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Mechanism of Effective Teaching at Secondary Level Schools in Purba Bardhaman, West Bengal

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ABSTRACT

Effective Teaching is not a new concept to us. To make learning more meaningful, understandable and fruitful to a learner, effectiveness of teaching delivered by a teacher is very essential condition. Through the present study an attempt has been made by the investigators to study using the Interest Diversification Model of Effective Teaching of Secondary School Students in the district of PurbaBardhaman, West Bengal. The investigators have used Experimental method for the present study. In this study, Teaching Effectiveness of Teachers has been evaluated by their concerned students. The sample consists of 80 Students who were studying in two Secondary Schools in the district of PurbaBardhaman. The Purposive sampling technique has been used for the selection of sample. The investigators have adapted a Mechanism Model by themselves to measure the level of Effective Teaching of secondary schools Teachers. For the analysis of data ANOVA and ANCOVA have been used by the investigators in the present study. The results of the study explore that the realising teaching learning system a Interest Diversification Model has been suggested for Indian context and it was observed that students are performed better in this model than traditional model.in the district of PurbaBardhaman.

Keywords: Effective Teaching, Secondary Schools, Teaching Model, Interest Diversification Model.

Introduction:

Diversification of interest basically stands for multi-dimensional approach of interest related to teaching and learning where one stimulus could be responded in many ways. If stimulus is many then how one stimulus will be bonded with multifarious interest of the learners in a particular teaching-learning situation. As a result some responses are connected well to the particular stimulus but others are isolated with the main-stimulating agent. Therefore, in these types of connection diversification of Interest is very much significant for the betterment of correlating stimulus in various ways.
That is how in a teaching-learning system one stimulus is diversified in different responses. Here for one stimulus four responses are generated. For each response the teacher has to provide four stimulus. Now their responses are modified to R. The way in which responses are modified to connect with a stimulus in various ways is called diversification. To explain diversification we can classify diversification of interest in three categories.

What is diversification of Interest?

According to Ray Lee Foley (2002) teaching-learning system includes different subsystems of which a model of teaching and learning is mostly significant.

Before suggesting an alternative model we investigate different teaching - learning components in West Bengal by conducting survey then analyse the information & finally select the model namely interest Diversification Model.
[Ref.: Research Project Diversification of interest and its impact on Education by Dr.Dibyendu Bhattacharyya.]

The basic feature of this model is to increase the interest of learner's academic field by multiplication & then substitute & shifting the interest into the other domain.

Here diversification is made by implementing multiplication, substitution & shifting to convert different responses to modified one.

A. Multiplication of Interest

Suppose a student is interested in Mathematics and especially in Arithmetic part. Now the question is how his/her interest could be enhanced? Generally for diversifications we use multiplication as a process of decentralize of one's interest according to the choice of the student. Therefore Learners can enable to multiply interest on the basis of their wishes.

B. Substitution of Interest

Substitution is one of the important components for diversification. Here substitution refers to substitute one interest to another. It is a spontaneous process. Naturally through substitution diversification is rather easy to execute. As for example a student has interest in science subjects could diversify Interest in social studies and language through substitution.

For example a student whatever the category he or she belongs academically at least has had some interest to a particular discipline. Some students have interest on science subjects; others are interested in social studies or language group, which refers that their interest is substituted by one or many disciplines. If we agree that one student is interested only in science subjects, that means the student is isolated his/her interest from other disciplines. In this respect for greater achievement their Interest will have to diversify from one interest zone to different interest zone. That is why substitution is important in teaching learning system.

C. Shifting of Interest is then possible when learners can apply a concept.

Shifting is also more important and applicable when substitution is rather difficult. Suppose a student is isolated from academic atmosphere and become interested in non-academic activities. In this regard diversification will be followed non-academically. In this condition shifting of interest have had an urgent need for remedial measures. Here the non-academic activities could be shifted to academic activities on the basis of particular effort.

Shifting is specially related to those diversification pattern were one stimulus has been isolated to a particular response.

(I) Multiplication
(II) Substitution
(III) Shifting of Interest

- ✓ Multiplication from a particular point to multi facets dimension
- ✓ One can substitute one's interest to another part
- ✓ Shifting is a mentionable factor for diversification

Instructional Strategy

Lesson plan on the basis of Interest Diversification Model will be the basic instrument for applying operational variables.

Suggested steps of Interest Diversification Model

Stage -1: Development relationship with learners through interaction to generate a positive attitude towards the teacher & the subjects.
Stage -2: To find out the interest zone of the student at their horizontal surface area to knowledge.
Stage -3 : Multiplication of surface area where the learners' interest are selected.
Stage -4: Substitution of interest in different dimension of a subject.
Stage -5 : Shifting of interest.
Stage -6: To develop vertical surface area of knowledge.
Stage -7: Evaluation.
Stage -8: Reinforcement of interest and academic achievement.
The teacher will have to play the main role in a classroom.

Review of Related Literature:

Deshpande, S. (1991) made "Evaluation of teaching; A multidimensional approach - independent study". He determined the teacher effectiveness through the modified version of Pop ham‟s performance test on a sample of 27 randomly selected science teachers, 638 students in class IX and the heads of the schools of Hubli-Dharwar city. The findings indicated that teacher effectiveness as evaluated by the performance test in terms of student achievement was not related to other types of assessment like student's ratings, head's ratings or teacher behaviour indices.

Biswas and Dey (1995) attempted to study effectiveness of secondary school teachers in Tripura on a sample of 345 teachers employed in 18 secondary schools situated in three administrative districts of Tripura and found that only male and female teachers differ significantly on teacher effectiveness and the female teachers had comparatively greater mean for teacher effectiveness scores indicating that the female teachers were comparatively more effective and further the girl school teachers had more mean teacher effectiveness scores than that of co-educational school teachers.

Tyagi, S. (2013) made "A Study of Teaching Effectiveness of Secondary School Teachers in Relation to their Demographic Characteristics". The present paper deals with teaching effectiveness of secondary school teachers and their relation with demographic characteristics i.e. gender, social background, category, marital status, teaching subjects, age qualification and school teaching experience of secondary school teachers. The objectives of the research were to study demographic characteristics of secondary school teachers and their relation with different dimensions i.e. Knowledge, Organization, Leading, Professionalism, Clarity and Presentation, and Enthusiasm of teaching effectiveness. The data was collected from 100 secondary school teachers at Ghaziabad district in U.P through Survey cum Explorative descriptive research method The Self constructed Teaching effectiveness questionnaire was used to collect the data with some statistical techniques i.e. mean, standard deviation, t-test, and correlation were used for statistical analysis of the Data. Result shows that the demographic characteristics (social background, marital status, school teaching experience, teaching subjects and qualification) of secondary school teachers were influence don different dimensions of their teaching effectiveness of secondary school teachers.

Pachaiyappan, P. & Raj, U. (2014) investigated "Evaluating the Teacher Effectiveness of Secondary and Higher Secondary School Teachers'' The Purpose of the study is to assess the teacher effectiveness of secondary and higher secondary school teachers Survey method of research has been used in the present study. Teacher Effectiveness Scale developed by UmmeKulsum, was used for collecting the data. The investigator randomly selected one hundred and thirty secondary and higher secondary school teachers in and around Chennai and Tiruvannamalai Districts of Tamilnadu. The data was analysed using mean, standard deviation, t-test and one way ANOVA. The major findings of the study are: The male and female School teachers do not differ significantly in their teacher effectiveness. The study reveals that there is a significant difference in teacher effectiveness among the school teachers with respect to locale, arts and science stream secondary and higher secondary level , teaching experience and type of school management.

Barman, P. & Bhattacharyya, D. (2015) carried out "Teaching Effectiveness of Teacher Educators in Different Types of B.Ed. Colleges in West Bengal, India". The present study an attempt has been made by the investigators to study the level of Teaching Effectiveness of Teacher Educators who is working in different Govt.-aided and Private-unaided/Self-Financed B.Ed. Colleges in West Bengal. The investigators have used Descriptive Survey method for the present study. In this study, Teaching Effectiveness of Teacher Educators has been evaluated by their concerned students. The sample consists of 151 B.Ed. College Student-Teachers out of which 57 Student-Teachers taken from three Govt.-aided B.Ed. colleges and 94 Student-Teachers taken from four Private-unaided/Self-Financed B.Ed. Colleges. The random sampling technique has been used for the selection of sample. The investigators have developed a Scale by themselves to measure the level of Teaching Effectiveness of Teacher Educators on the basis of Likert"s five point scale i. e. Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree. For the analysis of data Mean, S.D., t-Test and Graph have been used by the investigators in the present study. The overall results of the study explore that the level of Teaching delivered by the B.Ed. College Teacher Educators is Moderately Effective. It is also revealed that Teaching Effectiveness of Govt.-aided B.Ed. College Teacher Educators is comparatively better than that of the Teacher Educators who are working in different Private-unaided/Self-Financed B.Ed. Colleges in West Bengal. It is also explored that Govt.-aided and Self-Financed B.Ed. College Teacher Educators differ significantly with respect to their Teaching Effectiveness and on most of the dimensions of Teaching Effectiveness, namely Subject Mastery, Presentation Style, Motivational Strategy, Effective Communication, Student-Teacher Interaction, Informal Academic Support and Personal Attribute.

OBJECTIVES OF THE MODEL

The present study is taken to achieve the following objectives:

i) To develop teaching materials on the basis of Interest Diversification Model.

ii) To perform the experiment and compare the effectiveness of Interest Diversification Model with Traditional Teaching Method in teaching Education.

iii) To find out whether the achievement of students differ significantly due to variation in instructional treatments given.

iv) To develop criterion tests for the assessment of outcomes after completion of experiment.

Comparison between Interest Diversification Model & Traditional Teachers Model

i) **Treatments:** Based on the nature of the problem the instructional treatments is delimited into two, namely, Interest Diversification Model, and Traditional Teaching.

ii.) **Sample:** Sample of this study is delimited to 80 pupils of Class-XI taken from two schools, such that in each school only 40 pupils.

ii) **Content matters:** The content area is delimited to only two units of the syllabus of Education of class XI under the West Bengal Board of Secondary Education.

NULL HYPOTHESES:

There is no significant difference between the two treatments - Interest Diversification Model and Traditional method of teaching on the criterion of achievement in Education.

$\mathbf{H_{01}}$: There is no significant difference between the two schools (K.S.N.H.S & L.S.H.S.) on the criterion of achievement in Education.

$\mathbf{H_{02}}$: There is no significant difference effect of school factor on the treatment in respect of achievement in criterion test in Education.

$\mathbf{H_{03}}$: There is no significant difference between boys and girls on the criterion of achievement in Education.

$\mathbf{H_{04}}$: There is no significant effect of sex factor on the treatment in respect of achievement in criterion test on Education.

$\mathbf{H_{05}}$: There is no significant interaction effect of treatment and school on the criterion of achievement in Education

$\mathbf{H_{06}}$: There is no significant interaction effect of treatment and sex on the criterion of achievement in Education

$\mathbf{H_{07}}$: There is no significant interaction effect of school and sex on the criterion of achievement in Education

$\mathbf{H_{08}}$: There is no significant interaction effect of treatment, school, and sex on the criterion achievement in Education.

DEVELOPMENT OF RELATED INSTRUMENTS

At first, the investigator selected 'achievement' as an independent variable with a desire to utilize the Entry& Final Level Test. To develop this test, the researcher followed the following steps:

(a) Selection of the content area.

(b) Preparation of the entry level objectives.

(c) Development of measuring instruments.

Selection of the Content Area

The researcher has chosen several units from the syllabus of Education for Class-XI under W.B.C.H.S.E. as content area to prepare the Entry & Final Level Test.

The reasons behind this selection were:

(i) To measure the readiness of the students for new instructional items already chosen as content area for the criterion test, and

(ii) To measure their Entry & Final Level achievement.

Defining the pre-requisite knowledge and skill in behavioural terms of entry level behaviour

The description of entering behaviour lacks two characteristics of terminal behaviour. They do not describe the conditions under which the performance must occur, and they do not specify a standard of acceptability. Although a statement of entering behavior would include all the characteristics of a terminal behavior, the list of entering behavior on the units (preparation & study of the Concept and aims of Education, Significant factors of Education, Forms of Education, Psychology, Growth and Development of a child) selected simply do not do so.

For each terminal behaviour, attempt has been made to identify the corresponding entry-level behaviour.

The entering behaviour on the units (i) Concept and aims of Education and (ii) Significant factors of Education (iii) Forms of Education (iv) Psychology (v) Growth and Development of a child is given below :

(1) The learner defines 'what is education'?

(2) He explains 'education' as a process.

(3) He states the different process of education.

(4) He explains that the meaning of education.

(5) He detects the important factors of education.

(6) He indicates the statement - "Education is a lifelong processes''.

(7) He explains the different kinds of education.

(8) Given an example explaining the wider sense of education.

(9) He states the individual aim and social aims of education.

(10) He identifies the simple nature of education.

(11) He defines an National Development.

(12) He states the participation of society as a Teacher.

(13) He states the characteristics of Educand.

(14) He identifies different types of Curriculum and also explains their nature.

(15) He explains elementary ideas of Schools.

(16) He defines the function of schools.

(17) He states the characteristics of a good teacher.

Development of Measuring Instruments

Development of Achievement Test

In the present experiment, Entry & Final Level achievement can be measured by the scores obtained in the achievement test. So the researcher has constructed the achievement test by going through the following stages:

a) Planning of the achievement test

To lay out a plan for constructing the achievement test, firstly, the content area has been carefully judged and objectives have been identified. Secondly, the behavioural outcomes in terms of knowledge, comprehension, skill and application have been worked out. Finally, types of items have been selected. Here, the researcher to avoid any biasness in the test has preferred mainly the objective, multiple choice question and short answer type items. Hence he has framed a test blue print for the preparation of the test items.

b) Preparation of the test

Blue-Print In order to build the content validity in the achievement test, it is necessary that the test items in the test should represent an adequate sampling of the behaviour domain.

To accomplish the researcher has discussed with the subject experts. The entire procedure of assigning relative weightage upon the entry-level objectives-knowledge, understanding application and skill as well as subject matter domain have been selected.

It has been found necessary to develop the test, by including test items from each sub-unit, in such a way that correct preparation of items from a given sub-unit, may match the weightage given to a particular objective. In test literature, the procedure outlined is known as "developing a test Blue Print". It is the most systematic way of setting up the specification in terms of a twoway table, with objectives across the top and sub-units in the left-hand column. A blue print has been developed for the preparation of the entry-level achievement test.

c) Preparation of the items

The researcher has prepared 29 items, for the written test, the items are of various types - multiple choice.

d) Scoring principle of achievement test

The papers answered by the pupils have been scored. Some questions are credited with full marks (ranging from 1 to maximum 8 for each correct answer, and if wrong, zero. Some questions are also credited with partial scores (ranging 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8) depending upon the quality of the answer. For this purpose, the researcher has prepared a model answer to each of such questions to determine the number of points (scores) to be assigned to it and to the parts within it, validated by some experts of the subject, Physical Science.

e) Item-Analysis

As the test is of criterion-reference type, therefore, no item analysis was attempted. Item analysis would remove some items from the test, and thus, certain behaviour domain would be lost.

f) Reliability of the test

Among the four methods of computing reliability (such as test-retest method, Kuder-Richardson Technique, method of using parallel forms, split-half method), test-retest method was selected for determining the reliability of the test.

Test-retest Method

The same test was re-administered on thirty percent of students (36 students) of the original sample, i.e., thirty six students were selected randomly from the original sample. To reduce memory effect re-test was done after three weeks from the day of first administration. Reliability co-efficient of the test was found to be .86.

g) Validity of the test

Validity is the most important characteristic of a test. The validity of a test means the efficiency with which it measures what it attempts to measure. The researcher has determined the validity of the test scores by the following method.

Establishing the Content Validity

To test the validity of the test, judgments have been accepted from the experts. Firstly, they have judged the weightage of the sub-units and objectives of the content on the basis of that weightage, finally the content validity is established logically by building the test blue-print which shows that the test has been developed by including items which were adequate representative of the behaviour domain sampled as given in the list of objectives.

Development of Instructional Instrument

Two forms of Instructional instruments have been developed for the present study:
(a) Lesson plans on Interest Diversification -Model of Teaching.
(b) Lesson plans on Traditional Method of Teaching.

VALIDATION OF THE LESSON PLANS

After the completion of the draft, the researcher has made a thorough editing and review of the draft, for several times on the basis of the comments of three experts on the subject and educational technology.

To establish the construct validity of the lesson plan, the researcher has prepared lesson plan according to the strategy of Interest Diversification Model, as it integrates the processes of the chief learning outcomes of Interest Diversification Model into a single, meaningful form of lesson plan splendidly. Syntax, social system and support system have been carefully inbuilt into the lesson plan as is evident from a careful scrutiny particularly of the social system in each of the lesson plan cited in the Appendix.

Development of Lesson Plans based on Traditional Method

After a few modifications in this method following steps are being actually practiced now-a-days.

(i) **Objectives:** After giving the lesson what will be the behavioural changes of the learners are mentioned for the stage.
(ii) **Preparation** some questions of the type known to unknown, concrete to abstract and simple to complex are thrown to evaluate his previous knowledge and thereby create his interest for the day's lesson.
(iii) **Presentation** In this step teacher splits up the content into small parts and delivers his lesson through explanation, demonstration, and questioning.
(iv) **Evaluation** Through question-answer techniques teacher evaluates the learner's attainment regarding the day's lesson and also his capacity for applying this knowledge in a new situation.

The same division of the content area as it has been shown in page 35 was considered for preparing the lesson plans in traditional method of teaching.

Methodology

Experimentation is the methodology of the present investigation. Hence, in present study, the researcher deliberately manipulated the independent variables, i.e. teaching methods in order to observe the change in the dependent variable, i.e., pupil's performance - due to this manipulation under highly controlled condition. Researcher Select PreTest Post Test Control Group Design under the True Experimental Design.
The subjects were divided into two groups.
On the basis of the Entry Level Achievement Test, each group was randomly divided against into two-treatment groups- i.e. experimental and control. After the administration of the Final Test, the data of the Entry Level Test and Final Test were analysed by the "CO-VARIANCE"- statistical design as it is most accurate statistical procedure to control the extraneous factors.

Population

The population of this study is the Class XI pupils (both boys and girls) under the West Bengal Council of Higher Secondary Education from PurbaBardhaman District having Bengali as the medium of instruction.

Sample

The present experiment had been conducted upon a sample of pupils of Higher secondary schools under the Council of Higher Secondary Education, West Bengal. To make the sample adequate and representative, the following measures had been taken.

(a) Sampling of the School

Assuming, no basic difference of the teaching outcome between the Genders, among the socio-economic conditions of the families, and urban and rural areas, the researcher randomly selected by lottery the pupils of class-XI of (i) Kamarhati S.N. High School and (ii) LohaiSammilani High School under PurbaBardhaman district as the sample of the investigation.

(b) Sampling of Subject (student)

There were 90 pupils in Class-XI, studying in (i) Kamarhati S.N. High School in the academic session 2021 of which 80 pupils in this class were randomly selected as the sample for the experiment. 40 pupils were selected for each treatment groupexperimental and control group.
In the same way, the investigator also randomly selected 80 pupils in class-XI, out of 140 pupils, studying in LohaiSammilani High School in the same session as the sample for the experiment. 40 pupils were selected for each treatment group according to the methodology of the present study.

Variables of the Study

Variables are the conditions or characteristics that the experimenter manipulates, controls or observes. In conducting this experiment, the following variables were identified.

A) Independent Variable In this study Independent variables are –

(i) Teaching methods;
(ii) School and
(iii) Gender.

B) Dependent Variable: Dependent variable is pupil's achievement.

C) Intervening Variables Intervening variables are –

(i) Teacher variable,
(ii) Age,
(iii) Size of the class,
(iv) Previous experience and
(v) Other contamination effects, such as Intelligence, Motivation, Fatigue, Anxiety etc.

To **control the variables** the following measures had been taken –

i) School Variables

The school is considered as an independent variable. In the present study the school variation was assessed in the design of the study by the researcher.

ii) Gender

It is also taken as an independent variable. The researcher had taken sex variation into consideration to assess in the design of the study.

iii) Teacher Variables

The investigator himself had taught all the groups. Thus the effect of the teacher variable is minimized.

iv) Previous Experience

'Previous experiences' was an important variable to influence the performance of the students. To avoid this variable the researcher considered an Entry Level Achievement Test as initial measures of their Overall performance on the Secondary Examination Class-X prescribed by W.B.B.S.E.

v) Contamination Effects

(a) The pupils of all the groups had been requested by the investigator not to discuss among themselves or other groups about the subject matter taught or the mode of representation.

(b) The investigator had requested the pupils not to take any coaching in their homes, particularly in this content area. But receiving coach behind treatment had not been fully controlled.

(c) Pupils had also been requested not to do any homework from any other books, but there is no restriction to study the class notes.

Formation of Treatment Groups

Thirty students from section A were assigned randomly to treatment group I and another thirty students from section B were assigned randomly to treatment group II. Thus 80 students were assigned to two treatment groups in each school.

Name of School	Treatment - I	Treatment - II
KSNHS	**40**	**40**
LSHS	**40**	**40**
Total	**80**	**80**

Experimentation

The Experiment in school (One) At the beginning of the experiment, the treatment to be administered to a group was determined randomly. The result was Interest Diversification Model for the treatment group-I, and Traditional Method of teaching for the treatment group - II.

Secondly, each class period of 40 minutes from 1 p.m. to 1.40 p.m. and 2.10 p.m. to 2.50 p.m. on each day. Finally, a total of 20 periods arranged for the whole experiment. In this school, treatment group I was considered as 'experimental group' and treatment group II was considered as 'Control group'.

(ii) The Experiment in Schools (Two)

In the same way, at first, the treatment to be administered to a group was determined randomly. The result was Interest Diversification Model for the Treatment Group-II, and traditional method of teaching for the Treatment Group-I.

Secondly, each class period of 40 minutes from 12.30 p.m. to 1.10 p.m. and 2.20 p.m. to 3 p.m. on each day. Finally, a total of 20 periods arranged for the whole experiment.

In this school, treatment group I was considered as 'Control Group', and Treatment Group-II was considered as 'Experimental Group'.

For the treatment of experimental group Interest diversification model was followed. 05 subunits of the selected content area have been presented by the researcher on the basis of the lesson plans.

For the treatment of control, traditional method of teaching was followed. 05 subunits of the selected content area have been presented by the researcher on the basis of the lesson plants.

Data Collection

The answer scripts were examined following the scoring key. Then the marks obtained by each student has been collected and are arranged in tabular forms for further analysis.

ANALYSIS AND INTERPRETATION OF DATA

EXPERIMENTAL DESIGN

In order to reach valid conclusions about the effect of independent variable on the dependent variable by testing hypotheses the researcher analyses the scores on the criterion test by means of a suitable experimental design.

To find out the effects of teaching methods on pupil's achievement. An experiment involving three factors was performed.

There are 20 observations in each treatment combination, the criterion scores and covariates of the 20 observations for each treatment combination are shown.

Computation of 'ANCOVA'

The scores of the students on the entry level test (pre-treatment performance) was considered as Covariate (X-variable) and the scores on the criterion test (Post-treatment performance) was considered as Y variable.

The correlation between the Entry Level Test and Final test scores has been determined and the value of the correlation co-efficient is .71.

INTERPRETATION OF THE RESULTS

Analysis of Covariance of Pre-test and Post-test of Control and Experimental Groups

Entry Level Test (X)

Groups	Count	Sum	Average	SD
Control	80	1296	16.20	4.02
Experimental	80	1278	15.98	4.00
Total	160	2574		

ANOVA

Source of Variation	SS	df	MS	F	F at 0.05	F at 0.01	Significance
Between Groups	2.03	1	2.03	0.14	3.90	6.80	F is not significant
Within Groups	2292.75	158	14.51				
Total	2294.78	159					

Final Test (Y)

Groups	Count	Sum	Average	SD
Control	80	1595	19.94	4.47
Experimental	80	1791	22.39	4.73
Total	160	3386		

ANOVA

Source of Variation	SS	df	MS	F	F at 0.05	F at 0.01	Significance
Between Groups	240.10	1	240.10	10.79	3.90	6.80	F is significant at 0.01 level
Within Groups	3515.68	158	22.25				
Total	3755.78	159					

Correction Term C_{xy} = 54472.275

Analysis of Covariance

Source of Variation	df	$SS_{x.y}$	$SS_{y\cdot x}$	$Ms_{y.x}(V_{y.x})$	$F_{y\cdot x}$	F at 0.05	F at 0.01	$SD_{y\cdot x}$	Significance
Among Group Means	1	-22.05	268.94	268.94	16.40	3.90	6.80	4.05	F sig. at 0.01 level
Within Group SS	157	1468.78	2574.75	16.40					
Total	158	1446.73	2843.70						

Regression (b_{within}) = 0.64

Calculation of Adjusted Y Means

Groups	N	M_x	M_y	$M_{y.x}$(adj.)
Control	80	16.20	19.94	19.87
Experimental	80	15.98	22.39	22.46
General Means		16.09	21.16	21.16

Significant of differences among adjusted Y means

Df	MD	SE_D	t-value	$t_{.05}$	$t_{.01}$	Significance
157	2.59	0.64	4.05	1.98	2.61	t-value sig. at 0.01 level

Findings:

1. Control and Experimental groups differ significantly as the t-value is 4.05 which is greater than 2.61 at 0.01 level for df 157.

Conclusion:

The model on the basis of which the experimental research has been conducted mentioned . In Indian context it has been understood from the realistic situation teaching learning should be based on affective domain. Therefore finally for realising teaching learning system a Interest Diversification Model has been suggested for Indian context and it was observed that students are performed better in this model than traditional model.

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