [20] & (Zeliha Demir & Mehmet Barış, 2013, pp 1793 – 1794) [21] & (Maurizio Santoro, 2012, pp 167- 169) [22] (Abdel-Rahman Kamel, 2014, pp. 127-128) [6] mentioned these reasons.

All this led the researcher to choose the topic of his study. The researcher put the previous studies into two categories:

The first refers to the studies whose focus is using e-books in the educational process.

The second category refers to the studies whose concern is developing the meta cognitive skills in the different branches of language.

PROBLEM OF THE STUDY:

The problem of this study is represented by one main question: what is the effectiveness of e-books in using syntactic structures and meta cognitive skills of second year high school students?

This main question includes the following minor questions:

1. What are the meta cognitive skills there are suitable for teaching syntactic structures to second year high school students?
2. What is the form of the e-book used in developing the meta cognitive skills of second year high school students?
3. What is the effect of the e-book used in developing meta cognitive skills on teaching syntactic structures to students?

AIMS OF THE STUDY:

This study aims at the following:

1. Identifying the meta cognitive skills which are relevant for teaching syntactic structures to second year high school students.
2. Preparing an e-book for developing meta cognitive skills which are necessary for teaching syntactic structures to second year high school students.
3. Realizing the effect of using the e-book in developing meta cognitive skills on teaching syntactic structures to second year high school students.

([1])*The above remark is taken while observing teaching practice students in addition to the researcher's exploration of the finding of a large number of previous studies and papers written on the same topic.*

SIGNIFICANCE OF THE STUDY:

The present study may be useful for the following:

1. High school supervisors and teachers of Arabic language and other experts will be able to identify the meta cognitive skills which are relevant for teaching syntactic structures to second year high school students.
2. The sample students will know how to use the e-book in learning the rules of the Arabic syntax
3. Researchers in the field of curricula and methodology of Arabic language will know how to use the e-book not only in the Arabic syntax but also in the other branches of Arabic language.

HYPOTHESES OF THE STUDY:

The hypotheses of the study are:

1. There are no statistically significant differences between the observed and expected frequencies of the marks of Arabic language teachers and supervisors in the items of the questionnaire of the meta cognitive skills relevant for teaching syntactic structures to second year high school students by using the e-book as k2 test shows.
2. There are no statistically significant differences between the means of the experimental and control groups in the pre-test of meta cognitive skills of teaching syntactic structures
3. there are no statistically significant differences between the means of students' marks in the experimental and control groups in the post-test of meta cognitive skills of teaching syntactic structures, students' marks in the post-test

LIMITS OF THE STUDY:

The study is limited to the following:

1. a sample of second year high school students in secondary school for Males and Sports Secondary School which are affiliated to Fayoum Directorate of Education.
2. a sample of high school supervisors and teachers of Arabic language
3. The syntactic topics of unit 4 in the Arabic language textbook school, for second year high school student in the unit whose title is "Opening second term of the academic year 2013-2014. And Eliding the conform verb."

STEPS OF THE STUDY:

The study follows the following steps :

Firstly: To answer the first question, namely, what are the meta cognitive skills that are suitable for teaching syntactic structures to second year High school students?

1. The researcher read and analyzed some of the previous papers and studies written on the topic of the present study extract their findings and how to use them in the present study.
2. He prepares a questionnaire on the meta cognitive skills that are relevant for teaching syntactic structures to second year high school students.
3. Giving the questionnaire in its initial form to a group of referees who are specialized in curricula and Arabic language methodology to check its reliability, objectivity and suitability for application.
4. Applying the questionnaire on a sample of Arabic language teachers and supervisors to identify the meta cognitive skills that have the highest values in a K test
5. Writing the questionnaire's results in special tables and analyzing them statistically.

Secondly: to answer the second question, namely, what is the form of the e-book used in developing the meta cognitive skills of teaching syntactic structures to second year high school students?

The researchers designed an e-book to be used in teaching syntactic structures for developing some meta cognitive skills of second year high school students. He designed it in the light of:

1. The findings of the previous step.
2. Identifying the essentials and standards of the e-book.

3. Setting the general aim of the e-book
4. Setting the behavioral objectives of the e-book for the sake of teaching syntactic structures to second year high school students.
5. Selecting a relevant design for the e-book
6. Preparing the contents of the e-book
7. Preparing the scenario of the e-book
8. Preparing the educational aids that are relevant for the required syntactic structures
9. Preparing the relevant means of evaluation
10. Setting a time plan for teaching syntactic structures by using the e-book
11. Producing and publishing the e-book
12. Checking the accuracy (editing) the e-book and referring it to a committee of referees.
13. Making a pilot study of the suggested e-book and putting it in its final, applicable form.

Thirdly: to answer the third question, namely, what is the impact of the e-book on developing the meta cognitive skills of teaching syntactic structures to second year high school students?

1. The researcher randomly selected a sample of second year high school students and divided them into an experimental group and a control group
2. He controlled the study's variables
3. He prepared a test of meta cognitive skills of teaching
1. Syntactic structures to second year high school students, and referred it to a group of referees specialized in curricula and Arabic language methodology; then he modified it in the light of their recommendations in order to ensure its suitability for application.
4. The researcher applied the test to the sample students to set the test time and the factors of easiness, difficulty and identification for each of the test items and to check the validity of the test.
5. He applied the test as a pre-test to the two sample group of second year high school students both experimental and control.
6. He trained the experimental group to do some syntactic activities by using the e-book in order to develop their meta cognitive skills.
7. He applied the test as a post-test to the two sample groups of second year high school students, both experimental and control.
8. He recorded the results of the pre and post-tests of meta cognitive skills in special tables and explained and analyzed them statistically.
9. He presented recommendations and suggested topics for further research in the light of the previous results.

SAMPLE OF THE STUDY:

Type of sample: second year high school students in Demo Secondary school for Males and sports secondary school for Males.
Group: two groups one experimental and another control.
Class 2-2 & **Number** 2-4 students
Total: 50 students secondary school + Arabic language teachers and supervisors
Number: 40 teachers and supervisors

Table no. 1 shows Sample of the study

Type of sample	school	Group	Class	Total
Second year high school students	Demo Secondary school for Males	Experimental	2-2	25
second year high school students	Sports secondary school for Males	control	2-4	25
Arabic language teachers and supervisors				40

TERMINOLOGY OF THE STUDY:

1)- **E-book :**

Sakine and Adnan (2010) define e-books as "books, prepared to be read via computers or e-book readers and they have some additional features besides printed books'as; visuals, sound effects and interactive links." [2] **Onder** (2011) defines e-book as "a digitalized form of some or all printed books or as one produced completely in the digital environment, which can be viewed and accessed on any portable device like computers or specially designed e-book readers". [3] **Murat** (2014) defines e-book as "a software based electronic form with its rich text features (including bookmarker, highlighting, focusing and so on) that allow all the functions of conventional book reading." [4] **Lam and Mcnaught** (2009) define e-book as "combination of software and hardware allowing texts to be designed in electronic environments or texts in the formats of doc, txt and pdf, which can be viewed with other devices besides computers." [5] **Troy and Carol** (2011) define e-books as "books that have been completely converted to or originated in a digital format." [7]

The researcher defines it as follow :

The e-book is a source of interactive e-learning essentially based on texts, sound, images and figures in addition to syntactic examples, exercises and activities. All this is integrated in a digital form and its content is presented in a complicated way aiming at developing some meta cognitive skills of teaching syntactic structures to second.

2) Metacognition :

Flavell (1979) defines metacognition as "thinking about thinking or monitoring one's own cognition." [15] **Andria** (2008) defines metacognition as "the activity of monitoring and controlling one's cognition. It can further be defined as what we know about our cognitive processes and how we use these processes in order to learn and remember." [8] **Linda and Rtlb** (2012) define metacognition as "the ability to understand and monitor one's own thoughts; having knowledge and awareness of cognitive processes, and control of cognitive processes. [16] **Emmy et al** (2012) define metacognition as "the knowledge about and the regulation of one's cognitive activities in learning processes and is positively related to students' academic performances." [17]

The present study adopts the definition of metacognition as plans used to centre, arrange and plan for, and evaluate language learning to facilitate comprehension.

3) Meta cognitive skills:

Annemie and Gokhan (2009) define metacognitive skills as "refer to the voluntary control people have over their own cognitive processes." [9] **Lisa** (2008) defines metacognitive skills as "Cognitive skills include recall or recognition of knowledge and the development of intellectual abilities and skills and knowledge of self and ones personal cognition of thinking about thinking." [13] **Brianna and Ashleigh** (2013) define metacognitive skills as "one's ability to correctly predict performance, monitor whether individual answers are correct as one proceeds through a task, and correctly evaluate how well one has performed on a particular task." [14] **Ahmad** (2006) defines metacognitive skills as " the process of knowing or thinking about how we use strategies and skills to enhance our thought processes; thinking about how we think." [10] **Muhittin and Ali** (2011) define metacognitive skills as " involves the processes of individuals' deciding what strategy to use in what situations as result of the metacognitive experiences they have lived, using the strategy, monitoring learning, changing the strategy if learning has not taken place and trying a new strategy." [12]

The researcher defines them in the present study as those skills which help second year high school students (sample of the study) to produce correct syntactic structures. This can be done by making students have a good understanding of syntactic rules, organizing syntactic knowledge which includes syntactic planning, syntactic monitoring and control, syntactic organization, correcting syntactic mistakes, syntactic revision and evaluating understanding of syntactic rules by using the e-book.

FIELD STUDY:

A) The study is applied according to the following steps:

1. Applying the questionnaire of meta cognitive skills of teaching syntactic structures to second year high school students to a sample of Arabic language teachers and supervisors in order to identify the meta cognitive skills which have the highest values in a k2 test.

2. Recording the questionnaire's results in special tables to explain and analyze them statistically.

3. Applying the test of meta cognitive skills of teaching syntactic structures as a pre-test to experimental and control sample groups of second year high school students.

4. Training the experimental group to do some syntactic activities in the e-book to develop some of their meta cognitive skills.

5. Applying the test of meta cognitive skills of teaching syntactic structures as a post-test to the experimental and control sample groups of second year high school students.

6. Recording the results of pre and post-tests in special tables to explain and analyze them statistically.

Firstly : The results of the questionnaire of meta cognitive skills:

To prove the first hypothesis which states that there are no statistically significant differences between the observed and expected frequencies of the marks of Arabic language teachers and supervisors in the questionnaire items as the K2 test shows, the questionnaire was given to a number of the staff of Arabic Methodology and Curricula Department and was modified according to their remarks. Some of the questionnaire's expressions were re-phrased to ensure their reliability, comprehensiveness and relevance to the meta cognitive skills of teaching syntactic structures to second year high school students. After checking the questionnaire's reliability, it was applied to 40 Arabic language teachers and supervisors to test its reliability. The researcher used kuder -Richardson formula for test reliability. The following are the results of the questionnaire and the truthfulness of the first hypothesis:

Table (no.2): The observed and expected frequencies and the X² values for the opinions of Arabic language teachers and supervisors regarding the meta cognitive skills of teaching syntactic structures to second year high school students:

Skill no.	Appropriateness			(X^2) *	(Statistical significance) *	Relative Weight	Arrange
	High	Medium	Low				
1	26	8	6	18.2	**	0.833	14
2	20	18	2	14.6	**	0.817	22
3	21	18	1	17.45	**	0.833	15
4	27	10	3	22.85	**	0.867	8
5	18	19	3	12.05	-	0.792	30
6	16	23	1	18.95	-	0.792	29
7	22	13	5	10.85	**	0.808	28
8	21	17	2	15.05	**	0.825	18
9	20	17	3	12.35	**	80.8	27
10	22	15	3	13.85	**	0.825	19
11	38	2	0	68.6	**	0.983	1
12	37	2	1	63.05	**	0.966	2
13	34	3	3	48.05	**	0.925	4
14	35	3	2	52.85	**	0.944	3
15	4	3	33	43.55	-	0.425	32
16	6	4	30	30.14	-	0.366	34
17	24	11	5	14.5	**	0.825	17
18	25	12	3	18.35	**	0.850	10
19	24	13	3	16.55	**	0.842	13
20	27	10	3	22.85	**	0.867	9
21	27	12	1	25.55	**	0.883	7
22	8	10	22	8.6	-	0.448	31
23	28	10	2	26.6	**	0.883	6
24	22	15	3	3.85	**	0.825	20
25	25	10	5	16.25	**	0.833	16
26	29	10	1	30.65	**	0.900	5
27	24	14	2	18.2	**	0.850	11
28	4	3	33	43.55	-	0.425	33
29	23	15	2	16.85	**	0.842	12
30	23	13	4	13.55	**	0.825	21
31	24	10	6	13.4	**	0.816	23
32	20	17	3	12.35	**	0.808	26
33	17	22	1	18.05	**	0.800	24
34	25	7	8	15.35	**	0.808	25
Total	766	389	205				
Mean	22.5294	11.4412	6.02941				
S. deviation	8.158414	5.769256	8.99995				

*(*) Statistically significant at the 0.01 level, 0.05. (-) The lack of a statistically significant.*

(∗) - The degree of freedom when the ratio 0.05 is equal to (5.991), and when the ratio 0.01 is equal to (9.210)

A) As table no. (2) shows, Arabic language teachers and supervisors realize the importance and relevance of the following meta cognitive skills:

According to the previous analysis of the observed and expected frequencies and k2 values of the views of Arabic language teachers and supervisors regarding the meta cognitive skills relevant for teaching syntactic structures to second year high school students, it becomes clear that n=34 and d.h=2, and that DF at the ratio of 0,05 is 5,991 to be statistically significant, and at the ratio of 0,01 is 9,210 to be statistically significant. This means that Arabic language teachers and supervisors realize the importance of meta cognitive skills relevant for teaching syntactic structures to second year high school students which has the following numbers (1,2,3,4,7,8,9,10,11,12,13,14,17,18,19,20,21,23,24,25,26,27,29,30,31,32,33, 34) at the ratios of 0,01 and 0,05. These are the skills which have the highest values in k2 test with a frequency more than 80% because these skills are the most relevant for teaching syntactic structures to second year high school students (sample of the study). Table no. (2) shows the meta cognitive skills which have frequency more than 80% in the five essential levels:

Table no. (3) :Meta cognitive skills relevant for teaching syntactic structures to second year high school students which have the highest values in k2 test regarding the views of Arabic language teachers.

No	Meta cognitive skills which have a frequency rate of 80% or more	Relative Weight
Firstly:	**syntactic planning skills :**	
1 -	Identifying background information about syntactic concepts	**0.833**
2 -	Identifying the characteristics of syntactic concept.	**0.817**
3 -	Forming questions about syntactic concept like the previously prepared questions.	**0.833**
4 -	Identifying the aims of studying the syntactic subject matter.	**0.867**
5 -	Identifying the usage of syntactic concept's expressions in language situations.	**0.808**
6 -	Identifying the significance of syntactic concept.	**0.825**
Secondly:	**Syntactic control and monitoring skills:**	
7 -	Using some syntactic structures in correct phrasing.	**0.833**
8 -	Identifying similarities between syntactic structures.	**80.8**
9 -	Identifying the types of grammatical analysis whether major signs.	**0.825**
10 -	Deducing the syntactic concept controlling syntactic	**0.944**
11 -	Identifying the relationship between the syntactic concept and other syntactic concepts.	**0.966**
12 -	Giving a relevant definition to the syntactic concept.	**0.925**
Thirdly:	**Syntactic organization skills :**	
13 -	Finding missing points in the syntactic concept which negatively affect its function.	**0.983**
14 -	Properly using the syntactic concept in language constructions.	**0.825**

No	Meta cognitive skills which have a frequency rate of 80% or more	Relative Weight
15 -	Categorizing syntactic concepts according to using them language constructions.	0.850
16 -	Transforming one syntactic structure to another.	0.842
17 -	Syntactic relations' analysis of the concept in language construction.	0.883
Fourthly:	syntactic evaluation skills:	
18 -	Correcting syntactic mistakes when using the expressions of a specific syntactic concept.	0.867
19 -	Setting clear criteria for syntactic judgement.	0.883
20 -	Selecting the correct language construction among suggested ones	0.825
21 -	Identifying the misuse of syntactic concept in some sentences.	0.833
22 -	Identifying the reason of including the syntactic concept in the mentioned example.	0.850
Fifthly :	Syntactic reviews skills:	
23 -	Modifying language constructions according to the use of a specific syntactic concept.	0.900
24 -	Determining the correct spelling and pronounciation of word endings in language constructions	0.842
25 -	Determining the declension of some words in syntactic structure.	0.825
26 -	Relating the student's language environment to the syntactic concept	0.816
27 -	Correcting some sentences according to their syntactic rules.	0.808
28 -	Giving evidence of the accuracy of syntactic judgments	0.800

As for skills no. (5,6,15,22,28), they have a frequency less than 80% in k2 test. Thus the researcher excluded them. The table no (4) shows the meta cognitive skills which have less than 80% in k2 test

Table no. (4): The meta cognitive skills which have a frequency less them 80% in k2 test according to the views of Arabic language teachers and supervisors.

No	the meta cognitive skills which have less than 80% in k2 test	Relative Weight
1 -	Identifying the points of syntactic concept.	0.792
2 -	Observing the accuracy of the sentence which includes the syntactic concept.	0.425
3 -	Distinguishing between what is related to the syntactic concept and what is not.	0.366
4 -	Determining how far the steps the student takes for the declension of words in the sentence are correct.	0.448
5 -	Identifying the sections of a specific syntactic concept.	0.425
6 -	Identifying the misinterpretations of some of the expressions of syntactic concepts in the examples.	0.792

The previous tables of k2 values for the views of Arabic language teachers and supervisors regarding the meta cognitive skills for teaching syntactic structures to second year high school students show that there are statistically significant differences between the observed and expected frequencies of the marks of Arabic language teachers and supervisors. Thus the researcher tested the truthfulness of the first hypothesis which states that there are no statistically significant differences between the observed and expected frequencies of the marks of Arabic language teachers and supervisors in the items of the questionnaire of the meta cognitive skills relevant for teaching syntactic structures to second year high school students by using the e-book as k2 test shows. The alternative hypothesis is adopted. It states that there are statistically significant differences between the observed and expected frequencies of the marks of Arabic language teachers and supervisors in the items of the questionnaire of the meta cognitive skills relevant for teaching syntactic structures to second year high school students by using the e-book as k2 test shows.

Secondly: Results of the test of meta cognitive skills for teaching syntactic structures to second year high school students.

A) The second hypothesis which states that there are no statistically significant differences between the means of the experimental and control groups in the pre-test of meta cognitive skills of teaching syntactic structures, is proved and adopted. The students' marks in the pre-test were recorded and the mean and standard deviation were given. The T values

of the experimental and control groups in the pre-test of meta cognitive skills of teaching syntactic structures were also given as the following table shows.

Table no. (5) Means, standard deviations and T values and their significance between the experimental and control groups in the pre-test of meta cognitive skills of teaching syntactic structures:

Skills	Type of application	The control group		The experimental group		calculated (T) value*	level of significance
		Mean	s. deviation	Mean	s. deviation		
1- Syntactic planning	Pre- test	2.4	0.912871	2.48	0.962635	0.295	statistically insignificant
2- Syntactic monitoring and control		3.12	1.129897	3.2	0.866025	0.275	
3- Syntactic organization		2.16	0.746101	2.08	0.702377	0.382 -	
4- Syntactic evaluation		2.12	0.927362	2	0.645497	0.520 -	
5- Syntactic revision		2.36	0.860233	2.48	0.822598	0.493	

The previous table shows that there are no statistically significant differences between the means of students' marks in both experimental and control groups in all meta cognitive skills included in this study. This is because the value of calculated T is less than that of tabulated T at the level of 0,01 which is 2,40,and at the level of 0,05 which is 1,67. This indicates the idea that there is no development in the meta cognitive skills of teaching syntactic structures to students of the experimental group whose skills are targeted to be developed by using the e-book. Thus this hypothesis is accepted.

B) To prove the third hypothesis which states that there are no statistically significant differences between the means of students' marks in the experimental and control groups in the post-test of meta cognitive skills of teaching syntactic structures, students' marks in the post-test, the mean and standard deviation were recorded and the values of T is calculated for the experimental and control groups in the post test as the following table shows:

(*) - Tabulated T value at the level of 0,01 is equal to (2.40) and at a level of 0.05 is equal to (1.67)
 DF = 48.

Table no. (6): The Means, standard deviations and T values and their significance for the experimental and control groups in the post-test of meta cognitive skills of teaching syntactic structures:

Skills	Type of application	The control group		The experimental group		calculated (T) value[*]	level of significance
		Mean	s. deviation	Mean	s. deviation		
1- Syntactic planning	Post - test	3.32	0.748331	4.24	1.331666	2.950	Significant at 0.01 level
2- Syntactic monitoring and control		4	1.190238	5.84	1.106044	5.547	
3- Syntactic organization		3.2	1.040833	4	1	2.715	
4- Syntactic evaluation		2.76	0.778888	3.4	0.645497	3.099	
5- Syntactic revision		3.68	0.748331	4.52	1.045626	3.200	

Table no. (6) shows that there are statistically significant differences between the means of students' marks of the experimental and control groups in the post-test of meta cognitive skills of teaching syntactic structures and that these differences are in favor of students of the experimental group. These skills are :

(Syntactic planning skills, syntactic control and monitoring skills, syntactic organization skills, syntactic evaluation skills, and syntactic revision skills). It is also shown that these differences are not out of chance because the value of calculated T is more than that of tabulated T at the level of 0,01 which is 2,40, and at the level of 0,05 which is 1, 67. This indicates the development of meta cognitive skills of teaching syntactic structures to students of the experimental group whose skills are targeted to be developed by using the e-book such development is due to using the e-book in teaching the unit. Thus, this hypothesis is not accepted. The alternative hypothesis which states that there are statistically significant differences between the means of students' marks of the experimental and control groups in the post-test of meta cognitive skills of teaching syntactic structures is accepted. The differences are in favor of students of the experimental group.

([*]) - Tabulated T value at the level of 0,01 is equal to (2.40) and at a level of 0.05 is equal to (1.67)
DF = 48.

Table no. (7) The calculation of T value and its significance for the experimental and control groups in the post-test of meta cognitive skills of teaching syntactic structures.

statistics / group	mean	S.D	Calculated(T)	DF	Tabulated(T)		Statistical significance	
Experimental N= 25	22	2.081	7.58	48	0.01	0.05	0.01	0.05
Control N= 25	16.96	2.507			2.40	1.67	Significant	

The previous table shows that the value of calculated T as a whole for the experimental and control groups in the post-test of meta cognitive skills is (7,58). This means that the experimental group is superior to the control group in the meta cognitive skills included in the study. To show the effect of the e-book on developing the meta cognitive skills of teaching syntactic structures to students of the experimental group, the researcher applies the following formula:

$$D = \frac{2T}{\sqrt{FD}}$$

T means, The value of calculated T for the two groups in the post-test

FD is the degree of freedom (n1+n2)-2). The effect is weak if D is less than or equals 0,2 and moderate if it is 0,5 and strong if it is more than or equals 0,8. Applying the previous formula shows that the effect is 2,19. This means that the e-book has a deep effect on developing the meta cognitive skills of teaching syntactic structures to second year high school students.

Table no. (8) shows the effect of the e-book on developing the meta cognitive skills of teaching syntactic structures to second year high school students:

statistics	Value of calculated (T) in post-test	effect	The significance of the effect
Experimental N= 25 / Control N= 25	7.58	2.19	is very clear because it is more than,8

The previous table shows that the effect is (2,19). This means that the e-book is very effective in developing the meta cognitive skills of teaching syntactic structures to second year high school students.

Table no. (9): The degree of the effect for each of the meta cognitive skills in the post-test:

group / Skill	statistics	Calculated (t) value	D	The degree of influence
1- Syntactic planning		2.95	0.9	
2- Syntactic monitoring and control	**Experimental =** 25	5.55	1.60	
3- Syntactic organization	**Control** =25	2.67	0.8	Great
4- Syntactic evaluation		3.09	0.9	
5- Syntactic revision		3.2	0.92	

FINDINGS AND RECOMMENDATIONS OF THE STUDY:

In view of the study's results, the researcher recommends the following:

1. Using the e-book in the other branches of Arabic
2. Using the modern methods of teaching syntax, those methods which help develop the differentthinking skills-and avoiding traditional rather than thinking skills.
3. Preparing a training program for in-service teachers, training them on how to use e-book in teaching the branches of Arabic skills and the different thinking skills of teachers.
4. Using the various services available on the web in teaching the different branches of Arabic language.
5. Using the methods of developing meta cognitive skills in teaching the branches of Arabic language to all educational stages
6. Preparing training programs integrating the teaching of the branches of Arabic language for both the development of students, meta cognitive skills and their creative thinking
7. Reconsidering the current methods of evaluation by including questions measuring students' meta cognitive skills and the different thinking skills in Arabic language exams
8. Realizing the importance and usefulness of computer labs by using them in teaching the different knowledge
9. Establishing a special unit in the ministry for producing educational software, and software programs which educational software, and courses at reasonable prices especially in the branches of Arabic language

SUGGESTED FURTHER RESEARCH:

In view of the study's results, the researcher suggests making the following research studies:

1. The efficiency of using the e-book in developing some reading and thinking skills of first year high school students.
2. Making a comparison between using the e-note and the e-book in teaching the different branches of the students' thinking skills.
3. Studying the computer's ability to develop the composition and writing skills of prep stage students.
4. Studying the obstacles hindering the use of technological aids in teaching the branches of Arabic language.
5. The effect of free reading on developing some meta cognitive and creative thinking skills of second year high school students.
6. Studying the best methods of teaching Arabic language in general and Arabic syntax in particular.

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