

The Effect of Using Discovery Learning Strategy in Teaching Grammatical Rules to first year General Secondary Student on Developing Their Achievement and Metacognitive Skills

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ABSTRACT: The research problem is summarized in the shortage of the teaching methods used in the teaching of grammatical rules that led to a decline in the level of achievement and failure in the development of skills beyond the knowledge of students in the first grade secondary illustrated by numerous students.

KEYWORDS: Learning Strategy, Grammatical Rules, Student, Metacognitive Skills.

RESEARCH PROBLEM:

The research problem is summarized in the shortage of the teaching methods used in the teaching of grammatical rules that led to a decline in the level of achievement and failure in the development of skills beyond the knowledge of students in the first grade secondary illustrated by numerous students.

Despite the demonstrated previous studies of the feasibility of these strategies in achieving some of the goals of the Arabic language, the researcher did not find the study of Arabic and one sent to the pairing of discovery learning and skills development of metacognition in grammatical rules and this is what the researcher is trying to reveal through this research.

Based on the above, current research tries to answer the question the following: (What's effective use of discovery learning strategy in the teaching of grammatical rules for first-grade students in the development of secondary attainment, and what metacognitive skills ?)

The ramifications of the previous question raise the following sub-questions:

1. What metacognition skills appropriate knowledge to secondary first-graders?
2. How can the organization of the fourth unit of the decision of grammatical rules for first grade secondary using the discovery learning strategy for the development of collection and what skills and knowledge behind?
3. What is the impact of the use of discovery learning strategy in the teaching of the fourth unit of the decision of grammatical rules for first grade secondary to the development of the metacognition skills?

RESEARCH LIMITS:

1. A sample of secondary schools first-graders in Fayoum governorate.
2. What appropriate skills and knowledge for first grade secondary students that are determined through research.
3. The fourth unit assessed on the first secondary grade students.

RESEARCH OBJECTIVES:

Current research aims to stand on:

- 1 - Determine what skills and knowledge behind appropriate for first graders secondary.
- 2 - Determine the effectiveness of discovery learning strategy in the teaching of grammatical rules in the development and skills beyond the knowledge of students in the first grade secondary.

THE IMPORTANCE OF RESEARCH:

This research may be useful in:

- 1 - directing curriculum planners of grammatical rules to take into account the discovery learning strategy during the construction of these approaches.
- 2 - Provide a procedural model for how to use the discovery learning strategy in the field of teaching grammatical rules for first grade secondary.
- 3 - Provide one of modern strategies in the teaching of grammatical rules a discovery learning strategy in teaching grammatical rules rather than traditional methods.
- 4 - The development of appropriate metacognitive skills for secondary first-graders.

SEARCH SAMPLE:

The sample consists of a group of first-grade secondary students. The researcher randomly selected schools in the province of Fayoum divided into two groups; one group is considering using experimental discovery learning strategy and the other a control group taught in the traditional manner.

RESEARCH METHODOLOGY:

Current search will depend on:

- 1 - descriptive approach: in the theoretical framework of the research in the light of the references and previous studies and the preparation of search tools.
- 2 - Quasi-experimental approach: The strategy is the use of discovery learning to teach students of the experimental group.

SEARCH TOOLS:

Will be to search tools:

- pilot Tools:
 - 1 - student handbook entitled: "The use of discovery learning strategy in teaching topics fourth unit is assessed on the first - grade students for the development of secondary attainment and skills beyond knowledge."
 - 2 - A teacher's guide entitled "Use of discovery learning strategy in teaching topics fourth unit is assessed on the first - grade students for the development of secondary attainment and skills beyond knowledge."
- Measurement tools:
 - 1 - a questionnaire what skills and knowledge behind.
 - 2 - A test to determine what skills and knowledge appropriate for first grade students at secondary research sample (prepared by the researcher).

RESEARCH HYPOTHESES:

Current search will test the following hypotheses:

- 1 - There are no statistically significant differences between the duplicates Alohas and expected frequencies beyond the skills knowledge appropriate to grade students for the first year secondary.
- 2 - There is no statistically significant difference between the mean scores of students of experimental and control groups in the post application to test the skills and knowledge behind for the experimental group.
- 3 - There is no statistically significant difference between the mean scores of students of experimental and control groups in the tribal application to test the skills and knowledge behind.

Steps:

To answer the first question of a search (what metacognitive skills appropriate for first-grade secondary students?) The answer can be made according to the following steps:

- 1 - Review some of the studies and previous educational literature that dealt with the skills and knowledge behind.
- 2 - Prepare a questionnaire Ole these skills by referring to previous studies and research.
- 3 - Show the questionnaire on a group of arbitrators to determine the suitability of these skills to first-graders secondary.

To answer the second question of the search is (how can the organization of the fourth unit assessed on first-graders secondary using a strategy of discovery learning to develop skills beyond the knowledge of students in the first grade secondary?) The researcher introduced the definition of multi - strategy discovery learning and identified operational definition, and then explained how to apply this strategy in the field of grammatical rules, and finally a description of the organization of the content of the fourth unit assessed on first-graders secondary in light of this strategy through a handbook for students and a teacher's guide to learn how to use the strategy to explain the lessons of the fourth unit assessed on first-graders secondary.

To answer the third question of a search (what effect the use of discovery learning strategy in the teaching of the fourth unit assessed on the first secondary grade students to develop the skills and knowledge behind?) Can be according to the following steps:

- 1 - set up a test to measure what skills and knowledge behind and set scientifically tribal then be applied to the first grade students secondary.
- 2 - Teaching Unit IV assessed on the first secondary grade students using the discovery learning strategy.
- 3 - Application of T test.
- 4 - Processing and interpreting the results and make recommendations and proposals.

RESULTS OF THE STUDY:

Results of the application questionnaire what skills and knowledge behind.

1 - Ch2 account for a questionnaire beyond the skills of knowledge:

To calculate the Ch2 to get feedback from mentors to learn skills beyond the appropriate knowledge to first-graders and secondary were mentors responses on this way.

Table (1)

Views of the Arabic language in the guides skills beyond the appropriate knowledge to first - grade students general secondary.

No skill	Very suitable	suitable	Inappropriate	Total CA2 each skill	Relative weight	Skills arrangement based on relative weight
1	17	1	2	12,76	91,	98,
2	7	5	8	847,	65,	95,
3	8	5	7	282,	68,	93,
4	8	6	6	976,	70,	91,
5	6	8	6	4,794	66,	90,
6	7	6	7	1,325	66,	88,
7	6	5	9	1,929	61,	73,
8	16	1	3	9,85	,88	70,
9	5	7	8	4,321	61,	70,
10	7	7	6	2,408	68,	68,
11	6	6	8	2,029	60,	68,
12	6	5	9	1,929	61,	66,
13	6	8	6	4,794	66,	66,
14	16	2	2	9,82	90,	66,
15	7	6	7	1,244	66,	66,
16	9	6	5	1,226	73,	65,
17	8	6	6	976,	70,	61,
18	19	1	-	13.38	98,	61,
19	18	1	1	16,24	95,	61,
20	17	2	1	13,08	93,	60,

Based on the above table, the researcher chose skills (18 - 19 - 20 - 1 - 14 - 8) function through the value of CA 2 each skill; with the highest relative weights and meaning so that the researcher has chosen the following six skills:

- 1 - procedural behavior Skill
- 2 - declarative Skill
- 3 – conditional Skill
- 4 – Planning Skill
- 5 – regulation Skill
- 6 –testing skill

2 -: the results of the application of the test of metacognition skills (tribal).

To test a second hypothesis:

There is no statistically significant difference between the mean scores of students experimental and control groups in the tribal application to test the metacognitive skills. The researcher prepared a test of metacognition skills in the teaching of grammatical rules and after the application of the test tribal and monitoring results, where the application through: Calculate the arithmetic mean of the scores and the standard deviation of the test account (v) (Annex 13); to identify significant difference between the averages in pretest between the control group and the experimental group as shown in the table (22).

Value (v) and statistical significance between the mean scores of students of the control group and the experimental group in the application as a whole tribal Table (2)

Value (v) the calculated value (v) degree of tabular

Freedom of the standard deviation of the mean number (n) of statistical data application

Table (2)

Statistical data Application	No of " N"	Mean Scores	Standard deviation	T - test		Calculated T-test
				0,05	0,01	
The control group	26	17,52	15,82	1,676	2,403	,1238 Not significant
The experimental group	25	17	14,77			

It is clear from the table above (2) the lack of a statistically significant difference between the experimental and control groups in total in the pre - test the skills and knowledge behind.

3: Results of the application of T test skills of metacognition.

The third to test the hypothesis of a search:

There is no statistically significant difference between the mean scores of students experimental and control groups in the post application to test the skills and knowledge behind for the experimental group.

The researcher prepare a skills test metacognition in the teaching of grammatical rules and after the application of the T test and monitoring results, where the application through: Calculate the arithmetic mean of the scores and the standard deviation of the test account (v); to identify significant difference between the averages in the post-test between the control group The experimental group .

The following table illustrates this. Table (3)

T. value and statistical significance between the mean scores of students of the control group and the experimental group in the post in the test as a whole

Effect size value (v) the calculated value (v) degree of tabular

Freedom of the standard deviation of the mean number (n) of statistical data

Table (3)

Statistical data Application	No of " N"	Mean Scores	Standard deviation	Free degree	T - test		Calculated T-test	Effect size value (v)
					0,05	0,01		
the control group	26	48,2	5,54	49	1,676	2,403	4,166	26,
the experimental group	25	56,94	8,76					

It is clear from the above table (No. 3) there is a statistically significant difference between the experimental and control groups in total in the post-test the skills of metacognition in favor of the experimental group. ; Also clear that the size of Ale the robber where it is greater than (6), which is equal to (26),.

The following table illustrates the value of "T" between the scores of students of the control group and the experimental group in the tribal application.

Table (4)
Skilled pilot control value "v"

Skill	the control group	the experimental group	the value of "T"
1 - procedural behavior Skill	2,72 Mean Scores	2,07 Mean Scores	77,
	2,07 Standard deviation	1,82 Standard deviation	
2 - declarative Skill	2,32 Mean Scores	2,46 Mean Scores	285,
	1,22 Standard deviation	2,17 Standard deviation	
3 – conditional Skill	2,96 Mean Scores	1,92 Mean Scores	068,
	2,92 Standard deviation	2,23 Standard deviation	
4 - Planning Skill	3,12 Mean Scores	2,69 Mean Scores	722,
	2,43 Standard deviation	1,75 Standard deviation	
5 - regulation Skill	3,2 Mean Scores	3,23 Mean Scores	581,
	1,91 Standard deviation	1,77 Standard deviation	
6 –testing skill	3,23 Mean Scores	3,38 Mean Scores	,274
	2,52 Standard deviation	2,14 Standard deviation	

And adopt from the previous table that the value of the "T" in the previous skills is significant at the 0.05 level, which indicates a lack of superiority degrees students Mahmuah the experimental control group students in the pre - test in the skills and knowledge behind.

The following table illustrates the value of "T" between the scores of students of the control group and the experimental group in the post.

Table (5)
Skilled pilot control value "v"

Skill	the control group	the experimental group	the value of "T"
1 - procedural behavior Skill	8,72 Mean Scores	10,9 Mean Scores	2,83
	2,88 Standard deviation	2,57 Standard deviation	
2 - declarative Skill	8,16 Mean Scores	2,88 Mean Scores	3,35
	10,77 Standard deviation	2,57 Standard deviation	
3 – conditional Skill	7,84 Mean Scores	,2 Mean Scores8	*2,12
	9,31 Standard deviation	1,99 Standard deviation	
4 - Planning Skill	6,96 Mean Scores	2,47 Mean Scores	4,273
	9,54 Standard deviation	1,7 Standard deviation	
5 - regulation Skill	6,96 Mean Scores	2,34 Mean Scores	2,965
	8,77 Standard deviation	1,92 Standard deviation	
6 –testing skill	7,92 Mean Scores	3,42 Mean Scores	3,018
	10,77 Standard deviation	3,19 Standard deviation	

And adopt from the previous table that the value of the "T" in the previous skills function at the level of 0.05 and at 0.01, indicating the superiority of scores of the experimental students Mahmuah the control group students in the post - test in the metacognitive skills.

Find recommendations

- 1 - Find a questionnaire foot bout of metacognitive skills secondary students using a modern discovery learning strategy.
- 2 - Discovery learning strategy succeeded in teaching grammatical rules in the development of skills beyond the knowledge of students in the first grade secondary school year, which is reflected in the level of the students in the test scores.

3 - discovery learning strategy helped to recruit activities where students learn for themselves and apply what know it in new situations;; which in turn led to achieving effective learning.

SEARCH SUGGESTIONS:

1 - conduct research on the use of scientific discovery learning strategy among students in different rows, and in the top seminar stages.

2 - Conduct scientific research for the development of skills beyond the knowledge of students in different rows, and in the top seminar stages.

3 - Researchskills the researcher concluded that re useful in teaching first-graders secondary year.

4 - According to the use of discovery learning strategy in the development of the skills and knowledge behind.

5 - Focus on what skills and knowledge behind different; and development in all branches of the Arabic language.

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