

REFLECTIVE PRACTICES BASED STRIP MODEL**Ms. Priya Singh, Dr. Namrata Kamble, Dr. Asawari Bhawe-Gudipudi***MIT School of Education & Research***1. 1.1 Introduction**

2. *“We do not learn from experience..... We learn from reflecting on experience.” - John Dewey*

NCERT Journal of Education Bhogayata (2000) asserts that “Reflective practice is required because the teachers of the future should be reflective decision makers in terms of thoughtful persons intrinsically motivated to analyze a situation, set goals, plan and monitor action, evaluate results and reflect on their own professional thinking” (p.117).

Reflective Practice is a method of assessing our own thoughts and actions, for the purpose of personal learning and development. It is highly relevant and helpful towards Continuous Professional Development (CPD). It's also very helpful in teaching and developing young people and children.

3. Gosh, 2015, asserts it is not only desirable but almost essential to create reflective prospective teachers who can deal with the complexities of the field of education.

STRIP Reflective Model signifies:

- ✚ **S:** Strategies, for reflection,
- ✚ **T:** Theoretical background of reflective practices,
- ✚ **R:** Reflective Practitioners qualities,
- ✚ **I:** Innovations in field of reflective practices,
- ✚ **P:** Practicing being a reflective teacher.

1.2 Significance of the Study:

- The professors of higher education are untrained teachers as B. Ed is not compulsory.
- It is very important that professors look into ongoing process of teaching practices and make positive changes among the learners.
- It helps the teachers to become aware of different modalities and instructional learning formats which help them determine success of teaching learning.
- It helps the teachers to reflect and observe themselves in their classroom
- It helps the teachers to look at the underlying principles and beliefs that define the way of their working
- It is a response to past experience and involves conscious recall and examination of the experience as a basis for evaluation and decision-making and as a source for planning and action. (Richard 1990)

Statement of Problem:

To assess the awareness of reflective practices among teachers of higher education colleges and to develop a STRIP model on reflective practices and to test the effectiveness of the STRIP model

Objectives of the Study:

- To assess the awareness of reflective practices among teachers of higher education colleges
- To develop a STRIP model on Reflective practices for teachers of higher education colleges
- To test the effectiveness of the STRIP model after the implementation of the model.

Definition of the Terms:**Conceptual Definition:****Reflective Practices:**

"In reflective practice, practitioners engage in a continuous cycle of self-observation and self-evaluation in order to understand their own actions and the reactions they prompt in themselves and in learners (Brookfield, 1995; Thiel, 1999).

Effectiveness:

The degree to which something is successful in producing a desired result; success (<http://www.oxforddictionaries.com/definition/english/effectiveness>)

Operational Definition:**Reflective Practices:**

It is a practice in which the teachers reflect on their own process of teaching. They assess their own thoughts, action and evaluate themselves. It is a process which develops self awareness among the teachers.

STRIP Model:

It is a model which signifies the following S: Strategies, for reflection, **T:** Theoretical background of reflective practices, **R:** Reflective Practitioners qualities, **I:** Innovations in field of reflective practices, **P:** Practicing being a reflective teacher.

Effectiveness:

It is the difference in the achievement of the pre test & post test scores of the student teachers after implementing the program.

Hypotheses of the Study:

- **Research Hypothesis:** The STRIP Model for reflective practices helps in developing practice of reflection among the teachers of higher education colleges
- **Null Hypothesis:**
- There is no significant difference between mean scores of post test of experimental group based on reflective practices.
- **Research Questions:** What is the status of reflective practices among teachers of higher education colleges in pune city?

Assumptions:

- Reflection or “critical reflection, refers to an activity or process in which an experience is recalled, considered, and evaluated, usually in relation to a broader purpose (Richards J)
- Reflecting begins to exercise control and open up the possibility of transforming our everyday classroom life. (Bartlett, 1990. 267)

Scope of the Study:

- The study focuses on teachers teaching in higher education colleges
- The study is related to higher education colleges in Pune city only

Delimitations:

- The study is delimited only to higher education colleges affiliated to Pune University
- The study is delimited to teachers teaching in Engineering colleges only
- For experiment the study is delimited to only MIT college of Engineering
- The tool for the survey and the program is developed by the researcher

Limitations:

- The responses obtained are solely dependent on the participants
- The level of motivation, attention span of student’s interest in the subject area etc shall not be under the control of the researcher.

Research Methodology:

- The current research is Multi method research
- The research is also Mixed Method Research as it includes both Qualitative & Quantitative Methods

Research Design: Convergent Parallel Design

Objective	Method	Informants	Data Collection Tool
1)	Descriptive Research-Survey	67 teachers from three Engineering colleges affiliated to Pune university selected by purposive sampling	Questionnaire
2)	Product development	30 teachers from 1 engineering college affiliated to Pune university selected by purposive sampling technique	Various activities for reflective practice developed by the researcher
3)	Single Group Pre test Post Test Design		Post test prepared by the researcher

Experimental Research Design: Single Group Pre-test Post test design.

Variables of the Experimental Study:

Independent Variables: STRIP Model

Dependent variables: Performance in the pre test post test of the teachers.

Sample of the Study:

Method of sampling: Probability sampling technique i.e. stratified random sampling

- The sample selected for the present study comprises of 67 teachers from 3 higher education colleges for survey. Technique used is purposive sampling technique.
- Non-probability Sampling technique i.e. purposive sampling for the experiment
- The sample selected comprises of 30 teachers from 1 higher education college i.e. MIT College of Engineering for experiment

Data Collection Tool:

- The tool for the present study comprises of questionnaire to check the awareness which is made by the researcher
- The STRIP model developed by the researcher for Reflective practices.

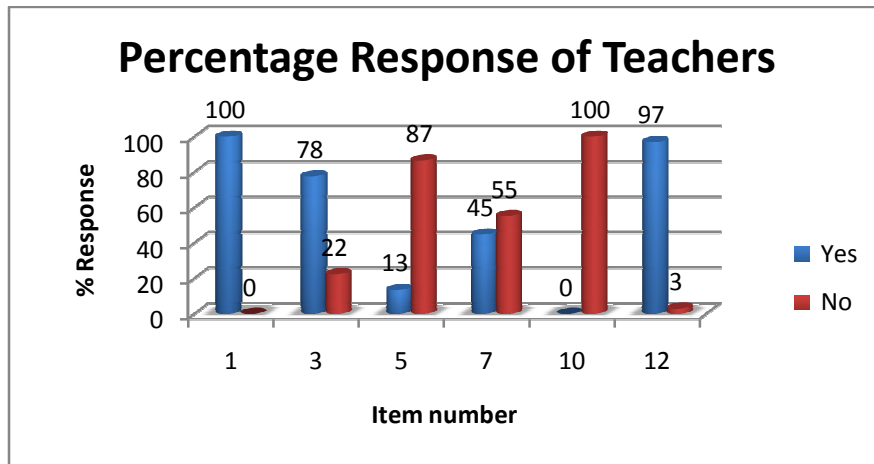
Data Analysis Tool:

Descriptive statistics: Mean

Inferential Statistics: t-test

Findings of the Research:

- **Objective 1:** To assess the awareness of reflective practices among teachers of higher education colleges



Graph 1

Item Number	Item
1	Do you plan your lesson in advance?
3	Do you feel teachers must think about the impact of their lesson once it's completed?
5	Are you aware about reflective practices?
7	Do you take out time to reflect on your lessons?
10	Are you aware about strategies used for reflective practices?
12	Are you willing to learn about reflective practices

Observations:

1. 100% teacher teaching engineering students plan their lessons in advance.
2. 78% teachers feel that teachers must think about their lesson once it is over so as to improve quality.
3. 87% of the teachers teaching engineering students are unaware of the reflective practices and strategies used for it.
4. Only 45% teacher take out time to reflect on their lectures once it is finished.
5. 100% teachers teaching engineering students are unaware of the strategies used for reflective practices.

6. 97% of the teachers are willing to learn more about the reflective practices.

Interpretation:

Teachers teaching engineering classes realize the importance of planning and assessing impact of the lesson once finished. But lack awareness about reflective practices and strategies used for the same.

Qualitative Data Analysis

Items 2: Following responses regarding reasons for planning in advance was provided by the teachers:

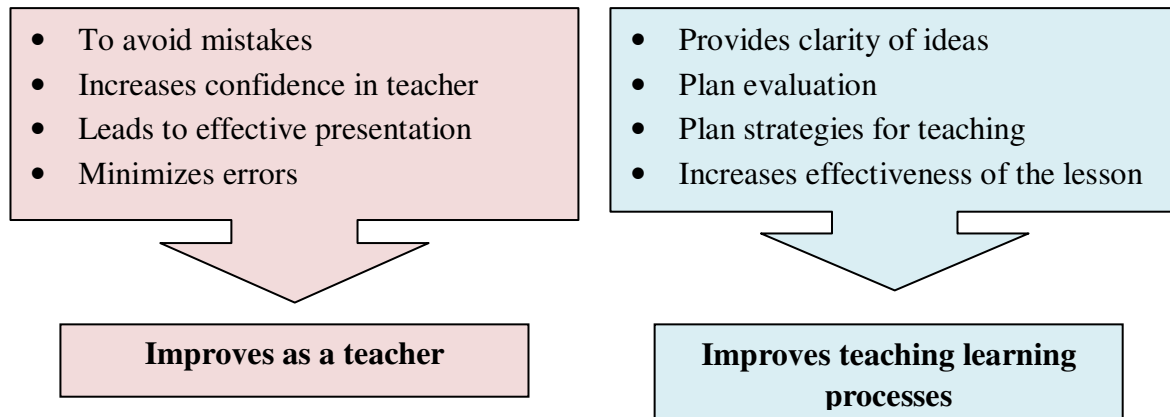


FIGURE 1: Responses of teachers regarding reasons for planning in advance

Discussion:

The respondents have given reasons for doing lesson planning in advance. Figure 1 show the responses were organized into two main categories: ‘Improves as a teacher’, ‘Implementation Improves teaching learning processes. Using Axial Coding the theme that arose from the responses was that **‘The teachers believe that doing lesson planning in advance helps in improving as a teacher and also improves the teaching learning process.’**

Item No 4: Responses of teachers regarding reasons why teacher needs to rethink about the lesson once its over:

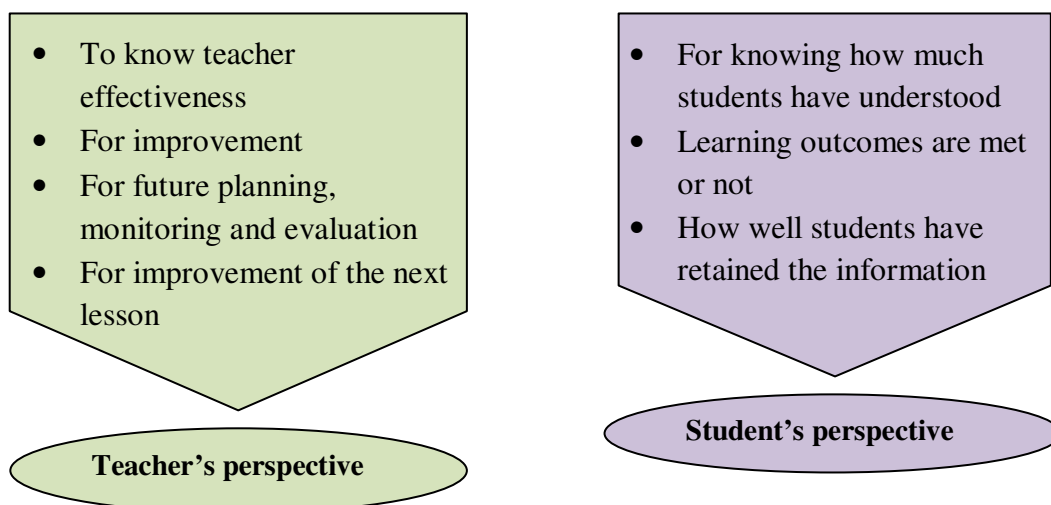


FIGURE 1: Responses of teachers regarding reasons for rethinking about the lesson once it's over

Discussion:

The respondents have given reasons for rethinking about the lesson once it’s over. Figure 2 show the responses were organized into two main categories: ‘Teacher’s perspective’, ‘Students perspective’. Using Axial Coding the theme that arose from the responses was that **‘The teachers felt that rethinking about the lesson once its finish helps improvement from teachers perspective as well as students perspective’**.

Item No: 9: Reflective strategies used by the teachers:

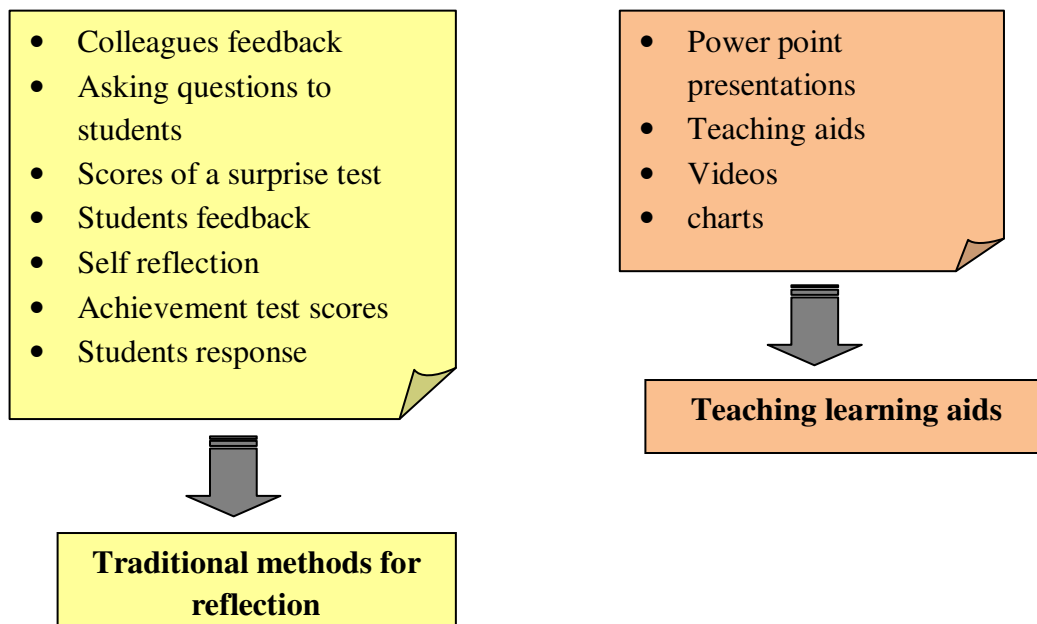


FIGURE 2: Responses of teachers regarding strategies used for knowing effectiveness of the lesson

Discussion:

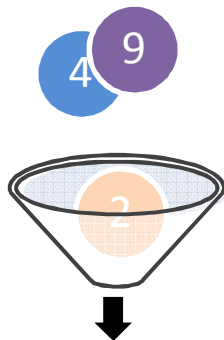
The respondents listed the strategies used by them for knowing effectiveness of the lesson. Figure 2 show the responses were organized into two main categories: ‘Traditional method of reflection’, ‘Teaching learning aids. Using Axial Coding the theme that arose from the responses was that **‘The teachers have less awareness about the reflective practices and use traditional methods of reflection’**.

Axial coding or themes were then converted into a theory using the selective coding. This was the finals step in the grounded theory for analyzing the qualitative data obtained from the teacher educators through their responses given in the questionnaire. Figure 4 shows the process and the final theory reached by the researchers using grounded theory, which was relevant for the next phase of the research.

2. The teachers believe that doing lesson planning in advance helps in improving as a teacher and also improves the teaching learning process

4. The teachers felt that rethinking about the lesson once its finish helps improvement from teachers perspective as well as students perspective

9. The teachers have less awareness about the reflective practices and use traditional methods of reflection



The teachers realize the need of lesson planning and rethinking the impact of lesson, but lack awareness about the strategies used for reflective practices.

FIGURE 3: ‘Axial Coding’ and ‘Selective Coding’ of the qualitative data

After analyzing the responses using the ‘axial coding’ the data was put into ‘themes’. Figure 4 shows the ‘themes’ generated and the ‘final theory’ reached by the researcher using the ‘selective coding’ phase in Grounded theory. The final theory indicates ‘**The teachers realize the need of lesson planning and rethinking the impact of lesson, but lack awareness about the strategies used for reflective practices**’. However from the quantitative data analysis it is evident that they are willing to learn more about reflective practices.

Objective 3: To test the effectiveness of the STRIP model after the implementation of the model
The following table shows the frequency distribution of Pre test of teachers

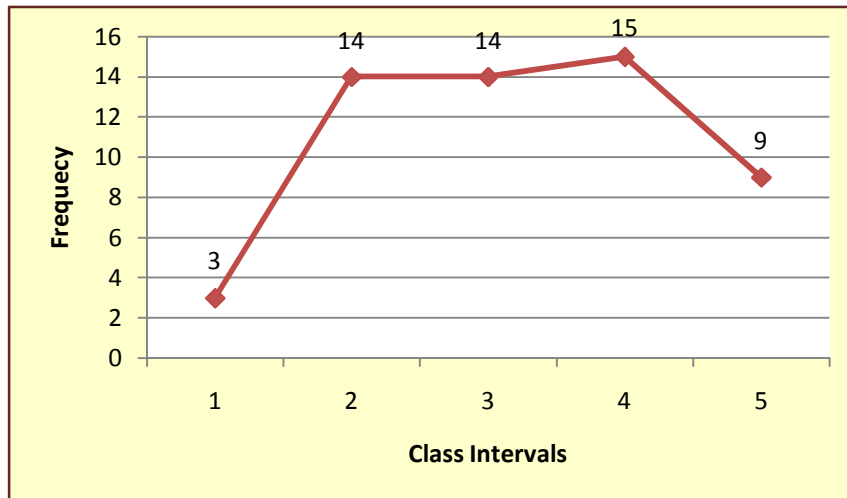
Frequency distribution of Pre test scores of teachers

Table 1

Class Interval	Frequency (f)
0-2	3
3-5	14
6-8	14
9-11	15
12-14	9
N	55

Graph 1 shows the frequency polygon of frequencies of pre test score of teachers.

Graph: 2
Frequency polygon of Pre test scores



Post test scores of teachers after implementing the SRIP Model on reflective practices:

- The following table 4.1 shows the frequency distribution of Post test scores of teachers

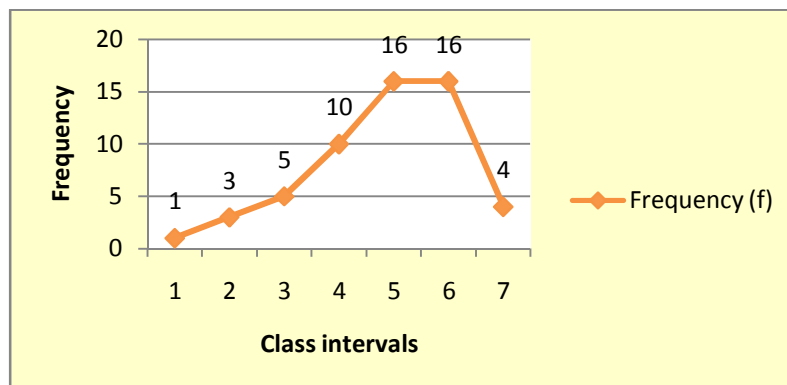
Frequency distribution of Post test scores of teachers

Table 2

Class Interval	Frequency (f)
4-6	1
7-9	3
10-12	5
13-15	10
16-18	16
19-21	16
22-24	4
	N=55

Graph 2 shows the frequency polygon of frequencies of post test scores of teachers.

Graph: 3
Frequency polygon of Post test scores



From the above two graphs it is seen that the range of scores for pre test were from 0 to 14 and for post test the range of scores were 4 to 24. There is increase in the range of scores which can be due to the impact of the STRIP model.

T test was calculated for the pre test and post test scores and compared with T table at 0.01 and 0.05 levels of significance. If:

T cal > T tab = null hypothesis is rejected and research hypothesis is accepted

T cal < T tab = Null hypothesis is accepted and research hypothesis is accepted

The following hypothesis was tested using above mentioned criteria

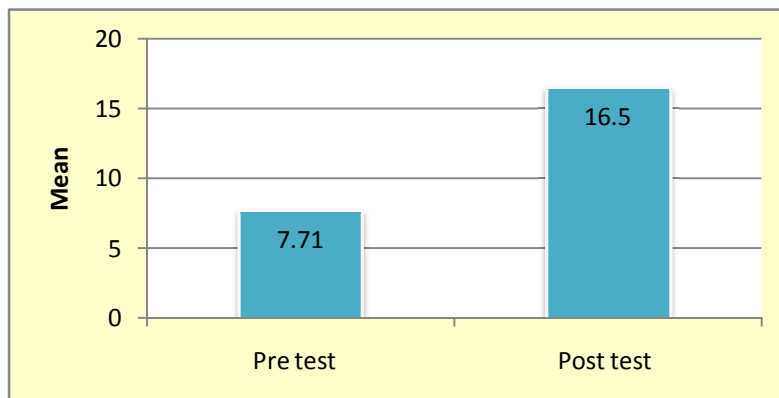
Hypothesis: There is no significant difference between the mean scores of the pre - test and post - test on implementation of STRIP model

The following table 4.3 shows the descriptive statistics of pre test and post test scores of teachers after implementation of STRIP Model.

Table 3
Scores of pre test and post test

Analysis	Pre test	Post test
N (Total number of score)	55	55
Mean	7.71	16.50
Standard Deviation (SD)	1.16	4.12
Standard error	0.16	0.56
T cal	18.31	

Graph 4
Mean scores of Pre test and Post test



Interpretation : From the above table and graph it is evident that there is difference of 8.79 units in the post test and pre test scores before and after implementation of the STRIP model.

Researcher calculated T test value for the above data that is 18.31 and after comparing with the T table following interpretation was done by the researchers.

No. Of degrees of freedom= $N - 1 = 55 - 1 = 54$

t table at 0.05 level = 2

t table at 0.01level = 2.66

t_{Cal} = 18.31 is greater than **t_{tab} = 2 & 2.66** at **5% & 1% level of significance** respectively. Hence it is to be taken as significant, resulting in the rejection of null hypothesis. It can be said that there exists a significant difference between the pre-test and post-test scores.

Conclusion: It is seen that the difference between mean scores of pre test and post test is not by chance but due to introduction of STRIP model.

Analysis of Reflective log:

After analyzing the reflective log following finding were generalized:

Strengths	Areas of Improvement
<ul style="list-style-type: none"> Teachers were able to express their views Teachers could analyse the problem Teachers listed their strengths and weakness as a teacher 	<ul style="list-style-type: none"> Terminology for writing reflection could be improved More detailed description related to students learning More critical analysis: As most of them could not mention what they learned as a teacher Could be more specific by mentioning the subject and few incidences.

Interpretation: Teacher were able to use reflective log but with few more practice and little bit of support will become efficient in recording the reflections.

Appendices:

About the Module: The model was developed by the researcher and was implemented for a period of 15 days

Tool for survey: Self made questionnaire

Item	Nature of questions
1,3,5,7,10,12	Closed ended
2,4,6,8,9,11	Open ended

Post test Questions comprised the following:

- Concept of Reflection& Reflective Practice: 1 question
- Qualities of a reflective teacher: 1
- Cycles of reflection: 2
- Strategies used for reflective practice: 2
- Reflective log: Concept and making entries in the log: 2

In the post test there were 10 questions out of which 5 marks multiple choice questions

5x3=15 marks short answers

5x2 =10 marks short answers

Total 30 marks were allotted to the pre test and post test questions

Reflective Log: It comprised of 9 questions which were open ended