FLANDER’S INTERACTION ANALYSIS CATEGORIES SYSTEM (FIACS)

WHAT IS INTERACTION?

- Ned. A. Flanders defines, “Teaching as an interactive process. Interaction means participation of teacher and students in the process of teaching”.
- In this process, teacher influences the students; students also interact with the teacher. Interaction takes place among the students themselves also.
- It means, in the process of teaching, everybody interacts with every other person involved in the process.

![Interaction Diagram]

- Teacher influences students through lecture, ask questions, criticizing, giving directions etc.
- Student’s reacted to the teacher’s lecture and questions, they give responses.
- It is interaction between teachers and students.

WHAT IS INTERACTION ANALYSIS?

- Interaction analysis is a process of encoding and decoding a pattern of interaction between the communicator and the receiver.
- Encoding helps in recording the events in a meaningful way and decoding is used to arrange the data in a useful way and then analyzing the behaviours and interactions in the classroom interaction.
- There are four important techniques to observe the interaction systematically. These are:
  1. Flanders Interaction Analysis Categories System (FIACS)
  2. Reciprocal Category System (RCS)
  3. Equivalent Talk Categories (ETC)
  4. Verbal Interaction Category System (VICS)
• Flanders Interaction Analysis Technique is most suitable and widely used technique in the field of research all over the world.

CHARACTERISTICS OF INTERACTION ANALYSIS

1. The classroom verbal interaction can be made more effective.
2. The teacher can increase student participation in his teaching.
3. The direct behavior of teacher may be shifted to indirect behavior, which is more suitable in democratic way of life.
4. The tape recorder and videotape can be used for recording the classroom events. The trainee can encode and decode his own behavior.
5. This technique can also be combined with other feedback device such as microteaching and simulated teaching.

FLANDER’S INTERACTION ANALYSIS CATEGORY SYSTEM (FIACS)

• Ned. A. Flanders developed a system of interaction analysis to study what is happening in a classroom when a teacher teaches. It is known as Flanders Interaction Analysis Categories System (FIACS).
• Flanders and others developed this system at the University of Minnesota, U.S.A. between 1955 and 1960.
• Flanders classified total verbal behavior into 10 categories. Verbal behavior comprises teacher talk, student talk and silence or confusion.
• The ten categories are mentioned as under:
  1. Teacher Talk – 7 categories
  2. Pupil Talk – 2 categories
  3. Silence or Confusion- 1 category
• Thus, the first seven categories include teacher talk. Next two categories include pupil talk. The last tenth category includes the small spans of silence or pause or confusion.
• The first 7 categories or teacher talk has been bifurcated into a) indirect talk, b) direct talk.
FIACS FLOW CHART

**Teacher Talk**

- **7 Categories**
  - A) Indirect Talk
    - Category 1: Accepts Feelings
    - Category 2: Praise or Encouragement
    - Category 3: Accepts or Uses ideas of Pupils
    - Category 4: Asking Questions
  - B) Direct Talk
    - Category 5: Lecture
    - Category 6: Giving Directions
    - Category 7: Criticizing or Justifying Authority

**Pupil Talk**

- **2 Categories**
  - Category 8: Pupil Talk Response
  - Category 9: Pupil Talk Initiation

**Neither Teacher Talk nor Pupil Talk**

- **1 Category**
  - Category 10: Silence or Pause or Confusion

**MEANING OF VARIOUS CATEGORIES**

1. **Teacher Talk (7 Categories)**
   
   **A) Indirect Talk**
   
   - In this method of analysis, the first four categories represent the teacher’s indirect influence.

   **Category 1: Accepts Feelings**
   
   - In this category, teacher accepts the feelings of the pupils.
   - He feels himself that the pupils should not be punished for exhibiting his feelings.

   **Category 2: Praise or Encouragement**

   **Category 3: Accepts or Uses ideas of Pupils**

   **Category 4: Asking Questions**

   **Category 5: Lecture**

   **Category 6: Giving Directions**

   **Category 7: Criticizing or Justifying Authority**

2. **Pupil Talk (2 Categories)**

   **Category 8: Pupil Talk Response**

   **Category 9: Pupil Talk Initiation**

3. **Neither Teacher Talk nor Pupil Talk (1 Category)**

   **Category 10: Silence or Pause or Confusion**

---

Dr. S. Arockiasamy, SXCE
Feelings may be positive or negative.

**Category 2: Praise or Encouragement**

- Teacher praises or encourages student action or behavior.
- When a student gives answer to the question asked by the teacher, the teacher gives positive reinforcement by saying words like ‘good’, ‘very good’, ‘better’, ‘correct’, ‘excellent’, ‘carry on’, etc.

**Category 3: Accepts or Uses ideas of Pupils**

- It is just like 1st category. But in this category, the pupils ideas are accepted only and not his feelings.
- If a pupil passes on some suggestions, then the teacher may repeat in nutshell in his own style or words.
- The teacher can say, ‘I understand what you mean’ etc. Or the teacher clarifies, builds or develops ideas or suggestions given by a student.

**Category 4: Asking Questions**

- Asking question about content or procedures, based on the teacher ideas and expecting an answer from the pupil.
- Sometimes, teacher asks the question but he carries on his lecture without receiving any answer. Such questions are not included in this category.

**B) Direct Talk**

- Next 5th to 7th categories represent the teacher’s direct influence.

**Category 5: Lecturing /Lecture**

- Giving facts or opinions about content or procedure expression of his own ideas, giving his own explanation or citing an authority other than a pupil.

**Category 6: Giving Directions**

- The teacher gives directions, commands or orders or initiation with which a pupil/student is expected to comply with,
  - Open your books.
  - Stand up on the benches.
  - Solve 4th sum of exercise 5.3.
Category 7: Criticizing or Justifying Authority

- When the teacher asks the pupils not to interrupt with foolish questions, then this behavior is included in this category.
- Teacher’s ‘what’ and ‘why’ also come under this category.

2. Pupil Talk (2 Categories)

Category 8: Pupil Talk Response

- It includes the pupils talk in response to teacher’s talk
- Teacher asks question, student gives answer to the question.

Category 9: Pupil Talk Initiation

- Talk by pupils that they initiate.
- Expressing own ideas; initiating a new topic; freedom to develop opinions and a line of thought like asking thoughtful questions; going beyond the existing structure.

3. Silence or Pause or Confusion (1 Category)

Category 10: Silence or Pause or Confusion

- Pauses, short periods of silence and period of confusion in which communication cannot be understood by the observer.

PROCEDURE OF OBSERVATION / ENCODING PROCEDURE

- The observer sits in the classroom in the best position to hear and see the participants.
- At the end of every three seconds he decides which category best represents the communication events just completed. Thus the time involves in coding one tally for every 3 seconds, is 20 tallies in one minute, 100 tallies in 5 minutes and 1200 tallies in one hour.
- In this process only the serial numbers of the categories are recorded.
- The serial number of that category is recorded on the data sheet by the observer.
- When the observation is over, the observer shifts to some other room and prepares the details on the basis of those serial numbers of the categories.
- In this observation process, the writing of serial numbers of the categories is known as Encoding.
- Writing details of behavior on the basis of these categories is known as Decoding.
- The observers should remember the serial numbers of these categories.
RULES FOR OBSERVATION / RULES FOR RECORDING OR DECODING

- Flanders category method has many rules for observation without following which the observation is not possible. The observer must remember these rules. These rules help in maintaining consistency and making observations uniform. These rules are as follows:

**Rule 1:** If more than one type of category occurs during a 3 second period, the observer should choose the category that is numerically farther from category 5 (but not category 10). Suppose the observer is in doubt whether the category is 2 or 3; he should write 2 categories.

**Rule 2:** The observer should not involve his personal viewpoint.

**Rule 3:** If more than one category is active in a span of 3 seconds, and then all the categories should be recorded. If after 3 seconds, no category changes, then the same serial number should be repeated in the next 3 seconds.

**Rule 4:** If the time period of silence exceeds 3 seconds, it should be recorded under the category No.10

**Rule 5:** When teacher calls a child by name, the observer is supposed to record a 4th category.

**Rule 6:** When the teacher repeats the student’s answer and the answer is a correct, that is recorded as a category No. 2. This tells the student that he has the right answer and therefore functions as praise or encouragement.

**Rule 7:** When a teacher listens to a pupil and accepts his ideas for a discussion, then this behavior belongs to category No. 3.

**Rule 8:** The words ‘All is ok’, ‘yes’, ‘yah’, ‘hum’, ‘alright’ etc. belong to the category No. 2. (Encouragement)

**Rule 9:** If a teacher jokes without aiming at any pupil, this behavior belongs to the category No. 2. But if he makes any joke aiming at some particular pupil, then it belongs to the category No. 7.

**Rule 10:** When all the pupils respond to a very small question collectively, then the serial number of category-8 is recorded.
CONSTRUCTING INTERACTION MATRIX

- After encoding or observation procedure of interaction, the coded behaviors are written in 10 x 10 tables. This 10 (rows) x 10 (columns) table is known as a matrix.
- The category numbers of the record sheet the tabulated in the matrix table. Each number is entered in the form of sequence pairs, being used twice, first as the first numbers and second as second number.
- The row of the matrix represent the first number and the columns the second number.
- For example an observation recorded is 6, 10, 7, 5, 1, 4, 8, 4
- Hence, the beginning and end of the coding should have the same number of the categories.
- It is the tradition of adding number 10 in the beginning and at the end. Hence the above number will be written in this way 10, 6, 10, 7, 5, 1, 4, 8, 4, 10

<table>
<thead>
<tr>
<th></th>
<th>10</th>
<th>6</th>
<th>10</th>
<th>7</th>
<th>5</th>
<th>1</th>
<th>4</th>
<th>8</th>
<th>4</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>2^{nd} Pair</td>
<td></td>
<td>6</td>
<td></td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4^{th} pair</td>
<td>7</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6^{th} Pair</td>
<td>1</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8^{th} Pair</td>
<td>8</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Sequence of the pair: (10, 6), (6, 10), (10, 7), (7, 5), (5, 1), (1, 4), (4, 8), (8, 4), (4, 10)
- While preparing matrices, one pair is marked at a time.
- The matrices have rows and columns.
- The first number of the pair represents ‘row’ and second number of the pair represents ‘column’.

Dr. S. Arockiasamy, SXCE
- For example, in the first pair (10, 6), the number 10 represents row and the number 6 represents column.
- Every pair overlaps the other pair. Total tallies of the matrices (N).
- In the matrices (N-1) i.e. one less number is marked. In the above example, N=10, (N-1) i.e. 9 numbers will be marked.
- Each matrix has 100 cells.

**INTERACTION MATRIX TABLE**

**INTERPRETATION OF INTERACTION MATRIX**

1. Teacher Talk Ratio / Percentage of Teacher Talk (TT)

   - The tallies of first seven categories are added and divided by the total tallies of the matrices (N) and hence the percentage can be calculated.

   \[
   TT = \frac{C_1 + C_2 + C_3 + C_4 + C_5 + C_6 + C_7}{N} \times 100
   \]

2. Indirect Teacher Talk Ratio (ITT)

   - It indicates teacher actions in encouraging and supporting pupil’s participation.
   - Its percentage can be calculated by adding the tallies of the first four categories and dividing by the total tallies of the matrix (N)

   \[
   ITT = \frac{C_1 + C_2 + C_3 + C_4}{N} \times 100
   \]
3. Direct Teacher Talk Ratio (DTT)

- It indicates the teacher actions restricting student participation.
- In this ratio, the tallies of 5th, 6th and 7th categories are added and divided by ‘N’ to calculate the percentage.

\[ DTT = \frac{C_5 + C_6 + C_7}{N} \times 100 \]

4. Pupil’s Talk Ratio/Percentage of Pupil Talk (PT)

- It indicates verbal activities of pupils in response to the teacher.
- In this ratio, the tallies of 8th and 9th categories are added and divided by ‘N’ to calculate the percentage.

\[ PT = \frac{C_8 + C_9}{N} \times 100 \]

5. Silence or Confusion Ratio (SC)

\[ SC = \frac{C_{10}}{N} \times 100 \]

6. Indirect and Direct Ratio (I/D)

\[ \frac{I}{D} = \frac{C_1 + C_2 + C_3 + C_4}{C_5 + C_6 + C_7} \times 100 \]

**ADVANTAGES OF FIACS**

1. It is an effective tool/instrument to measure the social-emotional climate in the classroom.
2. It is also used for in-service teachers.
3. It provides feedback to the pupil-teachers.
4. It is an objective and reliable method for observation of classroom teaching.
5. It is mostly teacher talk oriented.
6. It is used to compare the behavior of teachers at different age levels, gender, subject etc.
7. It is much useful in team teaching and microteaching.
LIMITATIONS OF FIACS

1. It consumes much time in preparing 10 x 10 matrix without which, interpretation is not possible.
2. Less attention has been paid towards pupil-talk.
3. The observers have to be trained in order to code correctly.
4. Classroom interaction of pupil-pupil type is not considered here.
5. The system of coding and decoding procedure very difficult and expensive.