

# A Study of effect of Jerk Technology in terms of Personality

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## Abstract

*The objective of this study is to find out the effect of treatment, Personality and their interaction on Achievement in Environmental Education by considering Intelligence and Pre. Achievement in Environmental Education as co-variats. The Study was experimental in nature and based on pre. Test post test parallel group design. The sample for Study comprised of 60 student teachers (30 student teachers per group) of academic session of 2008-2009 of regular B.Ed. course of Government PGBT College, Ujjain. There were 25 Females and 35 Males in the group. Students were allotted group randomly. There were two groups and two levels of treatment namely module with jerk technology and module without jerk technology. Study revealed that Personality significantly affected the achievement of students in Environmental Education. Introvert students were found to be benefited significantly more than those of Extrovert students.*

## Introduction

The scenario of teaching learning process has been completely changed due to revolution in education and technology. Society innovated some new concept to make education more productive. There are various types of innovation. Jerk Technology is one of them.

It is a type of innovation which requires a set of teaching skills. The use of JT depends on the target group, purpose, subject matter, context and teachers personality etc. Personality has some uniqueness by which An individuate become susceptible to change.

According to the need of individuals researches are making efforts to develop different types of instructional material which can fulfill their needs and also improve the teaching learning process. Module is a set of activities based instruction dealing with a single conceptual unit of subject matter. By Knowing the fact that Jerk Technology and module are an effective means of learning, investigator develop a module on environmental education for B.Ed. Students.

Jerk Technology has been compared with traditional methods and no study has been done to compare the effectiveness of Jerk Technology with same kind of instructional material like module. So the present study in an attempt to develop with and without Jerk Technology module on environmental Education for B.Ed. Student with context to personality.

## REVIEW OF RELATED LITERATURE

Crocketl (1980) Studied the plato IV CAI lesson in module form for investigating. the Predication of Students achievement from correlated personality variable. the study refleeps that certain cognitive and personality variables are predictive of academic achievement.

Maxwell (1983) studied selected personality traits as related to achievement in a modularized self paced program in media production techniques and reported that student with high self concept gained higher level of achievement.

Savitt (1986) planned, implemented and evaluated modules designed to provide school personnel with training in the area of parent school interaction. The results indicated 87% had a more positive attitude towards percent/school interaction.

Coulon (1987) studied the effects of self instructional modules on the task statements of the cooperating teachers, the teaching behaviors of the student teacher and in class behaviors of the pupils. The results showed that the modules positively affected the behavior of cooperating teachers but comparatively loss on student teachers pupils.

Lee (1987) developed and evaluated cardiovascular health module for Korean high school students. The results indicated the effectiveness of module with respect to knowledge, attitudes and practices.

Al-Qattam (1988) developed and evaluated modularized individualized instruction science course in Kuwaiti secondary schools. The module was proved effective with respect to achievement but no effective in producing favorable attitude towards science.

Jerk Technology has been tried out by Shrinivasan (1999) and Tourani (2001). They found that Jerk Technology was moderately satisfactory in terms of gain of achievement. Tourani (2006) has also conducted a comparative study of conventional method and Jerk Technology and found that Jerk Technology is more effective than lecture method and reaction towards Jerk Technology was very strong. Verma (2007) conducted a comparative effectiveness of Jerk Technology embedded modular approach and traditional approach and found that Jerk Technology embedded modular approach is more effective than traditional approach

## **OBJECTIVES**

1. To study the effect of Treatment on Achievement in Environmental Education by considering Intelligence and pre-Achievement in Environmental Education as covariates.
2. To study the effect of personality on achievement in Environmental Education by considering Intelligence and pre-Achievement in Environmental Education as covariates.
3. To study the effect of interaction between treatment and personality on Achievement in Environmental Education by considering Intelligence and pre-Achievement in Environmental Education as covariates.

## **HYPOTHESES**

1. There is no significant effect of Treatment on Achievement in Environmental Education by considering Intelligence and pre-Achievement in Environmental Education as covariates.
2. There is no significant effect of personality on Achievement in Environmental Education by considering Intelligence and pre-Achievement in Environmental Education as covariates.
3. There is no significant effect of interaction between treatment and personality on Achievement in Environmental Education by considering Intelligence and pre-Achievement in Environmental Education as covariates.

## **METHODOLOGY**

### **SAMPLE**

The present study was experimental in nature. For this study 60 student teachers of

regular B.Ed. course of Government P.G.B.T. College, Ujjain of the academic session 2008-09 were taken. 30 student teachers were included in Experimental Group Number 1 and 30 in Experimental Group Number 2 randomly. There were males and females in the groups.

(There were 25 females and 35 males). They were either graduate or post-graduate in different disciplines. They have almost same socio-economic status and background. The age of the student teachers was ranged from 23 to 55 years.

### EXPERIMENTAL DESIGN

Present study was experimental in nature and employed pre-test post-test parallel group design. The layout of this design was as follows:

G1	O1	X1	O2
G2	O1	X2	O2

Where X1 = Treatment was given by Module with Jerk Technology

Where X2 = Treatment was given by Module without Jerk Technology

O1 = pre-test

O2 = Post-test

There were two groups. One group was randomly considered as Experimental Group Number 1 and another as Experimental Group Number 2. There were two levels of Treatment.

1. Module with Jerk Technology
2. Module without Jerk Technology

The student teachers of both the Experimental Group used module as self

learning material. They learnt themselves as per instructions given in module. Investigator was present to solve their problems. Three units of Environmental Education were taught through Module with Jerk Technology and Module without Jerk Technology to Experimental Group Number 1 and Experimental Group Number 2 respectively at the rate of 40 minutes per day for 53 days.

## TOOLS

**Table 1 : The following Tools are used in the present study.**

S. No.	Name of Variable	Author of the Tool	Co-efficient Correlation	Reliability	Validity	Sample
1.	Intelligence	R.K. Tandon	--	0.59 to 0.99	.23 to .80	Arts, Science and B.Ed. students
2.	Personality	R.A. Singh	--	0.83	--	Higher secondary to post graduate students
3.	Achievement	Investigator	--			

The details of these tools are as follows:

1. **Intelligence Test** developed by Dr. R.K. Tandon (1973) “Samuhik Mansik Yogyata Parikshan” was used. It’s validity co-efficient ranges from .59 to .99. The validity of the test ranges from .23 to .80 against different tests.

2. **Extroversion-Introversion Test** developed by Dr. R.A. Singh (1986) was administered for measuring extroversion and introversion dimension of personality. Reliability of this test is .83.

## PROCEDURE OF DATA COLLECTION

The present study was experimental in nature. There were two groups, namely, Experimental Group Number 1 and Experimental Group Number 2. First of all orientation regarding experiment and learning

through module was given to the student teachers of both groups separately. Then the Criterion Test I was administered to the student teachers of both the groups. The student teachers of Experimental Group Number 1 were taught through Module with Jerk Technology while the students of Experimental Group Number 2 were taught through Module without Jerk Technology. Module were distributed to the student teachers of both the groups and asked to read the module at their own pace independently. Student teachers were allowed to take notes and ask difficulties to the investigator. To solve their problems investigator was present in the class.

When both the groups completed Unit I (Capsule I) the Criterion Test was re-administered to the student teachers of both the groups. Same procedure was followed for the

remaining two units/capsules. Intelligence, Personality tests were administered to both the groups during the experimentation whenever it was possible.

Tools were administered as per instructions given in manual and psychological condition needed. Scoring was done with the help of manual and scoring key. In this way data were collected regarding all the variables. Experiment was conducted for 53 days approximately. Medium of instruction was Hindi. respectively. Medium of instruction was Hindi. All the student teachers were inservice teachers.

#### DATA ANALYSIS

Statistical techniques used for analysis of data were as follows:

1. In order to study the effect of Treatment on Achievement in Environmental Education by considering Intelligence and pre-Achievement in Environmental Education as covariates the data were analyzed with the help of 2X2 Factorial Design ANCOVA.

2. In order to study the effect of Personality on Achievement in Environmental Education by considering Intelligence and pre-Achievement in Environmental Education as covariates the data were analyzed with the help of 2X2 Factorial Design ANCOVA.
3. In order to study the effect of interaction between Treatment and Personality on Achievement in Environmental Education by considering Intelligence and pre-Achievement in Environmental Education as covariates the data were analyzed with the help of 2X2 Factorial Design ANCOVA.

#### ANALYSIS AND INTERPRETATION OF RESULTS

There were two levels of Treatment, namely Module with Jerk Technology and Module without Jerk Technology. Two levels of Personality namely Extrovert students and Introvert students. Therefore the data were analyzed with the help of 2x2 factorial design ANCOVA with unequal cell size. The results are given in Table 2.

**Table 2: Summary of 2X2 Factorial Design ANCOVA for Achievement in Environmental Education by considering Intelligence and Pre-Achievement in Environmental Education as covariates**

Source of Variance	df	SSy.x	MSSy.x	Fy.x
Treatment	1	490.67	490.67	3.23
Personality	1	104.24	104.24	.69

Treatment X Personality	1	725.86	725.86	4.78*
Error	54	8205.63	151.96	
Total	57			

\* Significant at 0.05 level

**1. Effect of Treatment on Achievement in Environmental Education by considering Intelligence and Pre-Achievement in Environmental Education as co-variates**

From Table 2, it can be seen that the F-value for Treatment is 3.23 which is not significant. It indicates that the mean scores of achievement in Environmental Education taught through Module with Jerk Technology and Module without Jerk Technology did not differ significantly when Intelligence and pre-Achievement in Environmental Education were considered as covariates. It reflects that there is no significant effect of Treatment on Achievement in Environmental Education when Intelligence and pre-Achievement in Environmental Education were considered as covariates. In this context the null hypothesis that, “There is no significant effect of Treatment on Achievement in Environmental Education by considering Intelligence and pre-Achievement in Environmental Education as covariates” is not rejected. Further the adjusted mean score of achievement of student taught through Module with Jerk Technology was 218.50 which is not significantly different than

those taught through Module without Jerk Technology whose adjusted mean score was 205.86. It may therefore be concluded that both types of Treatment were effective to same extent, the same Achievement of the students taught by Module with Jerk Technology and Module without Jerk Technology may be that both the developed modules are based on psychological principles. These modules were designed in such a way that they helped the students to learn according to their own pace and interest. The language of the module was simple and easy. Examples from daily life were given to clarify the concepts well. The content was logically arranged to make learning effective.

Module with Jerk Technology may be a new approach to learning but the characteristics possess in the Module without Jerk Technology are quite same as the Module with Jerk technology. Another possible reason for same Achievement may be that this Technology could not succeed in creating interest in the subject neither could it make students more attentive. Hence the result achieved by both the modules were more or less same.



## **2. Effect of Personality on Achievement in Environmental Education by considering Intelligence and Pre-Achievement in Environmental Education as co-variates**

From Table 2, it can be seen that the F-value for Personality is 0.69 which is not significant. It indicates that there is no significant difference in mean score of achievement of Extrovert and Introvert when Intelligence and pre-Achievement in Environmental Education were considered as covariates. Thus the null hypothesis that, “There is no significant effect of Personality on Achievement in Environmental Education by considering Intelligence and pre-Achievement in Environmental Education as covariates” is not rejected. It may therefore be concluded that Achievement was found to be independent of Personality when Intelligence and pre-Achievement in Environmental Education were considered as covariates. One of the reason for this finding might be that pre-Achievement in Environmental Education and Intelligence were taken as covariates. It might have helped in taking care of difference in Achievement in Environmental Education of Extrovert and Introvert students. In both the groups there were students from Experimental Group Number 1 and Experimental Group Number 2. Due to this composition, the mean score of achievement in Environmental Education of Extrovert and Introvert groups might not have found to be significantly different.

Further, it is not necessary that Intelligence affect Achievement. It is quite possible that they might lack the necessary motivation from inside. Some times it is seen that students who have a low academic profile do exceedingly well in the competitive examinations and their careers. This further supports the point that Intelligence and Achievement might not always positively correlated.

## **3. Effect of Interaction between Treatment and Personality On Achievement in Environmental Education by considering Intelligence and Pre-Achievement in Environmental Education as co-variates**

From Table 2, it can be seen that the F-value for interaction between Treatment and Personality is 4.78, which is significant at 0.05 level with  $df = 1/54$ . This reflects that there was significant effect of the resultant of the interaction between Treatment and Personality on Achievement in Environmental Education when Intelligence and pre-Achievement in Environmental Education were considered as covariates. In this context, the null hypothesis that, “There is no significant effect of the interaction between Treatment and Personality on Achievement in Environmental Education by considering Intelligence and pre-Achievement in Environmental Education as covariates” is rejected. Further the adjusted

mean score of achievement of Extrovert students taught through Module with Jerk Technology whose adjusted mean score was 208.10 which is significantly different than those of Introvert students which also taught by Module with Jerk Technology whose adjusted mean score was 228.89. It may therefore be concluded that Introvert students were benefited more by Module with Jerk Technology than those of Extrovert students.

The reason behind this may be that Introverts are generally reserved in nature and less interacts in the classroom and also they feel shy to ask question. In the Module with Jerk Technology there were activities that could be performed by the students according to their own capabilities and mood. The use of Jerk Technology makes the Introvert students active and creates interest in learning. They enjoy the learning because of the use of Jerk Technology. We know that whenever a person does his work with interest, he works sincerely and devoted for it. The use of various tools of Jerk Technology like Mirror Image Writing, Teacher's Known Mistake, Use of Multiple Words, Unusual Sentence Construction, Give Misfit Examples, Double Negative Sentences, Small Writing, Disproportionate Word Writing makes Introvert alert, active and also they remain more attentive towards their content. These tools helped the Introvert students to concentrate better and effective manner. It is also a well known fact that Introverts always

try to involve in their own work completely as to avoid mingle with other person. Hence leading to better understanding and better Achievement than those of Extrovert. The Extrovert is an individual whose interest turns outward and is directed towards the external world. They tend to complete their work fastly so that they can mingle with other classmates as well. These may be the possible reasons due to which Extrovert were not benefited by the tools of Jerk Technology as much as Introvert.

This finding implies that Module with Jerk Technology can be used successfully for Introvert students.

### **Findings**

1. Both types of Treatment namely Module with Jerk Technology and Module without Jerk Technology were found to be effective to same extent by considering Intelligence and pre-Achievement in Environmental Education as covariates.
2. There was no significant effect of Personality on Achievement in Environmental Education of B.Ed. students by considering Intelligence and pre-Achievement in Environmental Education as covariates.
3. There was significant effect of interaction between Treatment and Personality on Achievement of students in Environmental Education. The Introvert students benefited more by



module with Jerk Technology than those of Extrovert students by considering Intelligence and pre-Achievement in Environmental Education as covariates.

## CONCLUSION

Finding reflects that there was significant effect of Personality on the Achievement of the students who were taught by module with jerk technology. Introvert students achieved more than Extrovert students when groups were matched with respect to Intelligence and Pre-Achievement in Environmental Education.

It can also be concluded that module Jerk Technology can be used successfully for Introvert students. So, there is a need to develop module with jerk technology on different subject.

## SUGGESTIONS FOR FURTHER RESEARCHES

1. Module With and Without Jerk Technology can be developed on different subjects at different levels.

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