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**Geographical Atlas Electronic The Effect of Using
on Developing some Geographical Concepts
and Spatial Perception of First year
Secondary Students**

By researcher

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(١٤٣٨ / ٢٠١٧)

Summary

Introduction:

Today we experience a world of which the most prominent feature is development and changing. As a result, a trend to get along with the technological development in all school subjects, especially, geography. Geography witnessed a lot of developments in its aims, content, and teaching methods. In order for geography to be consistent with progress, changes, and development, the subject of geography is aiming to enable students to acquire geographic concepts, collect knowledge from various resources, and to stimulate their thinking.

Geography has a special tendency in academic studies which is built on its nature that makes it an area where many teachers can find help in developing their abilities of observation, research and causation, perception of reasons and effects, and extraction of types of interaction between man and environment, recognizing spatial relationships surrounding human beings, and the investigation of interaction between both of them which would help develop the so-called spatial perception.

The electronic Atlas is a basic teaching aid of geography. If used well by teachers, it would surpass the other teaching aids. It includes quantitatively and qualitatively important information. It is one of the general aims of social studies and a special one of geography as a subject matter. It is necessary for students to have opportunities to study geography through an atlas appropriate for each educational stage and characteristics of teachers.

Problem of the Study:

According to the mentioned above, the problem of the current research was stated as "the reluctance of students to study the geography

subject because of the weakness of their spatial perception and the weakness of their concept acquisition. Therefore, the current research aims to use the electronic atlas to develop geographic concepts and the spatial perception of the first secondary grade students.

Questions of the Research:

The problem of the research can be formulated in the following questions:

"What is the effect of using an electronic atlas on developing some geographic concepts and the spatial perception of the first secondary grade students?"

The following sub-questions can stem from this main question:

- 1- What are the geographical concepts included in the chosen study units?
- 2- What is the form of the electronic geographic atlas used in developing some geographic concepts and spatial perception of the first secondary grade students?
- 3- What is the effect of using an electronic geographic atlas in developing some *geographic concepts* of the first secondary grade students?
- 4- What is the effect of using an electronic geographic atlas in developing the *spatial perception* of the first secondary grade students?

Goals of the Research:

The current research aims to the following:

- 1- To identify the geographic concepts of the two units in the Egyptian geography book in the light of the concepts which are difficult to be acquired by the first secondary grade students.
- 2- To identify the main skills and the sub-skills of the spatial perception.
- 3- To design an electronic geographic atlas to develop some geographic concepts and the spatial perception of the first secondary grade students.
- 4- To investigate the effect of using an electronic geographic atlas on developing some geographic concepts of the first secondary grade students.
- 5- To investigate the effect of using an electronic geographic atlas on developing the spatial perception of the first secondary grade students.

Significance of the Research:

The benefits of this research may be as the following:

- 1- To direct the attention of curriculum designers to the importance of developing the geographic concepts and the spatial perception of the first secondary grade students.
- 2- to introduce a list of the spatial perception skills and another list of geographic concepts to help curriculum designers, planners, and developers in integrate such concepts into the curricula of geography.
- 3- To introduce a model for testing the spatial perception of the first secondary grade, to be helpful in the evaluation of spatial perception skills in the curriculum of geography.
- 4- To introduce a model for testing the geographic concepts of the first secondary grade, to be helpful in the evaluation of such concepts.

Limits of the Research:

This research was limited to the following:

- 1- Subject limits
- 2- Time limits
- 3- Spatial limits
- 4- Number limits

Tools of the Study:

- 1- A test for spatial perception
- 2- A test for geographical concepts of the first secondary grade

Material of the Research:

- 1- An electronic geographic atlas
- 2- Preparation of a teacher's guide including how the selected units and subjects should be taught.
- 3- Preparation of a manual about students' activities to show how the tasks related to the teaching of the selected units should be implemented.

Hypotheses of the Research:

- 1- There statistically significant differences between both means of scores of *experimental group* students in the pre- and post-applications of the ***geographic concepts*** test in favor of the post application.
- 2- There statistically significant differences between both means of scores of *experimental group and the control group* students in the post-application of the ***geographic concepts*** test in favor of the experimental group.
- 3- There statistically significant differences between both means of scores of *experimental group students* in the pre- and post-

applications of the *spatial perception* test in favor of the post application.

- 4- There statistically significant differences between both means of scores of *experimental group and the control group* students in the post-application of the *spatial perception* test in favor of the experimental group.
- 5- There is a statistically significant correlation between the scores of students (the sample of the research) on the geographic conception test and the spatial perception test.

Procedures of the Research:

To answer the main question "What are the first secondary grade students' levels of geographic concepts acquisition and spatial perception?" the researcher followed these procedures:

- 1- Reviewing the Arabic and Foreign literature and previous studies written about developing geographic concepts.
- 2- Preparing a test for geographic concepts, introducing it to judges, and modifying it according to their opinions.
- 3- Results were extracted, statistically processed, and interpreted.
- 4- Reviewing the Arabic and Foreign literature and previous studies written about developing spatial perception.
- 5- Preparing a test for spatial perception, introducing it to judges, and modifying it according to their opinions.
- 6- Results were extracted, statistically processed, and interpreted.
- 7- Reviewing the Arabic and Foreign literature and previous studies written about the electronic atlases.
- 8- Developing an electronic geographic atlas and presenting it to a number of judges.

- 9- Preparing a teacher's guide about teaching the two units using the electronic geographic atlas and presenting it to a number of judges.
- 10- Preparing the student' activities book concerning the tasks related to the selected units and presenting it to judges.
- 11- Introducing a set of recommendations and suggestions in terms of the findings of the experimental study.

Results of the Study:

The results of the research indicate that using the electronic geographic atlas has been effective in developing some geographic concepts and spatial perception of the first secondary grade students.

Recommendations of the Study:

- 1- It is important to use teaching aids and atlases simulating the reality and help students to acquire the geographic concepts.
- 2- It is necessary for teachers to be pre-service training on how to use the electronic atlases in teaching the geographic concepts.
- 3- It is essential to pay attention to using computer in teaching, especially in the subjects of social studies and geography because it promotes the optical conception and spatial competence by its various applications.
- 4- The curriculum developers should pay attention to developing the spatial perception through integrating it into the curricular content.