ABSTRACT

Interaction between teacher and students is an essential part of teaching learning process. An educationist, Flander originally developed an instrument called Flanders Interaction Analysis (FIA). FIA system was designed to categorize the types and quantity of verbal interaction in the classroom and to plot the information on a matrix so that it could be analyzed and interpreted. The results gave a picture as to who was talking in the classroom, how much and kind of talking that took place. This system consists of ten categories, namely, accepting feelings, praising or encouraging, using ideas of students, asking questions, lecturing, giving directions, criticizing or justifying student talk-response, student talk-initiation and silence or confusion.

FIA became a widely used coding system to analyze and improve teacher-student interaction pattern. Perhaps few studies have been carried out regarding classroom interaction in Pakistan on this vital aspect of teaching learning process.

The main objective of the proposed study was to explore patterns of classroom interaction at secondary levels in the North West Frontier Province of Pakistan using Flander’s Interaction Analysis system. This study was significant because its findings and conclusions may stimulate teachers to improve their teaching behaviour in order
to maximize students learning. To achieve the above study objectives, three hypotheses were formulated in the light of Flanders “Two-third rule” of teacher-student classroom interaction at secondary level, namely, about two-third of the classroom time is devoted to talking, about two-third of this time the person talking is the teacher and two-third of the teacher’s talk is “direct” talk. Twenty five classrooms at secondary level were randomly selected as a sample of this study.

Twenty five observations were carried out, each in one classroom, using Flanders Interaction Analysis system to secure the data. To do this, time sampling was used and each classroom was observed for 810 seconds (13.50 minutes) in a 45-minutes class. After obtaining and encoding the data, it was tabulated, analyzed and interpreted by using percentages.

All the hypotheses were supported and it was concluded that, more than two-third of classroom time was devoted to talking, thus talk method dominated in classes. More than two-third of the classroom talking time was devoted to teacher’s talking at secondary level, the teachers playing the dominant role.

1- INTRODUCTION

The education system in Pakistan depicts an undesirable situation, especially the classroom environment. Teaching learning process in the country at secondary and secondary level is too weak and our classroom environment is totally based on rote memorization. There is no provision for the development of intellectual and thinking skills among students who are given very less time for active participation and interaction. The teacher seems to be in a very dominant role in the
class. Unfortunately, poorly structured classroom quickly deteriorate into a vacuous waste of time.

Recent research on teaching effectiveness based on large-scale meta-analysis conducted by Walberg (1986) indicates that the seven factors are key elements of effective teaching: engaged academic learning time, use of positive reinforcement, cooperative learning activities, positive class atmosphere, higher-order questioning, cues and feedback and use of advance organizers. The system of interaction developed by Flanders shows how these elements fit together in actual classroom interaction.

Jackson (1968) reports that teachers are typically involved in more than 1,000 verbal exchanges with their students every day. There is a lot of talking; enough to give even the strongest vocal cords a severe case of laryngitis. Count the number of verbal exchanges teachers have with their students and the count during a classroom scene will give an idea of how much teachers talk.

Flander (1963) originally developed a research tool, named as Flanders Interaction Analysis (FIA). FIA became a widely used coding system to analyze and improve teaching skills. This observations system was designed to categorize the type and quantity of verbal dialogue in the classroom and to plot the information on a matrix so that it could be analyzed. The result gave a picture of who was talking in a classroom and the kind of talking that was taking place.
As a result of research with his coding instrument, Flanders uncovered the two-thirds rule: about two-third of classroom time is devoted to talking, about two-third of this time the person talking is the teacher, and two-third of the teacher’s talk is “direct” (that is, lecturing, giving directions, and controlling student). The two-third rule is actually three related two-third rules and serves to substantiate that, typically, teachers verbally dominate the classroom.

Originally developed as a research tool, Flander’s Interaction Analysis became a widely used coding system to analyze and improve teaching skills. Flander’s instruments were designed for observing only the verbal communication in the classroom and non-verbal gestures are not taken into account. The basic assumption of the system is that, in the classroom, the verbal statements of a teacher are consistent with his non-verbal gestures or, rather, his total behavior.

Flander has categorized the interaction of teacher and pupils in classrooms. There are ten categories in the system. Out of the ten categories in the system, seven categories are assigned to teacher’s talk and two to students talk and the tenth category classifies pauses, short periods of silence and talk that is confusing or noisy. The seven categories assigned to teacher are again divided into indirect and direct influence. Categories 1 to 4 represent indirect influence and categories 5 to 7 represent direct influence. Indirect influence encourages student participation and freedom of action. Direct influence increases the active control of the teacher and often aims at conformity and compliance. Direct influence tends to increase the teacher’s activity and restrains student behavior. The net effect is less freedom of action for the students.
The division of student talk into categories 8 and 9 provides a clue to the nature of freedom given to the students. Usually, but not necessarily, an excessive or above average pattern of direct teacher influence is associated with less student talk. An above average indirect pattern is associated with more student talk and this will be of self-initiated type. The use of only two categories to record all kind of student talk neglects a great deal of information but the major purpose of this system is the analysis of teacher influence. The purpose of category 10 is to record pauses, silence and periods of confusion. This is not intended to record longer periods of silence or confusion that exists for more than two minutes.

The major feature of this category system lies in the analysis of initiative and response which is a characteristic of interaction between individuals. “To initiate” means to make the first move, to lead, to begin, to introduce an idea or concept for the first time and to express one’s own will. “To respond” means to take action after an initiation to counter, to amplify or react to ideas which have already been expressed, to conform or even to comply with the will expressed by others. Normally, it is expected that the teacher should show more initiative than the pupils. With this ten-category system, it is possible to estimate the percentage of time of teacher talk, pupil talk, and more information is brought about by the teacher. Hence with this particular set of categories, it is possible to study the influence of the teacher statements only.

Verbal domination of the classroom conditions students to become passive and to be dependent on the teacher. This dependency has adverse effect on student attitude towards learning and student’s performance in school. Flander found
that when teachers are trained in his observation technique and become aware of the importance of language in the classroom, their verbal monopoly decreases. To use the Flanders Interaction Analysis, one codes the verbal interaction in one of the ten categories in the Flander’s Interaction Analysis Coding Instrument (Gay, 2000).

Perhaps few researches have been carried out in Pakistan about classroom interaction patterns. There is a need to study different patterns of classroom interaction at different educational levels in the light of Flanders interaction analysis system.

**2- STATEMENT OF THE PROBLEM**

The present study was designed to investigate the patterns of classroom interaction at secondary level in the light of Flander’s interaction analysis system in North West Frontier Province of Pakistan. The study was further delimited to cities of Kohat and Peshawar only.

**3- OBJECTIVE OF THE STUDY**

The major objective of the study was to explore the patterns of classroom interaction at secondary level in the light of Flander’s interaction analysis.

To achieve the above objective of the study, the following research hypotheses were formulated.

1. About two-third of classroom time is devoted to talking at secondary level.
2. About two-third of the talking time, the person talking is the teacher at secondary level.

3. About two-third of the teacher’s talk is “direct” at secondary level.

4-PROCEDURE

The following procedure was adopted for the study.

4.1 SAMPLE

The sample of the study consisted of twenty five classrooms at secondary level. The number of observed teachers were twenty five. The number of observed students were six hundred at secondary level. Thus the total number of observed teachers were twenty five and total number of observed students were 600. All the twenty five classes of the above level were selected randomly.

4.2 RESEARCH INSTRUMENT

After going through the related literature, the researcher, with help of supervisor and members of supervisory committee, discussed the instrument, Flander’s Interaction Analysis system for observing and recording classroom interaction patterns. This instrument was developed by Flander (1970) and has been used extensively in various studies regarding classroom interaction. The items in the Flanders interaction analysis were converted in an observation sheet called coding chart as illustrated by Gay (2000).

The Flanders Interaction Analysis system and specimen of observational sheet is given below.
<table>
<thead>
<tr>
<th>INDIRECT INFLUENCE</th>
<th>DIRECT INFLUENCE</th>
<th>STUDENT TALK</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Accepts Feelings:</strong> Accepts and clarifies the tone of feeling of the students in an unthreatening manner. Feelings may be positive or negative. Predicting or recalling feelings are included.</td>
<td><strong>5. Lecturing:</strong> Gives facts or opinions about content or procedure, expresses his or her own ideas, asking rhetorical questions.</td>
<td><strong>8. Student talk—response:</strong> Talk by students in response to teacher. Teacher initiates the contact or solicits students statement.</td>
</tr>
<tr>
<td><strong>2. Praises or Encourages:</strong> Praises or encourages students action or behavior. Jokes that release tension, not at the expense of another individual; nodding head and saying “um hm?” or “go on” are included.</td>
<td><strong>6. Giving Directions:</strong> gives directions, commands, or orders that students are expected to comply with.</td>
<td><strong>9. Student talk—initiation:</strong> Talk initiated by students. If “calling on” student is only to indicate who may talk next, observer must decide whether student wanted to talk.</td>
</tr>
<tr>
<td><strong>3. Accepts or uses ideas of students:</strong> Clarifies, builds, or develops ideas suggested by a student. As teacher brings more of his or her own ideas into play, shift to # 5.</td>
<td><strong>7. Criticizing or Justifying Authority:</strong> gives statements that are intended to change student behavior from unacceptable to acceptable pattern; bawling someone out; stating why the teacher is doing in the context of what he or she is doing with extreme self-reference.</td>
<td><strong>10. Silence or confusion:</strong> Pauses, short periods of silence, and periods of confusion in which communication cannot be understood by the observer.</td>
</tr>
</tbody>
</table>
The above observational sheet represents 90 seconds for 10 categories of FIA. Each block in observational sheet represents 3 secs.

### 4.3 DATA COLLECTION

The design of the study was observational. In order to secure data, Flander’s Interaction Analysis procedure was employed to observe classroom interaction patterns in secondary level classrooms. The following observation procedure was adopted:

1. In the each class period of 45 minutes, 13.50 minutes (810 secs) were used as observation period.
2. 13.50 minutes (810 secs) were divided in to nine time units.
3. One time unit was for the duration of 1.30 minute (90 secs).

4. In first fifteen minutes of the class observation period, three time units were observed randomly, comprising 4.50 minutes (270 secs).

5. In second fifteen minutes of the class observation period, three time units were observed randomly, comprising 4.50 minutes (270 secs).

6. In third fifteen minutes of the class observation period, three time units were observed randomly, comprising 4.50 minutes (270 secs).

7. Stopwatch was used along with an ordinary watch.

8. Total time for observation in a single classroom comprised 13.50 minutes (810 secs).

Before conducting the actual study, the researcher visited various schools and it was inspiring for the researcher that Principals appreciated and extended cooperation for conduction of research. They all were ready to give time for observation of different classes with different teachers. Observation was conducted through simple random sampling.

The observational session was an interesting stage for the researcher. He had to visit different classrooms, of different stages with different subject matter and with different teachers.

Twenty five classes (as mentioned in sample) were observed. The co-operation of the principals, administrative staff and teachers was commendable. The researcher however faced some difficulties in class time management.
4.4 DATA ANALYSIS

Data collected through the above mentioned research instrument were coded in the observation sheets. Each table was analysed and interpreted by using percentages. In order to calculate, all the categories from category 1 to 10 were added and the mean and standard deviation of 10 categories for 25 secondary classes were calculated. In order to calculate the talk time, frequencies from category 1 to 9 were added which were converted into percentages by dividing the frequencies with total time of interaction. To calculate teacher’s talk time, frequencies from category 1 to 7 were added which were converted into percentages by dividing the frequencies with total talk time. To calculate the teacher’s direct talk time, frequencies from category 5 to 7 were added which were converted into percentages by dividing the frequencies with teacher’s talk time.

The procedure for the whole process of analysis and interpretation Every table was constructed using percentages.

5- CONCLUSIONS

Research hypothesis # 1: About two-third of classroom time is devoted to talking at secondary level classes.

Table 1: Proportion of talk times in classrooms at Secondary Level.

<table>
<thead>
<tr>
<th>No of Class Rooms</th>
<th>Total Talk time in secondary level classes (in seconds)</th>
<th>Mean Talk Time (in seconds)</th>
<th>Observation time per class (in seconds)</th>
<th>% age of talk time per class (in percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>17896</td>
<td>715.84</td>
<td>810</td>
<td>88*</td>
</tr>
</tbody>
</table>
Table 1 reflects that mean talk time (in percentage) in secondary level classroom was more than two-third of the total class time. The statement supports the hypothesis. It was, therefore, concluded that more than two third of the classroom time was used in talking in the observed secondary classrooms.

Research hypothesis # 2: About two-third of the talking time, the person talking is the teacher at secondary level.

Table 2: Proportion of teacher’s talking time in classrooms at tertiary Level.

<table>
<thead>
<tr>
<th>No of Class Rooms</th>
<th>Talk time in secondary level classes (in seconds)</th>
<th>Mean Talk Time in seconds</th>
<th>Observational time per class (in seconds)</th>
<th>% age of talk time per class</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>12884</td>
<td>51536</td>
<td>715.84</td>
<td>72*</td>
</tr>
</tbody>
</table>

Table 2 reflects that mean teachers’ talking time (in percentage) in Secondary level class room was more than two-third of the total class time. The statement supports the hypothesis. It was therefore concluded that more than two third of the classroom time was used in teachers talk in the observed classrooms.

Research hypothesis # 3: About two-third of the teacher’s talk is “direct” at secondary level.
Table 3: Proportion of teacher direct talking time in classrooms at secondary Level.

<table>
<thead>
<tr>
<th>No of Class Rooms</th>
<th>Talk time in secondary level classes (in seconds)</th>
<th>Mean Talk Time (in seconds)</th>
<th>Observational time per class (in seconds)</th>
<th>% age of talk time per class</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>7838</td>
<td>313.5</td>
<td>395</td>
<td>79*</td>
</tr>
</tbody>
</table>

Table 3 reflects that mean teachers’ direct talking time (in percentage) in secondary level classrooms was more than two-thirds of the total class time. The statement supports the hypothesis. It was therefore concluded that more than two-third of the classroom time was used in teachers direct talk in the observed classrooms.

On the basis of data analysis and findings of the study, following conclusions were drawn.

1. More than two-third of classroom time was devoted to talking at secondary level.

2. More than two-third of the talking time was for teacher’s talk.

3. More than two-third of the teacher’s talk was direct talk at secondary level.

6- DISCUSSION

The results of the study that two-third of classroom time was devoted to talking, two-third of the talking time was devoted to teacher’s talk and two-third of
teacher’s talk was direct talk is in line with formulation of Flander (1970) who uncovered the two-third rule which says that about two-third of classroom time is devoted to talking, about two-third of the talking time the person talking is the teacher and two-third of the teacher’s talk is directed talk. The two-third rule is actually three related two-third rules. The results of study support the studies by Mark (1994) and Gage (1978), who wanted to examine possible differences according to grade level, secondary versus secondary.

The present conclusions, however, do not provide support to the studies by Steadman and Mary (1993), Amidon et al. (1967), Bale (1950) and Medley and Hitzel (1963). The deviation of the conclusion from the above studies may be due to the instruments used for interaction analysis.

The basic assumption of the system is that in the classroom, the verbal statements of a teacher are consistent with his non-verbal gestures and his total behaviour.

Similarly, patterns of classroom interaction at secondary level classes have shown great differences in teacher’s talk time. It may be due to the process of observation in the class, where teachers were alert for observation. Bale (1950) and Amidon (1973) did not find the similar patterns of classroom interaction between teacher and student, due to the change in the instrument. Had the observations been made unobtrusively, the results would have been different.
Another possible reason for the results might be that it was a just an observation with a small proportion of time. The observation was not based on standard schedule. As such, its reliability and validity could not be tested. Still another possibility is that total subjects, in college and university were taken. Had observation in compulsory subjects such as languages, mathematics, sciences and social studies, the results might have been different.

Still another reason might be the flaws in coding procedure used by the researcher about interaction pattern in the classes. Flander remarked that two-third of the class room time is devoted to talk, about two-third of time the person talking is the teacher and two-third of the teacher’s talk is direct. The results are more than two-third in the present study, that is, about 80 % is teacher’s talk, 12 % is the student talk and 8% is the silence time. The results of the study also revealed no intercultural differences in interaction. The percentage of Kohat and Peshawar was quite close.

In the present study, percentages were used for analysis and interpretation. The result might have been different if the ratio between indirect influence and direct influence, ratio between positive and negative reinforcement, steady state cell, content cross cell, constructive integration cells and vicious cells were used.

In the study, the researcher himself coded the interaction patterns in the sample classrooms. It would have been better if one more observer trained in the coding process were involved in order to determine the inter observer reliability, thus, making the observation more authentic and reliable.
7- RECOMMENDATIONS

In the light of findings and conclusions of the study, the following recommendations are made:

1. As the study results reveal, the environment of the classroom is autocratic and in majority of the classrooms, direct teaching mode is used. Therefore, teachers should be given realization to create a democratic atmosphere in the classrooms. Teacher’s direct teaching in the class be reduced at secondary level and indirect teaching be encouraged.

2. The results of the study indicate that students in the classroom were passive. Therefore, students should be given more time for the participation in the classes.

3. It was observed in the classrooms that majority of the teachers used lecture method and they asked just lower-order questions. As it is said “To question well is to teach well”, so teachers must ask higher-order questions in the class and use participative methods instead of straight lecturing.

4. Majority of the trained teachers were unaware about classroom interaction and its importance. Therefore, special training to teachers should be given in this regard and classroom interaction theories may be included in teacher education programs at all levels.

5. When teacher teaches through interactive and participative mode, the administration and the students, especially at secondary level, consider it a wastage of time. Therefore, the administrators, principals and students may be provided awareness regarding classroom interaction.
6. Majority of language teachers were observed to be more directives in their teaching. Language teachers should be trained in observation techniques in order to decrease their verbal monopoly.

7. Flander’s Interaction Analysis was an instrument to study the verbal interaction but non verbal gestures and body language are equally, if not more, important. Non-verbal instrument may be used for studying non verbal interaction patterns.

8. In the present study, the researcher himself made the classroom observations. At least two trained observers be employed in future studies in order to generate more authentic and reliable findings.

9. The classroom observations in the present study were made obtrusively that might have changed the behaviour of teacher and students and resultanty, influenced the classroom interaction pattern. In follow-up studies, the observation may be conducted unobtrusively to overcome the unnatural behaviour patterns in the class.

BIBLIOGRAPHY


