

Assessing the Enacted Curriculum of India: A Study of IX Standard Science Classroom

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Abstract:

Classroom analysis is the real battle ground where curriculum is implemented and fights for proving its worth. Curriculum acts, as a tool in the hands of teacher to modify its material still improvement remains an issue directed by assessment of enacted teaching. Here in the present study a classroom is observed and efficacy of enacted curriculum and teacher is assessed by employing the Flanders interaction analysis technique.

Key words: enacted curriculum, interaction analysis, teacher talk ratio, silence ratio.

INTRODUCTION

Interaction analysis system using observation technique is one of the systems of behavior modifications developed is by **Ned Flanders** in 1960. According to this system, interactions between teacher and students in the classroom are observed continuously during the class period, the pattern of interactions is analysed & training in desired behavior acquisition by teachers are planned and implemented. In order to study classroom interaction, observation technique is used. Then, interactions between the teacher and the students are analysed

into certain categories. The basic purposes of classroom interaction analysis are developing skill in observation; providing tool for feedback about one's teaching for modification of his teaching behaviour; providing tools for analysis of process of teaching and learning.

CATEGORIES DESCRIPTION OF FIACS:

Category I Accepts feeling- This category consists of teacher's statements which shows acceptance of the feelings of a pupil in a non-treating manner. Feelings may be positive or negative, predictive or recalling. These are, however relatively rare and in frequent teacher statements.

Category II Praises or encourages- it refers to statements depicting overtones of warmth, friendliness & teacher approval. Examinations such as "right", "Good", "OK", "Go on".

Category III Accepts or Uses Ideas of Pupil- teacher further elaborating or developing ideas given by a pupil.

Category IV Asks Questions - This category depicts question asked by teacher about content or procedure.

Category V Lecturing – when the teacher is giving instruction, lecture , direction this category is to be recorded. This category has the highest frequency during a classroom interaction.

Category VI Giving directions- This category includes directions commands or orders to which a pupil is expected to comply.

Category VII Criticizing or Justifying Authority- statements given to change pupil behavior from un-acceptable to acceptable pattern.

Category VIII Pupil Response- responses given by pupils to teacher.

Category IX Pupil Initiation- pupil initiation for asking anything relevant to study, or clarify any doubt.

Category X Silence - Pauses, gaps, and short periods of silence and periods of confusion in classroom.

SAMPLE & TOOL

Sample of the study consists of classroom observation of IX Class of K.V Nahra Haryana located in India for a period of 6 days. Flanders interaction analysis as a technique of classroom observation is employed.

STEP I: ENCODING PROCESS

This is performed by the trained observer. The observer must memorize code numbers of all the ten categories e.g. If the teacher is lecturing, he puts 5, If he is questioning, he puts 4. After the expiry of every three seconds, the observer decides to which category the behaviours of the pupils & teacher belong.

Flander's Interaction Analysis system

Name of Teacher: Meetu

Class: IX

Subject: Science

Topic: Carbon and its compounds

Duration: 30*6 mins

Observer: Geeta Sharma

ENCODING

6	2	5	10	5	5	5	10	3	5
6	2	5	10	5	5	5	10	6	6
6	2	5	10	5	6	4	4	6	7
6	4	5	10	5	6	4	4	6	8
7	4	5	7	5	6	10	10	5	8
7	4	4	7	5	4	10	10	5	8
7	10	4	9	5	4	10	10	5	9
6	10	4	9	4	8	7	5	5	9
6	10	4	9	4	8	7	5	6	9
6	10	7	5	4	8	7	5	6	10
5	9	8	5	10	9	7	10	7	5
5	9	8	4	10	9	7	4	7	6
5	9	9	4	10	9	5	4	8	5
5	9	9	8	10	6	5	2	8	10
5	9	9	8	5	6	5	2	9	4
5	4	5	8	5	6	5	2	9	4
5	7	5	8	5	6	5	4	10	10

8	7	6	8	5	7	5	4	5	4
8	5	6	3	5	7	4	4	5	4
9	5	6	3	5	5	6	4	5	4
9	5	4	5	10	5	4	4	5	8
7	5	4	5	5	5	4	4	5	8
7	5	4	5	5	5	8	5	4	9
10	5	4	7	4	5	8	5	4	9
10	5	8	7	4	5	6	5	8	9
10	6	8	7	4	5	6	5	8	9
5	6	8	4	8	5	7	5	9	9
5	6	9	4	8	4	7	5	10	4
5	1	9	9	8	4	7	4	2	4
5	1	5	8	9	4	7	4	2	
5	3	5	8	9	4	10	8	5	
4	3	6	8	9	7	10	8	5	
4	3	6	8	9	7	10	8	5	
4	7	6	3	9	5	5	9	5	
4	7	4	3	5	5	5	9	5	
8	7	4	3	5	5	5	3	4	
8	6	8	5	5	5	5	3	4	

STEP II: DECODING PROCESS

After recording/encoding the classroom events into ten categories the next task is concerned with the construction of Interaction Matrix Table. It is mathematical table having 10 rows and 10 columns. It indicates what events proceeds and what event proceeds and what follows. The two continuous categories form a pair. Thus a tally is marked in a particular cell. In the matrix construction, it is customary to add a 10 in the beginning and end of the series as the class begins and ends with silences.

STEP III: INTERPRETATION OF MATRIX

FLANDER RATIO'S

1. Teacher talk ratio:

$$TT = \frac{\text{Total of categories 1 to 7}}{N} \times 100$$

$$\begin{aligned} &= \frac{274}{389} \times 100 \\ &= 70.43\% \end{aligned}$$

A) Indirect Teacher talk ratio:

$$\begin{aligned} \text{ITT} &= \frac{\text{Total of categories 1 to 4}}{N} \times 100 \\ &= \frac{89}{389} \times 100 \\ &= 23.10\% \end{aligned}$$

B) Direct Teacher talk ratio:

$$\begin{aligned} \text{DTT} &= \frac{\text{Total of categories 5 to 7}}{N} \times 100 \\ &= \frac{185}{389} \times 100 \\ &= 47.55\% \end{aligned}$$

2. Pupil talk ratio:

$$\begin{aligned} \text{PT} &= \frac{\text{Total of categories 8 and 9}}{N} \times 100 \\ &= \frac{79}{389} \times 100 \\ &= 20.30\% \end{aligned}$$

3. Silence or confusion ratio:

$$\begin{aligned} \text{SC} &= \frac{\text{Total of category 10}}{N} \times 100 \\ &= \frac{36}{389} \times 100 \\ &= 9.25\% \end{aligned}$$

4. Teacher response ratio:

$$\begin{aligned} \text{TRR} &= \frac{\text{Total of categories 1 to 3}}{\text{Total of categories}(1+2+3+6+7)} \times 100 \\ &= \frac{23}{99} \times 100 \\ &= \mathbf{23.23\%} \end{aligned}$$

5. Teacher question ratio:

$$\begin{aligned} \text{TQR} &= \frac{\text{Total tallies of category 4}}{\text{Total of categories 4 and 5}} \times 100 \\ &= \frac{66}{175} \times 100 \\ &= \mathbf{37.71\%} \end{aligned}$$

6. Pupil initiative ratio

$$\begin{aligned} \text{TQR} &= \frac{\text{Total tallies of category 9}}{\text{Total of categories 8 and 9}} \times 100 \end{aligned}$$

$$\begin{aligned}
 & 38 \\
 & = \frac{\quad}{79} \times 100 \\
 & = 48.10\%
 \end{aligned}$$

7. Indirect to direct :

$$\begin{aligned}
 & \frac{(1+2+3+4+)}{(5+6+7)} \times 100 \\
 & \frac{89}{185} \times 100 = 48.10\%
 \end{aligned}$$

CATEGORY RATIO 1

CATEGORY	FORMULAE	CALCULATION	RESULT
Category 1	$\frac{\sum f(\text{column 1})}{N} \times 100$	=2/389 × 100	0.51%
Category 2	$\frac{\sum f(\text{column 2})}{N} \times 100$	=12/389 × 100	3.08%
Category 3	$\frac{\sum f(\text{column 3})}{N} \times 100$	=9/389 × 100	2.31%
Category 4	$\frac{\sum f(\text{column 4})}{N} \times 100$	=66/389 × 100	16.96%
Category 5	$\frac{\sum f(\text{column 5})}{N} \times 100$	=109/389 × 100	28.02%
Category 6	$\frac{\sum f(\text{column 6})}{N} \times 100$	=42/389 × 100	10.79%
Category 7	$\frac{\sum f(\text{column 7})}{N} \times 100$	=34/389 × 100	8.74%
Category 8	$\frac{\sum f(\text{column 8})}{N} \times 100$	=41/389 × 100	10.53%
Category 9	$\frac{\sum f(\text{column 9})}{N} \times 100$	=38/389 × 100	9.76%
Category 10	$\frac{\sum f(\text{column 10})}{N} \times 100$	=36/389 × 100	9.25%

STEP V: INTERPRETATION OF BEHAVIOR RATIOS

The indices of behavior ratios are meaningless under they are interoperated against the norms i.e the standard normative expectations as developed by Flanders:-

S.No	Behavior Ratios	Values Developed by Flander	Calculated values
1	TT	67	70.43%
2	PT	21	20.30%
3	SC	12	9.25%
4	TRR	26	23.23%
5	TQR	19	37.71%
6	PIR	12	48.10%

CONCLUSION

According to the Normative expectations of behavior ratios for good performance of a Teacher: The Pupil Talk ratio, Teacher Response ratio, Pupil Initiation ratio should be greater than the given norms, whereas the performance is ineffective if the Teacher Talk ratio, Silence or confusion ratio are higher than their normative values. Here considering the above statement, the performance of pupil teacher is found to be unsatisfactory and enacted curriculum is found ineffective.