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Integrated Teaching Programme

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Abstract : Integration of teaching has an important purpose of assisting the teacher to have a wide range of approaches for creating a proper interactive environment for learning. The aim of this study. effectiveness of integrated teaching programme(ITP), Gender and their interaction on problem solving skills amongst teacher trainees. The study was conducted on forty male and female teacher trainees. The study was intervention study where pre post experimental control group design was carried out. The data were analyzed through factorial ANCOVA. The finding revealed that there was a significant effect of interaction between ITP, gender and problem solving skills when pre problem solving scores as co variate.
Keywords – *Education, Co variate, Slill*

I. INTRODUCTION

In the early history, the manner of sharing the skills, education and social behavioural component existed. In context of education, a teacher trainee can be defined as one who is concerned for learning at a minor level for particular job to improve the skills. They are supposed to have a better assistance with the lead teacher. For the conduction of such skills upliftment, various "Teaching Education Programmes" are required to implement on these teacher trainees. This programme is equipped with multi nodal perspectives as knowledge, behaviours, attitude and skills, for increased effectiveness in classrooms. Here, the context is concerning a teaching programme i.e. integrated teaching Programme. Integrated teaching programme is a multidisciplinary approach which focuses on a coherent/ inclusive learning process rather than in isolation form. It allows a teaching framework in which unity of different subjects/areas or curriculum streams arranged at a single platform.

A very common problem observed usually in the teacher trainees that, they are not so efficient in opposition to the raised issues (learners, teaching, schools, and life skills) & to reply successfully, they required some skill development. The problem solving skill could be an effective measure to deal such skill development amongst teacher trainees. Psychology plays a very vital role in the entire teaching domain as it grows a sensitive bond in between the teacher and learner (teacher trainee). The response of the learners achieved into various attitude forms. This attitude is an approach (in integrated teaching aspect) against such teaching programmes i.e. how much they have absorbed & how much they can represent.

So, integrated approach is a meaningful integration of subjects focusing broad areas of study to explore knowledge and connecting it to real life problems or environment. It is the teacher's purposeful planning of strategies and inducement of learning to facilitate and enhance learning across key learning areas.

Integrated approach denotes coordination or different subjects, activities, method, resources and skill to ensure harmonious functioning. In field of education integrated learning is defined as the coordinates of different teaching learning activities to ensure the effectiveness of educational process for more effective learning. This learning occurs which is imparted though integrated teaching. It engage learners in purposeful, relevant learning. Integrated learning connects skill and knowledge from multiple sources and experiences. It allow applications of skills and practice in various setting, utilizing diverse and even contradictory point of view and thereby understanding issues and positions contextually.

II. DEVELOPMENT OF PROBLEM SOLVING SKILLS

Problem solving includes integration of concepts and skills to get over the unusual complete situations (stones,1994). Solving a problem means to find or create new solutions for the problem or to apply the new rules to be learned (mayer & wittrock,1996). Though Problem solving skill is one of the generic life skills as reported by World Health Organization in 1999.As per concerning the problem solving is a phenomenon of understanding the gaps & queries in academic minds, which need to be addressed well. This process means development of problem solving skills can be conducted through thousands of ways/ strategies. As per concerning to the teacher training scenario optimistic steps are defined as follows.

Evaluating The Problem

First of all for evaluating a problem, the nature of the problem is required to get understand and make it addressed. Every problem as its own nature or character which need to be addressed. For framing the problem the question formulation need to be done. Then gather all the information required in a systematic manner. After that the data collected need to be collate and organize well to be work upon. Now the information will be represent in a condensed and scrutinized form. And at last desired objective is able to be defined.

Managing The Problem

First of all in this phase use the information collected effectively. Then break down a problem into small parts. After that using some techniques such as brain storming, discussion, devil's advocate, etc. now analyze deeply these abstracts after that steps can be identified to achieve a desired goal.

Decision Making

In this phase decision need to frame between the possible solution for the action taking. Now the further required data need to be collecting before action taking. Then the final decisions need to be build for the resources to complete for the possible solution.

Resolving The Problem

In this phase the implementation of above defined actions need to be cater. Then provide information up to the rest students. Along with this it is also important to review their progress.

Examining The Results

In this section, monitoring for the result of implied action will be done. After that the review of the problems parallel need to be done to avoid future errors**.**

III. IMPORTANCE OF PROBLEM SOLVING SKILLS AND EQUATIONS

Well-developed problem-solving skills are important for a wide variety of reasons. First, they are important for real life. Every day both adults and children must solve problems. The ability to approach a problem with an "I can" attitude begins early on. By helping young children discover that they can figure things out, you encourage a strong belief in their own abilities. In addition, well-developed problem-solving skills are important for future learning in math, science, language and social studies. Again, by encouraging children to solve their own problems at a young age, the development of problem-solving skills is promoted. Problem-solving skills need to be introduced and reinforced through a wide variety of hands on, developmentally appropriate activities. Problem solving is a fixture in life. One has to be able to solve problems. Problems pop up every day. Sometimes they are small and sometimes they are large. Sometimes solving a problem is a matter of life and death and other times it is merely a matter of keeping your sanity. Good problem solving skills empower students in their educational, professional, and personal lives. Nationally and internationally, there is growing recognition that if education is to produce skilled thinkers and innovators in a fast-changing global economy, then problem solving skills are more important than ever. The ability to solve problems in a range of learning contexts is essential for the development of knowledge, understanding and performance. Requiring students to engage with complex, authentic problem solving encourages them to use content knowledge in innovative and creative ways and promotes deep understanding.

IV. OBJECTIVE

To study the effectiveness of integrated teaching programme, discipline and their interaction on problem solving skill amongst teacher trainees by considering pre problem solving scores as covariate.

V. HYPOTHESIS

There is no significant effect of integrated teaching programme, Gender and their interaction on problem solving amongst teacher trainees by considering pre problem solving scores as co variate.

VI. METHODOLOGY

Sample

The present study is experimental in nature. For this study, the population constituted of the registered coeducation teacher training institute of Aligarh district, Uttar Pradesh. Thereby forty male and female teacher trainees was randomly selected & considered as experiment (integrated teaching programme) and other institute 40 male and female teacher trainees considered as control group.

Design and Process

The study was intervention study where pre post experimental control group design was carried out.

ACTIVITY	**EXPERIMENTAL GROUP**	**CONTROL GROUP**	**TOTAL TIME**
Pre testing of problem solving skills	Administration of problem solving inventory	Administration of problem solving inventory	35
Orientation **Pre testing of reaction toward ITP**	Introduction of ITP on problem solving skills Formation of ITP group Administration of reaction towards ITP	Continued with normal activities of classroom	35 35
Treatment **First cycle**	Classroom arrangement Problem solving sessions A. Stages 1. State of knowledge/problem recognition 2. Operators/ measure of problem difficulty 3. Constraints / limitation (on selecting operators) 4. Control of knowledge/ solution seeking B. Strategies 1. Brain storming/ discussion Devil's advocate (making learners to rethink approach to problem)	Continued with normal activities of classroom	35
Second cycle	Practice of ITP on problem solving by including 10 issues which were related to learners, teaching, and school & life skills.	Continued with normal activities of classroom	35 X 10 = 350
Post test of Problem solving inventory & reaction towards	Administration of problem solving inventory	Administration of problem solving inventory	90

ITP	Administration of reaction towards ITP	Continued with normal activities of classroom	

Table 1: Schedule presentation of experiment

VII. Tool

The study would include the following tools.

Reaction towards Integrated Teaching Programme

For evaluating the Reaction towards Integrated Teaching Programme was developed a inventory by the investigator. In this inventory different statements were stated related to problem statement, classroom arrangement and problem solving techniques. In total 30 items was constructed. The tool developer had calculated content validity and it was found 90.83.

Problem Solving

The Problem Solving Skills of the teacher trainees will be measured by Problem Solving Detection Test constructed by Anupriya Kumari. The test includes components such as State of Knowledge, Operators, Constraints, Control of Knowledge. The reliability of the test is .80.

VIII. DATA ANALYSIS

For studying the effect of integrated teaching programme, Gender and their interaction in terms of facilitation on problem solving skills amongst teacher trainees by considering pre problem solving scores ANCOVA were used.

IX. RESULTS AND INTERPRETATION

Effect of ITP, Gender And Their Interaction on Problem Solving By Considering Pre Problem Solving As Co Variate

The objective was to study the effect of ITP, gender and their interaction on problem solving skills by considering pre problem solving scores as co variate. There were two levels of treatment namely ITP and conventional method on the basis of Gender. The participants were divided into the two levels namely Male and Female. Thus the data were analyzed with the help of factorial design ANCOVA where pre problem solving was taken as covariate the results are given in table 4.3 or the stated criteria & the results followed by their interpretations are separately in the following captions.

Source Of Variance	**Df**	**SS**	**MSS**	**F**
Treatment (A)	1	43279.468	43279.468	308.549**
Gender (B)	1	930.790	930.790	6.636
A*B	1	2001.003	2001.003	14.266**
Error	75	10520.089	140.268	
Total	80	1726809.00		

**Significant at 0.01 level

Table 1.2: Summary of factorial design ANCOVA for ITP, Gender & its interaction on problem solving

Effect Of ITP On Problem Solving By Taking Pre Problem Solving As Co Variate

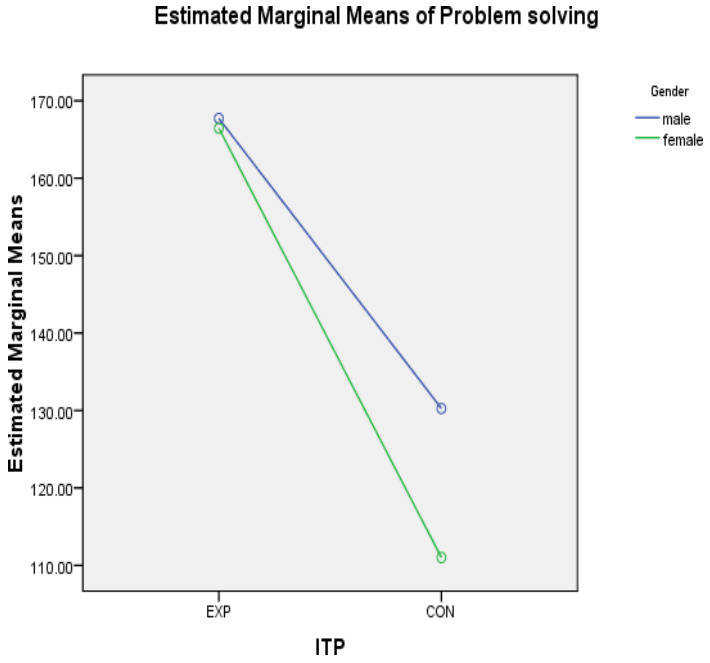
From table 1.2 can be observed that the F-value for Treatment is 308.549 which is significant at 0.01 level with df=1/80, when pre problem solving is taken as covariate. It reflects that mean scores of problem solving was differ significantly. Thus there was significant effect of Treatment on problem solving of teacher trainees. In this context, the null hypothesis that there was significant effect of ITP on problem solving by taking pre problem solving as covariate of teacher trainees, is rejected. The mean scores of ITP and problem solving is not same it may, therefore be said that the problem solving was not same as that of ITP.

Effect Of Gender On Problem Solving Skills

The F-value of Gender is 6.636 (table1.2) which is not significant at 0.01 level with df=1/80. It indicates that the mean scores of problem solving of Gender (male as well as female) did not differ significantly. So Gender did not influence significantly the problem solving of teacher trainees. In this light, the null hypothesis that there is no significant effect of gender on problem solving is not rejected. It may therefore, be concluded that problem solving was found to be dependent of gender.

Effect of interaction between ITP and gender on problem solving skills

The F-value for interaction between Treatment & Gender is 14.266 which is significant at 0.01 level with df=1/80. It indicates that there was a significant differential effect of the resultant of interaction between ITP & Gender on Problem Solving of teacher trainees. In light of this, the null hypothesis that "there is significant effect of interaction between ITP on Problem Solving of teacher trainee, is rejected. In order to study the found of effect of ITP & Gender on problem solving the graph 1.2.1 has been plotted.



Graph 1.2.1 Effect of gender on problem solving skills

From graph 4.3.1 it can be seen that Gender (male as well as female) were found to posses problem solving to be different. But the Treatment effect on the problem solving amongst male & female teacher trainees was same to an extent, where as in conventional group of problem solving gender (male & female) differed.

X. CONCLUSION

There is significant effect of Integrated Teaching Programme, Gender on problem solving teacher trainees when pre problem solving scores considered as covariate. It means problem solving skills of Male and female teacher trainees were better after the treatment. The present study is beneficial for Administrators, Teachers, Teacher Educators, Students and Parents too.

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