

"conceptually transparent" to students. Many students have difficulty recognizing the important concepts in a text, lecture or other form of presentation. Part of the problem originates from a pattern of learning that basically requires retention of information and no assessment of the data is required. Such students neglect to build powerful concept and propositional frameworks, leading them to consider learning as a blur of myriad facts, dates, names, equations, or procedural rules to be retained. For these students, the subject matter of most disciplines, and particularly science, mathematics, and history, is a bedlam of information to remember, and they as a rule locate this boring. Many feel they cannot master knowledge in the field. If concept maps are used in planning instruction and students are required to construct concept maps as they are learning, previously unsuccessful students can become successful in making sense out of science and any other discipline, acquiring a feeling of control over the subject matter (Bascones & Novak, 1985; Novak, 1991, 1998).

DEFINITION OF AN IDEA MAP

An idea map is a type of organizer used to help students organize and represent knowledge of a subject. Idea map begin with a main concept and then branch out to show how that main concept can be broken down into specific topics.

How to Create an Idea Map

Idea maps are an organized structure which consists of needed information of main concepts to specific one (subordinate concepts stemming from the main concept to specific). This type of map allows change and new concepts to be added.

➤ Start with a main idea, topic, or issue to focus on.

A helpful way to determine the context of an idea map is to choose a focus question-something that needs to be solved or a conclusion that needs to be reached. Once a topic or question is decided on, that will help with the hierarchical structure of an idea map.

➤ Determine the key concepts

Find the key concepts that connect and relate the main idea and rank them; most general, inclusive concepts come first, then link to smaller, more specific concepts.

➤ Finish by connecting concepts-creating linking words

The basic links between the concepts are created, add cross-links, which connect concepts in different areas of the map, to further illustrate the relationships and strengthen student's understanding and knowledge on the topic.

OBJECTIVES OF THE STUDY

- To study the potency of an idea map in learning biology among high school students with adhere to their gender.
- To study the potency of an idea map in learning biology among high school students with adhere to their locality.
- To study the potency of an idea map in learning biology among high school students with adhere to their type of school.

HYPOTHESES

1. There is no significant difference between boys and girls high school students' potency of an idea map in learning biology.
2. There is no significant difference between rural and urban high school students' potency of an idea map in learning biology.
3. There is no significant difference between government and private high school students' potency of an idea map in learning biology.

TOOL

Idea map was developed by the investigator with help of ninth standard science book, Tamilnadu Text book and Educational Services Corporation. Forty objective questions were given to the subject in the lesson "Animal kingdom and Cells" ninth standard - I term III & IV Unit) constructed and validated by the investigator.

Population and Sample

The target population of the present study consisted of high school students in Pollachi educational district, Coimbatore. In which four high schools with two hundred students were selected for this study. Simple Random Technique was used. The same teaching method and learning content was followed all the schools with the proper intimation of the heads, consultation with experts, experience teachers and subject handling teachers. After the expert evaluation, the investigator gone for the data collection.

RESULTS

To analyze potency of an idea map in learning biology among high school students with regard to their gender, locality and type of school. Mean, standard deviation and independent t-test were computed. The findings were represented as below.

Table 1: Mean Score Difference Potency of an Idea Map in Learning Biology among High School Students based on their Gender, Locality and Type of School

Variable	N	Mean	SD	t-value	Level of Significance
Boys	118	28.00	3.198	0.847	Not Significant
Girls	132	27.63	3.645		
Rural	60	27.67	2.915	0.486	Not Significant
Urban	190	27.67	3.521		
Aided	98	27.58	3.252	1.008	Not Significant
Government	152	28.03	3.236		

From Table-1, the mean achievement score potency of an idea map in learning biology among high school students of boys and girls are found to be 28.00 and 27.63 respectively. The calculated t-value 0.847 is not significant at 0.05 level. Hence the hypothesis-1 is accepted. It is inferred that control group students do not differ significantly with adhere to their gender their achievement scores.

Table-1 also shows that the calculated t-values 0.486 and 1.008 are less than the table value (1.96) at 0.05 level. Thus, the framed hypotheses-2 & 3, are accepted.

CONCLUSION

When created correctly and thorough idea map is a powerful way for students to reach high levels of cognitive performance. An idea map is also not just a learning tool, but an ideal evaluation tool for educators measuring the growth of and assessing student learning. As students create idea maps, they reiterate ideas using their own words and help identify incorrect ideas and concepts; educators are able to see what students do not understand, providing an accurate, objective way to evaluate areas in which students do not yet grasp concepts fully. Conclusively, the method seems the best alternative to experimental studies since it has the potential for the retention of knowledge for a long time. Concept mapping is therefore recommended to schools in developing nations as a reliable method for study since most of their schools lack equipped laboratories and instructional materials for hands-on activities.

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