



DIFFERENTIATED INSTRUCTION WAY TO ENSURING ALL STUDENT'S MASTERY OF ACADEMIC STANDARDS

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ABSTRACT

(The present study was conducted to find out effectiveness of differentiated instructions in teaching of environmental studies in primary school. The study has provided an opportunity for researcher to work with school teacher in developing differentiated instructions and used developed material in teaching learning process. A sample of 60 students were selected from third standard of Mararhi medium school through purposive sample technique from Bhivandi area. Experimental method was used in present study. The study revealed that differentiated instructions was very much beneficial for students to achieved mastery on the subject . Majority of Students having opinion that the this type of instructions created interest in the studies. The result revealed in the study indicated that learning using differentiated instructions contribute significant increase in academic achievement of students to compare to traditional method)

INTRODUCTION

“Meeting Students Where They Are”

Differentiated instruction is a framework or philosophy for effective teaching that involves providing different [students](#) with different avenues to learning often in the same classroom in terms of acquiring content, processing, constructing, or making sense of [ideas](#), and developing [teaching materials](#) and assessment measures so that all students within a [classroom](#) can [learn](#) effectively, regardless of differences in ability.

Differentiating instruction is doing what's fair for students. It means creating multiple paths so that students of different abilities, interests, or learning needs

experience equally appropriate ways to learn. Designed differentiation is the deliberate act of modifying instruction or an assignment in order to customize the effect to match the particular developmental level and skills of a student or group of students. The ideal is to provide equivalent learning activities that cater to the students strengths but bring all of the students to the same learning objective. The best teachers throughout time have always found ways to reach individual students. Teachers today are no different. We have all sorts of designed differentiation strategies that help teachers offer variety and choice to students of different skills and needs.

Differentiated instruction, according to [Carol Ann Tomlinson](#) is the process of "ensuring that what a student learns, how he or she learns it, and how the student demonstrates what he or she has learned is a match for that student's readiness level, interests, and preferred mode of learning."

Differentiation is rooted and supported in literature and research . Evidence suggests that, by instructing through multiple learning pathways, more "[dendritic](#) pathways of access" are created. This can be achieved by using several senses (i.e. sight, sound, smell) or by creating cross-curricular connections. As Wolfe (2001) argues, information is acquired through the five senses: sight, smell, taste, touch and sound. This information is stored temporarily, and the brain decides what to do with the acquired data. The more of these stimuli that are activated, the more impact the data has on the brain. This information is pertinent to differentiation, which can activate multiple senses and thus have a greater impact on the brain .

The Rationale for Differentiated Instruction is that every student has different level of readiness and different interests. To cater the needs of each and every student according to their interest teacher can differentiate instructions according to content, process and product and learning environment based on the individual. While teaching through differentiated instruction teacher has to analysed content and select materials at varying readability levels, select audio and video recordings, charts and model , varied manipulated resourses, also Peer and adult mentors.

After analysing the content , teacher has to process the content for making sense and meaning to content as per need of the students – to make content meaningful teacher can use leveled or tiered activities , locate Interest centers, provide Hands-on materials, Vary pacing according to readiness, Allow for working alone, in partners, triads, and small groups, Allow choice in strategies for processing and for expressing results of processing.

Thinking of Differentiating Products is also most important step in Differentiated Instruction in this step teacher has to think what is known by students and what students are needd to be done. During this step teacher cam make tiered product choices, use and encourage student use of technology within products and presentations, Provide product choices that range in choices from all multiple intelligences, options for gender, culture, and race. Differentiating instructions according to content, process and product, now teacher is ready to teach in the classroom.

While observing lessons in the zilha parishad school in kon(Bhivandi) researcher observed teacher teaching in the classroom with differentiated instruction, as student in the classroom are from different medium and having different age group and their need was also different. Teacher was making groups, giving instruction according to the pace of students and support student wherever necessary. Researcher was very much motivated by this lesson, hence researcher think that whether this type of use of differentiated instructions help student to achieve mastery on content? To find out answer to this question researcher was took this study.

OBJECTIVE

To prepare differentiated instruction for teaching of environment studies at primary level

To find out the effectiveness of differentiated instruction in the teaching of environment studies at primary level

To compare the effectiveness differentiated instruction in the teaching of environmental studies with traditional way of teaching .

Hypotheses

There is no significance difference between the experimental group and control group in the achievement of environment studies in pretest level.

There is no significance difference between the experimental group and control group in the achievement of environment studies in posttest level.

There is no significance difference between pretest and posttest in the achievement of environment studies for the experimental group.

There is no significance difference between pretest and posttest in the achievement of environment studies for the control group.

METHODOLOGY

Sample

Sample of the study consist of 60 students studying in 3rd standard under Maharashtra state board syllabus. The sample includes both boys and girls. Sample drawn from the Bhivandi school.

Tools used for Data collection

The following tools had been used for the present study:

Differntiated Instrcutions developed by the investigator.

An achievement test in environment studies constructed by the researcher.

Development of Differentiated instructions/Experiment:

Investigator ask school teacher to select the a content, to differentiate this content researcher selected materials at varying readability levels, digital information, information cards, charts and model , varied manipulated resources, to make content meaningful teacher used leveled or tiered activities , located Interest centers among students , provided Hands-on materials, kept pacing according to readiness of students and presented the topic in classroom. The investigator selected zilha parishad school , kon(Bhivandi)for his experiment .For pre test researcher used first unit test score of environment studies . On the basis of this score researcher made two equivalent group viz., experimental and control group. The student of experimental group were taught with differentiated instructions prepared by teacher and the control group through the traditional way of teaching. After the treatment researcher administered a post test on both group.

Statistical techniques used:

The collected data were computed by applying suitable statistical techniques such as mean, Standard Deviation and t – value

Data Analysis

The data collected from students were analyzed with the help of Mean, SD, and t – value technique of statistics .The tables exhibits Mean value, SD, and t – value showing effectiveness of differentiated instruction.

Testing of Hypothesis:

Hypothesis 1:There is no significance difference between the experimental group and control group in the achievement of science in pretest level.

Table- 1

Mean achievement test score of the

Experimental group compared with that of the control group at pretest level

Group	N	Mean	S.D.	t value
Experimental	30	18.23	6.2	0.2848
Control	30	17.72	7.6	

Table 2 reveals that the ‘t’ value is not significant at 0.05 level . The student of the experimental group do not differ significantly from the students of the control group in the mean achievement test score at pretest level.it shows that both groups are equivalent.

Hypothesis 2:

There is no significance difference between the experimental group and control group in the achievement of science in posttest level.

Table-2

Mean achievement test score of the

Experimental group compared with that of the control group at post test level

Group	N	Mean	S.D.	T value
Experimental	30	24.12	5.2	3.2176
Control	30	19.23	6.5	

Table 2 reveals that the 't' value is significant at 0.05 level .Hence it could be inferred that there is a significant difference between the two groups as indicated by the mean values ,it can be concluded that the students of the experimental group fared better in the achievement test than the students of control group .This again clearly shows that learning with the help of differentiated instructions will increase the achievement of the students better than the learning through the conventional method.

Hypothesis 3:

There is no significance difference between pretest and posttest in the achievement of science for the experimental group.

Table-3

Mean achievement test score of the pretest compared with that of the post test for the Experimental group.

Group	N	Mean	S.D.	T value
Experimental				3.98
Pre test	30	18.23	5.2	
Posttest	30	24.12	6.2	

Table 3 indicates that the 't' value is significant at 0.05 level . Hence it could be inferred that there is a significant difference between the mean achievement test scores of the pretest and posttest for the experimental group. The higher mean value in the posttest shows that the students fared better in the post test than the pretest. This further shows that the learning through differentiated instructions has helped the students to score more mark in the post test.

Hypothesis 4:

There is no significance difference between pretest and posttest in the achievement of science for the control group.

Table-4

Mean achievement test score of the pretest compared with that of the post test for the Control group.

Group	N	Mean	S.D.	t value
Control				
Pre test	30	17.12	7.6	0.6079
Posttest	30	18.23	6.5	

Table 4 reveals that the 't' value is not significant at 0.05 level . Hence it could be inferred that there is no significant difference between the mean achievement test score of the pretest and posttest for the control group..

Finding and discussion

There is no significant difference between the experimental group and control group in the mean achievement test score of environmental studies at pretest level.

There is significant difference between the experimental group and control group in the mean achievement test score of environment studies at posttest level. The students learning with the help of differentiated instructions fared better in environment studies than the students learning through the traditional method.

There is a significant difference between the mean achievement test scores of the pretest and posttest for the experimental group. This shows that the differentiated instructions has helped the students to score more mark in the post test.

There is no significant difference between the mean achievement test scores of the pretest and posttest for the control group . This shows that the traditional method of teaching will not help the students to score more mark in the post test.

Present study reveals that differentiated instruction help students to excel in their studies. Differentiated instruction allows students to work according to their pace , interest and ability which result in better academic performance . Instructional

material developed by teacher was child friendly and behavior of teacher was also supportive to students while using differentiated material, These all aspects help student in achieving more score compare to traditional method .hence it is concluded that differentiated instruction is way to all students mastery of academic standard.

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