Abstract

The Innovative Instructional Strategies play an important role in enhancing learning systems. The time of instruction through blackboards with chalks and notice boards is going to change. Innovative Instructional Strategies are used to make learning sessions interactive, motivating and interesting. The purpose of this study was to examine the effectiveness of innovative instructional strategies on Educational Psychology among B.Ed Trainees'. A sample consists of 60 students trainees were selected from Usha Latchumanan College of Education, Thirukkanur, Puducherry. The quasi experimental, equal group randomization of experimental and control group design was adopted for this study. Experimental group taught using innovative instructional strategies while traditional method followed for control group. The study reveals that there is no significant differences between pre-test mean scores of experimental (N=30) and control group (N=30). There is significant difference between post-test mean scores of experimental and control group and learning retention of experimental group was higher than the control group. Hence, Innovative Instructional Strategies is effective for teaching educational psychology and enhance the student learning retention.

1. Introduction

In recent years, there has been a groundswell of interest on how computer and the Internet are best harnessed to improve the efficiency and effectiveness of education at all levels. Now, innovative instructional strategies play a remarkable role in the education sector. The development of the
economy of any country depends on the quality of education imparted in the educational institutions. The teacher education institutions are playing an important role in shaping the destiny of the teacher education is the need of the hour. For enhancing the equality in education, the strategies of teaching of the teachers followed in the classrooms is very important. Strategies is a kind of approach or way by which one can disseminate content in the classroom. Walberg & Waxman (1985), said strategies is a set of teaching actions intended to attain desired outcomes. Planning and designing the best learning route for each student and keeping the students on the right learning route can be called Teaching Strategy. It calls upon a variety of processes. Strasser, B.B. (1976) said strategies is a generalized plan for a lesson which includes structure desired learner terms of the goals of instruction and outline of tactics necessary to implement the strategy. Instructional strategies is a pattern of teaching act that services to attain certain outcomes and purposefully conceived and determined plan of action.

2. Innovative Instructional Strategies

2.1 Concept Map

Concept maps are also a method of graphically illustrating complicated scientific issues and knowledge problems in a way that the students can see the interrelatedness among the concepts. Concepts maps reveal to them the connections which they would not understand otherwise. The next labels and the linking words as well as lines arrangement, reveal a meaningful structure to the learners, which they can understand easily. Concept maps are a teaching/learning technique and are now accepted over the last few decades would wide, especially in science teaching. Concept mapping has been found as an effective tool for aiding student’s comprehension of psychology material. The technique enables the student to visualize the structure knowledge. Concept maps present graphically the structure of interrelated concepts. Various concepts and sub-concepts are depicted on a map displaying their relationships. As the concept maps depict contents, these can be described as showing semantic relationships among the concepts. They represent semantic knowledge and hence can also be called semantic networks (Lanzing, 2004).

2.2 Blog

Teachers have noticed the creative use of this internet technology and put the Blog to work in the classroom. The education Blog can be a powerful and effective Blog can be a powerful and effective technology tool for teaching and learning process. Blogs work well for students because they can be worked on at virtually any time, in any place with an Internet-enabled computer. The post is arranged in reverse chronological order, with the most recently at the top of the Blog. Blog can be used to inform students of class requirements, post handouts, notice, and homework. A class Blog opens the opportunity for students to discuss topics outside of the classroom. With a Blog, every person has an equal opportunity to share his or her thoughts and opinions. Students have time to be reactive to one another and reflective. Teacher can also bring together a group of knowledge individuals for a given unit of study for students to network and conference with on a Blog.

2.3 Cooperative Learning

Cooperative Learning is a pedagogical approach that promotes student – student interaction via working in small groups to maximize their learning and reach their shared goal. It is a personal philosophy, not just a classroom technique. In all situations where people come together in groups, it suggests a way of dealing with people, which respects and highlights individual group members ability and contributions. Whereas education itself has been regarded as social adjustment of an
individual and a society can never exist without effective education. For an effective education, effective teaching is required and for an effective teaching.

3. Significance Of The Study

Educational Psychology play very crucial role in teaching and learning process. Teachers are involved in teaching learning process. In a normal classroom variety of students with different learning styles, and interest also varies from individual to individual. Teacher has to adopt modern instructional strategies according to needs of student teachers. Educational Psychology help the teachers acquire knowledge about Individual differences, Personality Adjustment, Intelligence, Cognitive development, interest, aptitude, Creativity, Concept, Abstraction, Motivation, learning, discovery learning, Mental health, mental hygiene, special children. Hence, teachers by adopting, innovative instructional strategy they can enhance the academic achievement and learning retention in educational psychology.

4. Statement Of The Problem

Education is very important process in mankind. We have to make education as joyful learning process, generate interest among students and motivate them to stay back in the institution than to run away from it. Teaching role is very important in the teaching learning process because he/she is key of learning and he/she has to adopt modern instructional aids, use appropriate innovative instructional strategies in the classrooms. Methods of instruction also changing day by day so teachers have to adopt modern innovative instructional strategy. Hence, present study entitled “Innovative Instructional Strategies for Teaching Educational Psychology among B.Ed. Trainees”.

5. Objectives

- To find out whether there is any significant difference between control and experimental group of pre-test mean scores of basic educational psychology among B.Ed. trainees’.
- To compare the Mean post-test scores of experimental and control groups to see the effectiveness of an Innovative Instructional Strategies on Educational Psychology.
- To compare the mean retention scores of Experimental and control group in Educational Psychology of B.Ed. trainees’ exposed to Innovative Instructional Strategies and Traditional method of instruction.

6. Hypotheses

- **H01:** There is no significant difference between pretest means score of control and experimental group.
- **H02:** There is no significant difference between posttest means score of control and experimental group.
- **H03:** There is no significant difference between mean scores of experimental and control group of learning retention of Educational Psychology.

7. Research Methodology

The present study used pretest – posttest control and experimental group method as a basis for its design and was carried out in a 7 week time period. This study was equal randomization of
experimental and control group design. As measuring tools, an achievement test in Educational Psychology was administered to student trainees’. After a gap of twenty five (25) days, same achievement test was again administered to student trainees’ to ascertain the learning retention among the student trainees’.

7.1 Variables

Dependent variable: students’ achievement and Learning retention in educational psychology. Independent variable: Innovative Instructional strategy.

7.2 Sample

Samples of 60 student trainees’ were selected using simple random sampling from Usha Latchumanan College of Education, Thirukkanur, Puducherry UT. Above selected 60 student trainees’ were further divided into two groups such as Control group (30 student trainees’) and Experimental group (30 student trainees’). The investigator taught traditional method of instruction for control group and innovative instructional strategies used for experimental group.

7.3 Tools used

Educational Psychology Test: Pre-test contains 50 objective type questions (Basic Educational Psychology) and Post-test contains 50 objective questions (Selected topics on Educational Psychology after the treatment).

8. Experimental Procedure

The whole experiment was conducted in the four phases which is shown below in the tabular form

<table>
<thead>
<tr>
<th>Phases</th>
<th>Experimental group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration of Pre-test</td>
<td>Measurement of Achievement in Educational Psychology</td>
<td>Measurement of Achievement in Educational Psychology</td>
</tr>
<tr>
<td>Conducting the Experimental Treatment</td>
<td>Teaching Educational Psychology through Innovative Instructional Strategies for 7 weeks</td>
<td>Teaching Educational Psychology through traditional method of teaching for 7 weeks</td>
</tr>
<tr>
<td>Administration of Post-test</td>
<td>Measurement of Achievement in Educational Psychology</td>
<td>Measurement of Achievement in Educational Psychology</td>
</tr>
<tr>
<td>Administration of Retention Test</td>
<td>Measurement of Achievement in Educational Psychology after 25 days</td>
<td>Measurement of Achievement of Educational Psychology after 25 days</td>
</tr>
</tbody>
</table>

The investigator identified modern innovative instructional strategies for teaching educational psychology such as Concept map; Educational Blog and Cooperative learning which are enhance the educational psychological knowledge among student trainees’. The investigator administered basic educational psychology as pre-test for both groups experimental and control group (50 objective type questions). Educational Psychology is one of the core paper of bachelor of education, Pondicherry University, Puducherry, investigator identified some topics from Pondicherry University syllabus such as School of psychology, growth and development, learning process and theories, intelligence, personality and creativity. The investigator gave treatment for teaching educational psychology through Innovative Instructional Psychology for 7 weeks. The innovative instructional strategies such as Concept map, Educational Blog and Cooperative learning
was taught experimental group while control group taught conventional method of instruction (chalk and talk). After the treatment of 7 weeks post test was administered the both the groups experimental and control group (50 objective types questions which was taken from selected topic of educational psychology). The investigator administered the retention test after the 25 days over of post-test.

9. Data Analyses

9.1 ‘t’ – test

Table 2: Mean and Mean Gain Achievement Scores on Educational Psychology among B.Ed Trainees’

<table>
<thead>
<tr>
<th>S.No</th>
<th>Group</th>
<th>Pretest (1)</th>
<th>Posttest (2)</th>
<th>Mean Gain (2) – (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Experimental</td>
<td>56.30</td>
<td>68.33</td>
<td>+12.00</td>
</tr>
<tr>
<td>2</td>
<td>Control group</td>
<td>55.30</td>
<td>56.37</td>
<td>+1.07</td>
</tr>
</tbody>
</table>

The pre and post test scores of experimental and control groups were obtained through an achievement test on Educational Psychology which was analyzed and described by using descriptive and inferential statistics. The data were analyzed for the total achievement test scores for both the groups. The mean of pre-test and post-test scores were computed and are presented in the Table 1.1 shows positive Mean gain achievement scores for the experimental group. It was inferred that for the experimental group the mean post-test score is higher than the mean pretest scores with a very high significant difference. This data shows that there is a significant gain in the achievement of Educational Psychology of the experimental group when taught by using innovative instructional strategy. Hence, it is inferred that innovative instructional strategies proves useful in increasing the knowledge and achievement level of B.Ed. Trainees’.

Table 2: ‘t’ values of Pretest Posttest and Retention mean scores of Experimental and Control group

<table>
<thead>
<tr>
<th>Test</th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Test Achievement Scores</td>
<td>Experimental vs Control group</td>
<td>30</td>
<td>56.20</td>
<td>8.91</td>
<td>0.634 (NS)*</td>
</tr>
<tr>
<td>Post-Test Achievement Scores</td>
<td>Experimental vs Control group</td>
<td>30</td>
<td>68.33</td>
<td>8.21</td>
<td>8.02 (N)*</td>
</tr>
<tr>
<td>Retention Scores</td>
<td>Experimental vs Control group</td>
<td>30</td>
<td>64.30</td>
<td>8.04</td>
<td>15.33 (N)*</td>
</tr>
</tbody>
</table>

NS: Not Significant
* Significant at 0.05 level

9.2 Statistical Techniques Used

1. Means and S.D’s were worked out on the achievement and retention scores.
2. t-test was applied to compare the performance to two groups
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Figure 1: Pre-test Posttest and Retention Mean Scores of Experimental and Control group

‘t’ value 0.634 vide Table 1.2 for the difference in pre-test scores of the two group was found to be not significant. Thus hypothesis $H_{01}$: There is no significant difference in the mean achievement scores of two group of experimental and control group of pre-test on Fundamentals of Educational Psychology before treatment. It leads to the conclusion that there is no significant difference in the pre-test mean achievement scores of the two groups (Experimental and Control group). Hence, above null hypothesis was accepted.

‘t’ value 8.02 vide Table 1.2 for the difference in post-test scores of the two treatment group was found to be significant. Thus hypothesis $H_{02}$: There is no significant difference in the mean achievement scores of two group of experimental and control group of post-test on Fundamentals of Educational Psychology after treatment. It leads to the conclusion that there is significant difference in the post-test mean achievement scores of the two groups (Experimental and Control group). Hence, above null was rejected.

Table 2 also reveals that ‘t’ value (15.33) for the difference in mean retention scores of Experimental group and Control group is significant at 0.05 level. $H_{03}$ Thus hypothesis there is no significant difference between mean scores of experimental and control group of learning retention of Educational Psychology is rejected. Thus subjects exposed to innovative instructional strategies retained higher than the subject taught by conventional method of teaching.

10. Findings

As Gibbs (1992) emphasized, the issues of greater autonomy, control of choice of study constitute key hallmarks of learner-centered learning. There are definitely such constraints as limited facilities, large classes and the structured syllabus that need to be covered. Interest and
commitment will go a long way in reducing the effects of these constraints. The innovative instructional strategies were found to be effective in term of achievement of students on criterion reference tests. There is significant difference between post-test mean scores of experimental and control group and learning retention of experimental group higher than the control group. Hence, innovative instructional strategies is best than the traditional method of instruction.

11. Conclusion

Rajshree Vaishnav and Pratima Parage (2013) studied on innovative instructional strategies for teaching biology, result reveals that, innovative instructional strategies is good than the traditional method of instruction. Experimental group mean scores is higher than the control group. Fauzia Khurshid & Urusa Ansari (2012) studied on Effects of Innovative Teaching Strategies on Students Performance, the study reveals that innovative teaching methodologies outperform the traditional classroom teaching. The satisfies the individual learning requirements and increase the interest level among students. The study shows that the innovative instructional strategies plays an important role in improving the achievements of educational psychology among student teachers. So a teacher should use innovative instructional strategies in teaching in the classroom which can make his/her task easier and students can achieve better. Hence innovative instructional strategies such as concept map, EduBlog, Cooperative learning is effective and enhance the students learning retention.

References

M. Deivam, Dr. N. Devaki: Innovative Instructional Strategies for Teaching Educational Psychology


