EFFECTIVENESS OF INTERPERSONAL INTELLIGENCE AND NATURALISTICINTELLIGENCE BASED TEACHING STRATEGIES ON ACADEMIC ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS

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ABSTRACT

Education is the process of putting one's potential to its maximum use, without education man is in a closed room and with education he finds himself in a room with all its windows open towards outside world. Education contributes to every person's complete development- mind and body, intelligence, sensitivity, aesthetic appreciation and spirituality. Intelligence has been defined in many different ways including as one's capability for logic, understanding, self- awareness, learning, emotional knowledge, reasoning, planning creativity and problem sloving. It can be more generally described as the ability to perceive or infer information and to retain it as knowledge to be applied towards adaptive behaviors with in an environment or context. According to earlier concept intelligence level of the individual was limited to only three types of intelligence, linguistic intelligence, logical intelligence and mathematical intelligence, later on in 1983 the broader concept of intelligence was given by one of the greater educationist "Howard Gardner" in his theory of "Multiple Intelligence" he initially formulated a list of 7 intelligences and finally formulated the list of 8 intelligences (Gardener 1999:41-43), they are- 1) linguistic intelligence, 2) mathematical & logical intelligence, 3) musical intelligence, 4) bodily kinestic intelligence, 5) naturalistic intelligence, 6) spatial/visual intelligence, 7) interpersonal intelligence, 8) intrapersonal intelligence. So, it is very important for a teacher to recognize the individual intelligence of every student. So that he/she can satisfy the individual need and interest by providing customized treatment. Thus, the theory of Multiple Intelligence is worth considering. The present study will be conducted keeping in the mind the effectiveness of Interpersonal Intelligence Based Teaching Strategies and Naturalistic Intelligence Based Teaching Strategies   given in the theory of Multiple Intelligences.Ashok G Chanchu (2012) and Gurpreet Kaur & Sudha Chhikara(2008) also did an experiment on multiple intelligence they both found multiple intelligent technique effective. Present study was differing from these two studies because researcher used only interpersonal intelligent and Naturalistic based teaching strategies. Students of Std- 9 were selected for the purpose of research. Can the academic achievement of the students improved by using Interpersonal Intelligent and Naturalistic Intelligent based teaching strategies? Are the intrapersonal

intelligent based teaching strategies having similar effect for students belonging to nuclear and joint family? The investigator has thought about all such crucial questions for undertaking this research. Hence the topic "EFFECTIVENESS OF INTERPERSONAL INTELLIGENCE AND NATURALISTIC BASED TEACHING STRATEGIES ON ACADEMIC ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS" is selected for the present study.

Keywords: Interpersonal Intelligence based teaching strategy; Naturalistic Intelligence based teaching strategy; Conventional Teaching strategy, Secondary School Students, Effectiveness

Statement of the Problem

Effectiveness of Interpersonal Intelligence and Naturalistic Intelligence Based Teaching Strategies on Academic Achievement of Secondary School Students

Objectives

The researcher decided the following objectives for the present study.

1. To compare the mean scores of Academic Achievement of 9th standard students taught through interpersonal intelligence, naturalistic intelligence and conventional teaching strategies
2. To study Academic Achievement of students taught through interpersonal intelligence, and naturalistic intelligence based teaching strategies with respect to their **nature of family**, joint family or nuclear family.

Hypothesis

The following hypotheses were prepared for the present study

Ho_1-There will be no significant difference in the mean scores of Academic Achievement of 9th standard school students taught through Interpersonal Intelligence strategies and conventional teaching strategy

Ho_2-There will be no significant difference in the mean scores of Academic Achievement of 9th standard school students taught through naturalistic intelligence based teaching strategies and conventional teaching strategy

Ho_3- There is no significant difference in the mean score of Academic Achievement of **joint family** of 9th standard school students taught through Interpersonal intelligence based teaching strategies and conventional teaching strategy

Ho_4- There is no significant difference in the mean score of Academic Achievement of **nuclear family** of 9th standard school students taught through Interpersonal intelligence based teaching strategies and conventional teaching strategy

Ho$_5$- There is no significant difference in the mean score of Academic Achievement of **joint family** of 9th standard school students taught through Naturalistic intelligence based teaching strategies and conventional teaching strategy

Ho$_6$-There is no significant difference in the mean score of Academic Achievement of **nuclear family** of 9th standard school students taught through Naturalistic intelligence based teaching strategies and conventional teaching strategy

Limitation and Delimitation

- The present study will be delimited to 9th standard students of English Medium School in Gandhinagar city

- In the present study the achievement test which is post test are constructed by the investigator so their limitations also remain as limitation of the present study.

- The findings of the study were found on the basis of the responses of the students so this also remains as a limitation of the study.

- The present study is limited to the biology part of the science subject.

Definition of Key-words

1. **Interpersonal Intelligence based teaching strategies** refers to

Community involvement, Conflict mediation, Group brainstorming sessions, Interpersonal interaction, Peer sharing, simulations, People sculptures.

2. **Naturalistic Intelligence based teaching strategies** refers to

Aquariums, terrariums and other portable ecosystems, Gardening Nature- oriented software, Nature study tools (binoculars, telescope and microscope) plants as props.

3. **Conventional strategy-**It is the strategy where learner learn through conventional teaching strategy

4. **Secondary School Students-**The students of standard 9th studying in English medium secondary school at Gandhinagar city

5. **Effectiveness-**Effectiveness reefers to the difference between Academic Achievement of group taught through Intrapersonal Intelligence based Teaching strategies and conventional teaching strategy.

Variables

The variables of present study are as follows:

Independent variable-

1. Method : (i) Interpersonal Intelligence based teaching strategies

(ii) Naturalistic Intelligence based teaching strategies

(ii) Conventional teaching strategy

2. Nature of family:

     (i) Nuclear Family

     (ii) Joint Family

Dependent variable- Academic achievement of students

Control variable-

1. Area: Gandhinagar city
2. Medium: English medium school
3. Class: Student of standard 9th
4. Subject: Biology

Population and Sample-

     All the students of standard 9th of Secondary English Medium schools were the population of the present study. Investigator has used **purposive sampling technique** for selection of a school. In the present study, the researcher had to check the effectiveness of this Special Teaching Strategy and for that, she had to prepare an **experimental group** and **control group.** Hence the researcher convinced schools because instructional pedagogy differs from routine practices. If school was selected randomly, school may not ready to give consent for the experiment. Hence, purposive sampling has been opted for the selection of school. Hillwoods School sector 25, Gandhinagar was selected. This school includes total four divisions (A to D). The experimented classes (division A and C) were selected randomly by lottery method among all the classes.

Treatment-

After completion of teaching work, the achievement test was administered on both the groups. Answer paper were examined according to the Scorning Key and thus necessary data was collected.

Tools for data collection-

     One self constructed tool was used for data collection:

     1. Achievement Test

Data Analysis

1. To access the effectiveness of Interpersonal Intelligence based teaching strategies and Naturalistic Intelligence based teaching strategies - t-value was found
2. For rejection or acceptance of hypothesis, t-value was found Hypothesis wise,

Hypothesis	Group	N	Mean	SD	SE_D	C.R.	Df	Level Of Significance
Ho_1	Interpersonal Intelligence Strategy	38	16.8	5.25	0.52	6.09	70	Significance at 0.01 H_{o1} is rejected
	Conventional Teaching Strategy	38	13.6	5.76				

Hypothesis	Group	N	Mean	SD	SE_D	C.R.	Df	Level Of Significance
Ho_2	Naturalistic Intelligence Strategy	20	17.25	4.82	0.73	7.47		Significance at 0.01 H_o rejected
	Conventional Teaching Strategy	14	11.78	5.55			32	

Hypothesis	Joint Family	N	Mean	N	SE_D	C.R.	Df	Level Of Significance
Ho_3	Interpersonal Intelligence Strategy	20	16.35	20	0.73	7.47	32	Significance at 0.01 H_o rejected
	Conventional Teaching Strategy	18	15.23	18				

Hypothesis	Nuclear Family	N	Mean	SD	SE_D	C.R.	Df	Level Of Significance

Ho_4	Interpersonal Intelligence Strategy	38	16.35	5.74	0.7		1.23	38	Not significant at 0.05 Ho_2 is accepted
	Conventional Teaching Strategy	34	17.25	4.82					

Hypothesis	Joint Family	N	Mean	SD	SE_D	C.R.	Df	Level Of Significance
Ho_5	Naturalistic Intelligence Strategy	20	17.25	4.82	0.73	7.47	32	Significance at 0.01 H_o rejected
	Conventional Teaching Strategy	14	11.78	5.55				

Hypothesis	NuclearFamily	N	Mean	SD	SE_D	C.R.	Df	Level Of Significance
Ho_6	Naturalistic Intelligence Strategy	20	17.25	4.82	0.74	1.49	36	Not Significant at 0.05 H_o accepted
	Conventional Teaching Strategy	14	11.78	5.55				

Findings

- It was found that Interpersonal Intelligence based teaching strategies and Naturalistic Intelligence based teaching strategies had been more effective for 9th standard students than conventional group.

- It was found that Interpersonal Intelligence based Teaching Strategies had been **more effective** for students belonging to joint than nuclear family**.**

- It was found that Interpersonal Naturalistic based Teaching Strategies had been **more effective** for students belonging to joint than nuclear family**.**

Educational Implication

Following implications can be drawn from the present study:

The findings of the study are helpful in understanding individual differences and so the **Teachers** can develop their teaching strategies according to their need and interest area.

It is beneficial for the **Students** as with this teaching strategy will help the students to identify their innate capabilities and potentials, and can develop their skill in their respective area.

Conclusion

Finally we concluded that IIBTS are more effective then the conventional teaching strategies. This study helps to reaffirm the proven fact that Experimental Method of teaching are mostly superior to traditional methods. So such type of studies should be encouraging in future.

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