

CHAPTER - V

SUMMARY

&

CONCLUSION

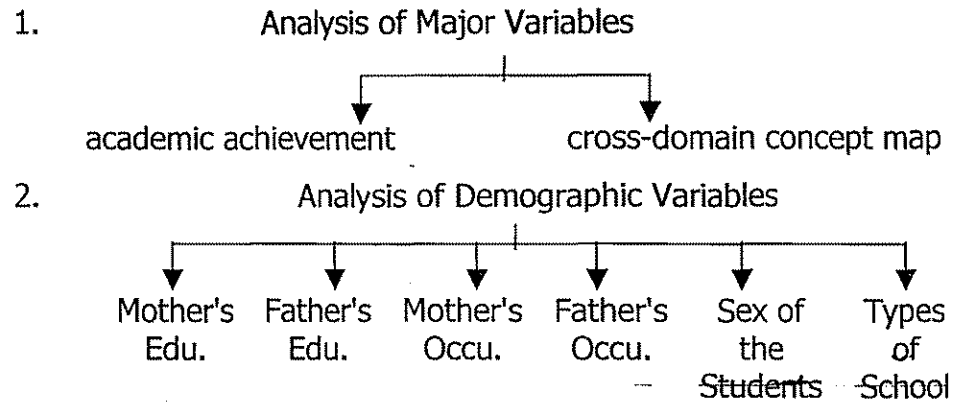
5.1 INTRODUCTION :

Concept map is an intuitive visual knowledge representation technique. It enables teachers to gain invaluable insights into the cognitive modes of their students. The technique has therefore been widely used in an attempt to better comprehend differences in student construction of knowledge and subsequent learning enhancement. This study has, therefore, argued for the flexible knowledge acquisition tool which handles both formal and informal knowledge representation

This chapter sums up the process of the study as a whole. In this section of the study, the procedure, findings and entire development of the investigation have been reviewed. The main points of the study have been clustered to give the complete picture of the study in a concise form. The conclusions have precisely been drawn. The implications of the study have also been discussed.

5.2 SUMMARY/REVIEW OF THE STUDY :

- In the first chapter the conceptual framework of concept map is given.
- The second chapter deals with the review of related literature which helped the investigator to delimit and define the problem, avoiding duplication.
- The third chapter deals with the participant selection procedure, data gathering device, data analysis & statistical techniques used in the study.
- The fourth chapter deals with the analysis of the data. The analyses have been done in the following manner :



STATEMENT OF THE PROBLEM :

The study specifically reads as **"Eighth Graders Academic Achievement And Their Ability to Construct a Cross-domain Concept Map" (A Brain Function Perspective).**

SAMPLE/PARTICIPANT SELECTION PROCEDURE :

The best way to study population is through representative samples by the suitable techniques. Keeping in view, the nature of the problem and population under investigation, its availability, time suitability, money and manpower the method of random sampling was adopted by the investigator.

TOOL/DATA GATHERING DEVICE :

In any research work importance of tool is well known. During research process efficient use of tools with due precautions lead to produce reliable results. Hence a self constructed inventory was used by the investigator in this study.

RESEARCH QUESTIONS :

1. Are there any gender differences in the ability to construct cross domain concept map?
2. What is the relationship between a.a. and cdc^m ability?
3. How far is it true that high achievers construct better cross-domain concept maps?
4. Does education of parents play a role in a.a. and c.d.c.m^{ng} ability of children?
5. Is attitude related with a.a. of a child?
6. Is there any difference between a child whose mother is working and the one whose mother is not working in relation to a.a., c.d.c.m^{ng} ability and environmental attitude?
7. How much the different components of two major variables contribute in making them?

OBJECTIVES OF THE STUDY :

1. To study the relationship between academic achievement and the ability to construct cross-domain concept map.
2. To find if there is any difference in a.a. and the ability to construct cdc^m between the students of K.V. No. 1 and M.G.P.S.
3. To study the gender difference with respect to a.a. and cdc^m ability.
4. To analyze the relationship between a.a. and environmental attitude.
5. To find the effect of parents education on the students a.a., environmental attitude and cdc^m ability.
6. To find the effect of mother's occupation on the students a.a.; environmental attitude and cdc^m ability.
7. To find the effect of father's occupation on the students a.a., environmental attitude and cdc^m

HYPOTHESES :

Consideration of null hypotheses have been taken in this study :

1. **Ho¹** : There is no significant relationship between a.a. of the students and their ability to construct c.d.c.m.
2. **Ho²** : There is no significant relationship between the a.a. of students and their environmental attitude.
3. **Ho³** : There is no significant relationship between boys and girls in respect of a.a. and c.d.c.m^{ng} ability.
4. **HO₄** : There is no significant relationship between the students of two schools in respect to a.a. and c.d.c.m^{ng} ability.
5. **Ho⁵** : There is no significant relationship between mother's occupation and ability to construct c.d.c.m. and a.a. of eighth graders of two school.
6. **Hp⁶** : There is no significant relationship between different categories of father's education in respect of a.a. and c.d.c.m.
7. **Ho⁷** : There is no significant difference between different categories of mother's education in respect of a.a. and c.d.c.m.
8. **Ho⁸** : There is no significant difference between different categories of father's occupation in respect of a.a. and c.d.c.m^{ng} ability.

5.3 MAJOR FINDINGS OF THE STUDY :

1. The analysis of the data gathered shows that students who score more in academics are better in c.d.c.m^{ng} ability.
2. Again the study showed that the students with high a.a. have better environmental attitude.
3. Intra-correlation of components of c.d.c.m. & a.a. reveals that there exists significant relationship between almost all the components of c.d.c.m. & a.a.

4. No significant difference has been found between the two sexes in respect of c.d.c.m. hence sex has nothing to do with c.d.c.m^{ng} ability.
5. Similarly, sex has no role in the a.a. of eighth graders.
6. The students of two schools differ in the ability to construct c.d.c.m. with private school students doing better than their counterparts from govt. school.
7. At the same time it has been also found that the private school students fair well in their academics as compared to Govt. school students.
8. Parents occupation plays no significant role either in c.d.c.m^{ng} ability or a.a.
9. Parents (both father & mother) edu. has been found to have a significant role in c.d.c.m^{ng} ability as well as in a.a. of eighth graders.

5.4 CONCLUSION :

Education as a craft has been with us for several millennia. As the science of education continues to improve, we may be better able to meet the enormous challenges that face the world today. Cross domain concept map is one tool which empowers student to play an active role in the knowledge capturing process & enables to build knowledge models with interconnected sets of linked concept maps & resources of the various domains.

In the present study the investigator has come to the conclusion that it is the parent's education and not the occupation of parents, which matters as far as the academics of eighth graders is concerned. The study also proves that the students who are academically good are better at c.d.c.m^{ng} ability and environmental attitude. Sex has proved to play no role in c.d.c.m., a.a. & env. atti. of eighth graders. There was marked

difference in the overall performance between the students of two schools, with private school students overshadowing their counterparts from govt. school. It can be inferred that it is the lack of proper facilities which hinders the performance of the govt. school students had the same been provided to them, they can come up with better performances.

In brief it can be said that concept mapping allows for flexibility in students formation of cognitive patterns.

5.5 EDUCATIONAL IMPLICATIONS:

Present scenario requires that students should be good not only at domain specific knowledge but equal importance should be given to the cross-domain knowledge and teachers can give positive turn to the activities of the children by guiding them how to relate the material presented in the textbooks, reference books or through classroom instructions.

The present study was taken up with a view to find out the impact of certain identified early indicators on learning problems and hence has following educational implications on students learning and teachers instructions.

- (a) Every school must initiate concept mapping as a compulsory exercise in teaching learning process.
- (b) Teachers will have to pay considerable attention on low achievers and use concept mapping to enhance their a.a.
- (c) Concept maps can be used to arise the curiosity and creativity amongst students.
- (d) Concept maps can be used to enhance and level the mental ecology of the classroom and cognitive schemata of the students in the direction of higher a.a.

- (e) Concept maps can be used as an exercise to develop divergent thinking among school students and relate the curricular concepts to everyday life.
- (f) c.d.c.m. enables combinational subsumption which is very valuable process of instruction.
- (g) c.d.c.m. makes learning material more meaningful and easy to comprehend and reflect.

5.6 SUGGESTIONS FOR FURTHER STUDY :

- (a) A wider study may be made involving all schools of Bhopal.
- (b) The study can also be elaborated to national level.
- (c) The same can be conducted at rural level only.
- (d) This can be taken for Ph.D. level research.
- (e) The same study can be done including the sample of different castes.
- (f) The same study can be done specifically on Hindi medium students.
- (g) The same study can be done concerning socio-economic status of the children.

SECTION - I**CONCEPT - MAPPING INVENTORY**

Name : _____ Father's Education : _____
 Class : _____ Mother's Education : _____
 School: _____ Father's Occupation: _____
 Sex : _____ Mother's Occupation: _____

Scholastic Achievement	Sub.	L	M	Sc.	S.St.	Salary/Annum:
	Marks					

Direction : Tick the most appropriate answer.

SECTION - II**LANGUAGE**

- Q.1 Give antonym for 'Biotic' :
 (a) living (b) non-living (c) dead organisms
- Q.2 Give other name for autotrophs :
 (a) consumers (b) producers (c) decomposers
- Q.3 Synonym for Omnivore is :
 (a) Plant eaters (b) Animal eaters (c) Plant & animal eaters
- Q.4 Tiger is a :
 (a) Verb (b) Pronoun (c) Noun
- Q.5 Plants are green in colour :
 (a) Adverb (b) Adjective (c) Proper-noun

SOCIAL SCIENCE

- Q.1 The term 'eco-friendly' means :
 (a) echo-friendly (b) soil friendly (c) environment friendly
- Q.2 Taj Mahal is getting corroded due to :
 (a) Tourists (b) River water (c) Pollution
- Q.3 Bermuda triangle is famous for :
 (a) Beauty (b) Mystery (c) Colour
- Q.4 The World Environment Day is celebrated on :
 (a) 5th July (b) 5th June (c) 5th August
- Q.5 Punjab gets its name after :
 (a) Five soils (b) Five rivers (c) Five colours

CULTURE

- Q.1 Trees are being worshipped from time immemorial :
(a) Disagree (b) Agree (c) Can't say
- Q.2 Hunting of animals is a good practise :
(a) Disagree (b) Agree (c) Can't say
- Q.3 Coconut is considered auspicious :
(a) Disagree (b) Agree (c) Can't say
- Q.4 We don't use flowers while worshipping :
(a) Disagree (b) Agree (c) Can't say
- Q.5 Peepal is a sacred tree :
(a) Disagree (b) Agree (c) Can't say

MATHS

- Q.1 Plantation increases economic growth of a country :
(a) Agree (b) Disagree (c) Can't say
- Q.2 Total area of earth covered by water is :
(a) $1/3^{\text{rd}}$ (b) $2/3^{\text{rd}}$ (c) $1/4^{\text{th}}$
- Q.3 Nitrogen composition in air :
(a) 78% (b) 21% (c) 4%
- Q.4 Which is a better source of energy :
(a) Renewable (b) Non-renewable (c) Can't say
- Q.5 Rain water harvesting is a good practise :
(a) Agree (b) Disagree (c) Can't say

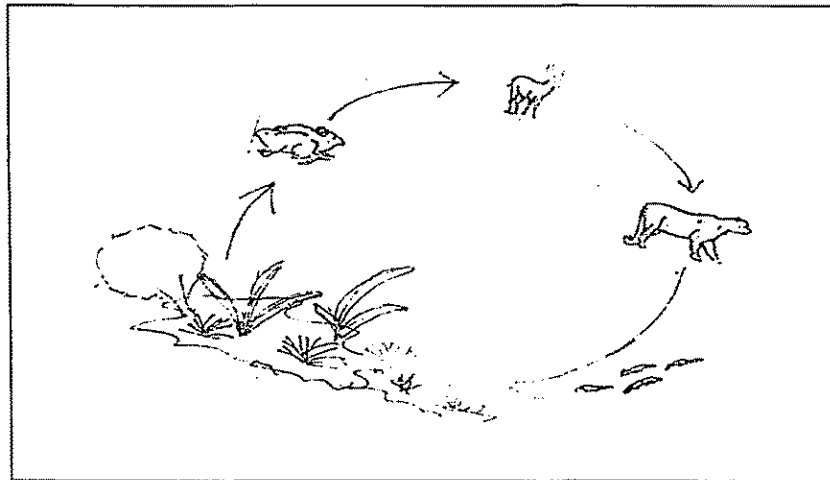
SCIENCE

- Q.1 Green plants manufacture their food by the process of :
(a) Guttation (b) Transpiration (c) Photosynthesis
- Q.2 Chipko movement is related with :
(a) Chips Conservation (b) Tree conservation (c) Contour farming
- Q.3 Lion is the :
(a) Predator (b) Prey (c) Precipitator
- Q.4 Decomposers are microorganisms like :
(a) Pteridophytes (b) Algae (c) Fungi
- Q.5 Example of symbiosis is :
(a) Lichen (b) bread + butter (c) candy flocks

- Q.6 Pollution occurs due to :
(a) degradable substance (b) Non bio degradable subs (c) cowdung
- Q.7 'Green House' effect is due to increase in :
(a) CO₂ % (b) O₂ % (c) Argon %
- Q.8 Solar energy is used in :
(a) Microwaves (b) Pressure cooker (c) Water heater sys.
- Q.9 Clouds are formed by :
(a) Transpiration of water (b) Perspiration of water (c) evaporation of water
- Q.10 Gange's plain is good for cultivation because of :
(a) Black soil (b) Clay soil (c) Loamy soil

SECTION - III

- II. Explain (briefly) the representation below giving a suitable title :
& put a (x) against the diag. which you feel is incorrect & justify your ans.



SECTION - IV

- III. Make a cross domain Concept map of an ecosystem :

SECTION - V

ENVIRONMENT ATTITUDE INVENTORY

Direction : Tick the most appropriate answer.

- Q.1 Natural calamity like 'Tsunami' balances the nature :
(a) Disagree (b) Agree (c) Neutral
- Q.2 Spitting on the roads is unavoidable :
(a) Agree (b) Disagree (c) Neutral
- Q.3 Use of loudspeakers during functions is justified :
(a) Disagree (b) Agree (c) Neutral
- Q.4 Construction of big dams like 'Sardar Sarovar' is good for nation :
(a) Agree (b) Disagree (c) Neutral
- Q.5 Plastic bags are more attractive than paper bags :
(a) Disagree (b) Agree (c) Neutral
- Q.6 Urea gives better yield as compared to humus :
(a) Agree (b) Disagree (c) Neutral
- Q.7 Allopathic medicines give fast result than Ayurvedic medicines :
(a) Disagree (b) Agree (c) Neutral
- Q.8 Vegetable dyes do not give strong colour as compared to synthetic dyes
(a) Disagree (b) Agree (c) Neutral
- Q.9 Hair colouring enhances the beauty of a person :
(a) Agree (b) Disagree (c) Neutral
- Q.10 Petroleum driven vehicles are better than C.N.G. driven vehicles :
(a) Disagree (b) Agree (c) Neutral

APPENDIX-II**SCORING KEY****SECTION - II**

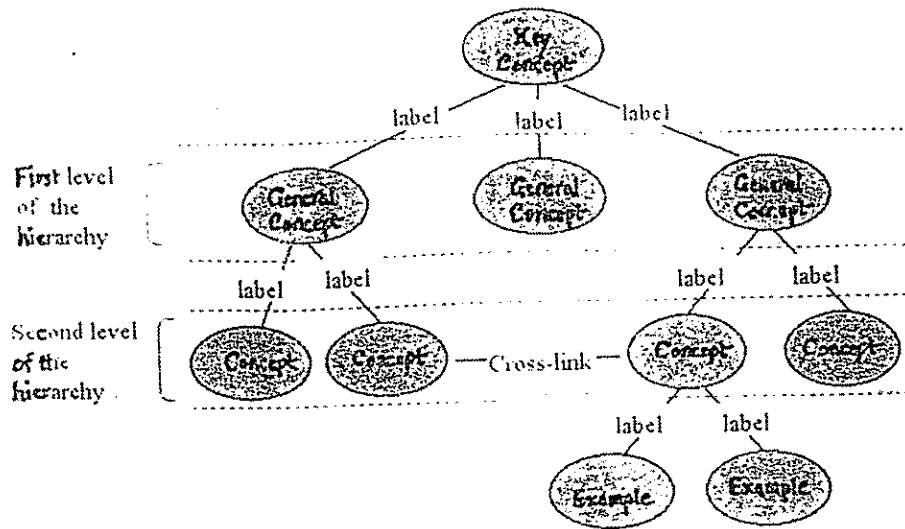
Discipline	Q.No.	Answer	Score
Lang.	1	b	1
	2	b	1
	3	c	1
	4	d	1
	5	b	1
S.St.	1	c	1
	2	c	1
	3	b	1
	4	b	1
	5	c	1
Culture	1	b	1
	2	a	1
	3	b	1
	4	a	1
	5	b	1
Maths	1	a	1
	2	b	1
	3	a	1
	4	a	1
	5	a	1
Science	1	c	1
	2	b	1
	3	a	1
	4	c	1
	5	a	1
	6	b	1
	7	a	1
	8	c	1
	9	c	1
	10	c	1

SECTION - III

Title	1 mark
Justification	1 mark
Description	3 mark

SECTION - IV

To make a cross-domain concept map	
Propositions/Nodes	1 mark
Hierarchies	2 marks
Cross-links	3 marks
Example	1 mark



SECTION - V

Questions 1 - 10

- Agree
- Neutral
- Disagree

- 1 mark
- 2 marks
- 3 marks

