CHAPTER 2
THEORETICAL ORIENTATION AND RELATED LITERATURE

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CHAPTER 2
THEORETICAL ORIENTATION AND RELATED LITERATURE

2.1 THEORETICAL ORIENTATION AND RELATED LITERATURE IN THE FIELD OF INTERACTION BEHAVIOUR OF TEACHERS

Education is a factor for developing human, socio-economy. Management in education will have much or little quality and efficiency is dependent on one important component, that is, teacher. Therefore, although the curriculum will be written excellently, but if the teacher is unable to implement learning/teaching activities in a qualitative way, the result which will happen to students will not attain purpose of the curriculum.

Samarn Saengmali (1977) has given an opinion relevant to duties and responsibilities of teachers, as follows:-

1) Teacher occupation is honourable because it has to train people in order to raise mental level to a higher one. Teachers are normally well respected by students, their guardians and the society, therefore, the teachers have to behave and perform work suitably, as has been honoured by society.

2) Important duties of teachers are:

2.1) Give training in Knowledge, good behaviour to children so that they can look after themselves and create benefit to society.

2.2) Maintains and relays good national culture.

2.3) Is the one who gives advice about good and new
things to later generation.

3) In performing duties of a teacher, the teacher must:

3.1) Make himself an example. He must be from respectable family and is able to control himself.

3.2) Be responsible to duties.

3.3) Keep finding additional knowledge.

3.4) Have an orderliness / discipline and follow the Government's pattern.

3.5) Be friendly and participate in performing work with his superior and teacher colleagues in school in full.

3.6) Learn to sacrifice for the benefit of the whole.

Louis E. Raths (1964) has mentioned about duty in teaching of teachers that they should:

1) Explain, give the fact and show various methods in remedying problem.

2) Initiate, implement, and look after the students under their responsibility.

3) Implement so that the students would unite.

4) Give social welfare to students, i.e. give warmth, be friendly with students, etc.

5) Correct wrong attitude and belief including the problems which the students experience.

6) Consider problem in learning.

7) Produce teaching material and equipment.

8) Evaluate the students, compile data and report to guardians.
9) Prepare room which promotes knowledge.
10) Participate in various school activities.
11) Assist and support communities' activities.
12) Participate in activities which will develop oneself and lives in society.

Thanu Sawaengsak (1962) is of opinion that characteristics of good teachers are in five aspects:–

1) **Has relationship with students**

   Teacher must be interested and takes care about problem of students, answer the questions clearly, gives guideline and does not show aggressiveness, does not mock, knows how to hold temper, has sportive spirit, has perseverance, places himself suitably with students, not to be too intimate with students, does not make students lose face, learns how to admire, gives opportunity to students to evaluate result of teaching as well as deciding the goodness of students with reason.

2) **Loves in teaching occupation**

   Always Takes part in advising in order to improve learning/teaching. Listens to advice and always improves himself to be modern in technology and teachers' activities and teaches without concealing knowledge, co-operates and supports educational associations or vocational institutes which are interested in making themselves useful to the Government, is capable in the occupation and spends leisure time to create benefit in teaching.

3) **Has teacher's ethics/morality**

   Teachers should have ethics and morality and does not spread rumours, is faithful to occupation, does not steal other's output
of work, does not prejudice others, is polite in contacting government officials according to level and line of work, does not make reference about religion which will damage other religions, always improve himself, does not give tuition to his own students, maintains secret of students, does not make propaganda, does not gossip about others with his own students, does not plead about salary for his own sake, does not decrease his own work to suit the wages, does not apply for position which already has a teacher, does not use personal influence in government work.

4) **Has good personal qualification.**

Teachers should have good personal qualification, faithful, intellectual and self-confidence, initiation, enthusiastic, thinks about improving school, friendly with students, knows how to be flexible, earnest, gentle and polite, good health, learns to cooperate, does not show disgusted manner, speaks clearly but does not shout, punctual, gives justifiable marks, understands regulation and performs work strictly, learns to protect mouth and bodily odour.

5) Has good figure and good personality, has clean face, cuts his hair politely with good pattern suitable for a teacher.

Karagate (1962) has concluded result of research that good teachers must have personal characteristics and must practise as follows:—

1. Has good personality
2. Has eagerness in giving training
3. Has ambition in work
4. Has confidence in value of work
5. Maintains himself at a suitable place
Tuek Kusuma Na Ayuthya (1964) commented that "A good teacher is the teacher who does not teach, but knows how to advise the students to teach themselves" Teaching by telling students directly is of little use and he feels that Thai teachers teach too much, therefore, they ought to teach less, but to advise more. As regards characteristics of good Thai teachers, it is that, he should have good knowledge, teaches will and behaves well, but when considering about European style, they will aim at personality wherein no one has found a correct answer yet. However, although they have other qualities, but if they do not teach will, they cannot be a good teacher.

Surin Sorasiri (1972) is of an opinion that a good teacher must have 6 aspects of characteristics:

1) Has good personality, i.e. has good bodily structure, good feature, dresses will, has self-confidence, speaks well and can adjust himself well.

2) Arranges the room well with suitable atmosphere, hygienic, stores various equipments in proper and suitable place.

3) Has good relationship with students.

4) Teaches well, prepare teaching according to curriculum and can teach according to that time-table and he must have very good knowledge in the subject that he has to teach.

5) Has good attitude towards teacher's occupation, must have ethics and morality as well as having an orderliness according to teachers' custom and keeps finding additional knowledge.

6) Has good relationship with students' guardian.

He has further expressed opinion that a good teacher, if separated
into sub-group of behaviour, there will be 11 aspects, as follows:–

1) Punctuality
2) Attends work regularly.
3) Prepares teaching regularly.
4) Acts as good example to the students.
5) Finishes work neatly and regularly.
6) He knows and is responsible for his scope of work.
7) He is diligent in finding additional knowledge.
8) He is not stuck up and has unity with colleagues.
9) Must have ethics/morality and an orderliness according to teachers’ custom and Teacher’s Assembly.
10) Shows off to the chief of educational place by performing work which has been specified, but not fawn on one’s superior by talking nonsense to the master and makes superior and colleague break up.
11) Assists with special work when asked to do so.

Gilbert (1971) is of opinion that a good teacher must have the following characteristics:–

1) He knows what he is teaching very well.
2) He likes the subject which he is teaching.
3) He likes children.
4) He knows how children are.
5) He is broad-minded.
6) He has wide knowledge.
7) He has joyous habit.
8) He is smart at memorising things.
9) He has hope.
10) He is merciful.
While Oless (1970) is of opinion that students who like teacher that has nice character, who helps students. Parents or guardian likes teacher who is smart at work, wise and takes good care of children. The administrator likes teacher who does not complain when there is workload, The Board of Directors like teacher who has good knowledge, has stability and has no danger with low salary.

On account of this, the teacher has to be a person who has hope and is ready to work hard physically and mentally. The teacher has to try to find out about a student's intellectuality for use. A teacher can be many things for other people, but the important thing is, he has to be the first one in teaching/learning, where in this opinion corresponds with that of Professor Tuek Na Ayuthya as already mentioned.

Characteristics of teacher which has been compiled from result of research.

In 1929, Charter and Wharf had tried to study work under teacher's duty and further considered that teacher must have knowledge, skill and capability in how to perform work to a successful one and result of analysis was found that teacher must have the following characteristics:

1) Can adjust himself very well.
2) Has personality that attracts people.
3) Wide-hearted.
4) Has thoroughness and has high calibre.
5) Is merciful and not egoistic.
6) Learns to co-operate.
7) Is stable.
8) Is enthusiastic.
9) Fluent in speech.
10) He is brave, stable, be himself.
11) Has good judgement and can foresee things.
12) Has good health.
13) He is faithful.
14) He is diligent and has perseverance.
15) He has leadership characteristics, has initiation and has self-confidence.
16) He is charming, gay and looks at things in good light. He has sense of humour, good social and good voice.
17) Clean and meat.
18) He is open-hearted.
19) Likes to use his brain and good at thinking over.
20) He has progressive mind.
21) He does not put off things to the next day.
22) Has taste, humble, has moral integrity and is easy-going.
23) He has wisdom.
24) He can control himself.
25) He is economical.

Later in 1934 Heart has asked 3,725 senior high school students as to what type of teacher that they like best, the outcome was in priority order as follows:

The teacher that they like best must:
1) The teacher who assists in work and explains the lesson so that it becomes clear and easy, he takes care in examining the work and knows how to raise an example. (frequency 1950)

2) The teacher who has smiling face and has sense of humour.

3) He helps his friends in a true and faithful way.

4) He is interested and understands children.

5) He treats his work as something interesting, and promotes desire to work which causes fun in class.

6) He is rather strict in controlling the class but he has to respect people.

7) He does not divide colleagues into groups and there is no closer one.

8) He is not emotional and is not difficult to understand.

9) He makes the children acquainted in various subjects.

10) He has good personality.

11) He is endurant and is merciful.

12) He gives justice.

13) He is an orderly person.

14) He makes the students perform work efficiently.

15) He understands the students' feeling, therefore, he makes the student feel easy in class.

16) He knows things precisely and can make subject understandable.

17) Accepts student's opinion and supports a discussion in class.

18) Does not act as though he knows about everything.
19) Lets the students work reasonably.
20) He is not so very strict.
21) Helps the child to solve problem.
22) Dresses well, tidily with good taste.
23) He is not too old.
24) Works according to plan.
25) He is enthusiastic in teaching.
26) Spares enough time to work.
27) Gives reasonable homework to student.
28) He understands the difference in children.
29) He is straight forward.
30) Has good feature and is attractive.
31) He teaches more than what is in the subject.
32) He is interested in school activities.
33) He takes interest in the subject.
34) He is modern.
35) He is polite.
36) He has good voice.
37) He is wise.
38) He attends to work instantly and does not put off till next day.
39) He is faithful and earnest.
40) He has wide knowledge.
41) He has sportive spirit.
42) He has good judgement.
43) He has culture
The teacher whom the students don't like has the following characteristics:

1) Has strict emotion, does not smile and difficult to understand (1,708)
2) Teacher who divides colleagues into group.
3) Does not help with work.
4) He likes to show that he knows everything. But when he is out of the classroom, he does not know students.
5) He is unreasonable, is very strict and has no mercy.
6) He is unjustified.
7) He does not understand children's feelings. He likes to talk badly behind children and makes children afraid.
8) He does not understand and is not interested in students.
9) He gives work unreasonably.
10) He has disorderly manner and does not control the class.
11) He is not attentive in teaching, likes to talk about personal matter and is talkative.
12) Students cannot study what they want.
13) He is stupid.
14) He is unmodern.
15) He has no good relationship with children.
16) He knows but he cannot make the subject clear.
17) There is no standard set, he tends to bend toward individual work.
18) The work is too difficult. He does not give opportunity to finish the work.
19) He does not know things precisely.
20) He does not accept a child’s opinion
21) He is unstable.
22) He is lazy and is not interested in teaching.
23) He is not friendly.
24) He shows whether he likes male or female students.
25) He does not dress properly and has bad taste.
26) He is weak.
27) He is not honest or be true.
28) His personality is not interested.
29) He does not understand about difference in children.
30) Bad voice (frequency 63)

In 1947, Witty has analyzed characteristics of good teacher from 12,000 letters from primary and secondary students and was of opinion that the following 12 characteristics are the most important:-

1) He good attitude towards democracy, i.e. learns to co-operate, etc.
2) Is kind and is interested in individual child.
3) Has perseverance.
4) He is widely interested in things.
5) Has good personal appearance.
6) He is justified and does not divide colleagues into groups.
7) Has sense of humour.
8) Has good behaviour and is stable.
9) He is interested in children’s problem.
10) He is flexible.
11) He learns how to accept and give honour.
12) He finds modern method of teaching.

Research on characteristics of very good teacher belongs to Ryan (1970) and party which began to study in 1948, printed for the first time in 1960 and printed for the fifth time in 1970. From analysis on component, 5 aspects and 9 characteristics, were obtained.

**Behavioural aspect in class**

**Characteristics 1** Gives warmth, has understanding and is friendly which is opposite to separating himself and does not want to have any concern, thinks too important of himself and is too strict.

**Characteristics 2** Has responsibility and works in a systematic way and fast enough which is the opposite of trying to avoid work, works in an unplanned way and inertly.

**Characteristics 3** There is encouragement, pursuasion and thinks progressively which is opposite to inertness and monotonousness.

**Attitude aspect**

**Characteristics 4** Is interested in student’s opinion which is the opposite to not interested.

**Characteristics 5** Is interested in democratic behaviour in class which is opposite to uninterested.

**Characteristics 6** Is interested in administrator’s opinion and other’s opinion which is the opposite to uninterested.

**Attitude towards education**

**Characteristics 7** Learning centered-traditional which is the opposite with Child centered-permissive.
Aspect on capability in language.

Characteristics 8 is able to understand speaking language very well which is the opposite of not understanding speaking language.

Aspect of emotional stability.

Characteristics 9 has emotional stability. can adjust himself very well which is the opposite of unable to adjust himself and has emotional unstability.

Characteristics # 1,3,7 (PERMISSIVE) have high co-efficient in primary class teachers wherein it was mentioned that teacher's behaviour which shows friendliness and encouragement to become progressive does relate with educational attitude with child centered -permissive while Characteristics # 2, 4, 5, 6 have high co-efficient which means satisfaction in other's ides. This naturally is important component of desirable teacher's behaviour, specifically responsibility in work in an orderly system. In secondary level, it has similar relationship but is lower. Therefore, it is regarded as component of important behaviour. As for Characteristics # 2, it is regarded as important behaviour.

Ryan's study (1970) in the 9 Characteristics of teacher has also been compared with age, experience of teacher, sex, family's financial status, hobby, religion, type of education-lower than B.A. Degree, technological success, selection of occupation, activities in childhood and in youthful age, size of school, size of community, socio-economic status of the community which the school is located as well as topographical condition.

Munthana Piyamada (1968) has surveyed about characteristics of
teachers in Bangkok Metropolis and found that there are nine important aspects, as follows:-

1) Promotes, gives encouragement, praises and admires students.
2) Has mercy.
3) Gives good teaching.
4) Gives advice to students.
5) Is reasonable in a democratic way.
6) Is justifiable and honest.
7) Assists the students.
8) Has good personality.
9) Has good relationship with students.

In implementing learning/teaching activity, teacher has both direct and indirect influence. Teacher's behaviour has part in changing students' personality. Thai educational problem in the present time is teaching. Majority teachers who teach in educational institutes will explain to the students and do not teach the students to learn how to think which will be seen clearly from result of analysis of Duabucha Suetrong (1978): 64) who has studied about teacher's behaviour and found that majority of teachers explains/lectures to the students and lets the students learn it by heart. They don't give opportunity to students to ask or express opinion. Students have very little chance to initiate which corresponds with result of research of Chalor Wongsawaeng (1979): 41-46) who had studied about teachers' teaching behaviour in secondary level and found that majority of learning/teaching is behaviour shown by teachers while
behaviour that students respond is to answer to the teacher’s question only.

As for Chucheep Onkokesoong (1973):33, he has studied and found that method of teaching which a teacher uses in teaching is that teachers are the ones who explains and students listen and memorize by heart in order to use it for teaching. This method of teaching, the students are the ones to receive it and dare not express opinion when they come across various problems. In daily life, they are unable to solve those problems.

**Inter-action behaviour between teacher and students.**

Successful result in learning by students will be according to the aim of education or in accordance with the teacher's hope is not dependent on teacher's teaching behaviour alone, it also has to depend on learning behaviour, because educational activity is joint-activity between teacher and learners as to how they will correspond or how it will respond, as referred by Trojack (who made reference from Prueng Kumut (1976): 170) wherein it was mentioned that learning/teaching will be beneficial if the teacher and the students and the subject which is being learnt has inter-action at the highest level wherein the teacher and students will have to have joint-behaviour in conversation and responding to one another throughout the learning/teaching time.

Anderson (1972:3) has studied about inter-action behaviour between teacher and learner that teacher’s behaviour has influence towards learner’s behaviour and has classified teacher’s behaviour
into 2 categories, i.e. teacher who likes to set conditions for students by having teacher give 'dominative' instruction and teacher who wants students to consider and selects in doing things according to what they are interested in and is not integrative.

Karch and Estrabrook (1956:19-23) has analyzed occupation wherein the result appeared that there are 5 good aspects of teacher's quality, i.e. relationship with students, teaching aspect, morals aspect, specific quality and personality. As regards the aspect on students, good teacher must be interested and tries to understand students problem answer every problem and do not let private aspect to have influence over attitude towards students, tries to control emotion, has firm mind and is not interested only one student and do not be intimate with students. Don't make student feel shy, admire the students when their performance is progressive, must let students participate in learning/teaching, must decide and punish in a reasonable way. The result of this study corresponds with witty's (1947: 662-668) studied by 200 students between grades 2-12 who wrote literature on "Teacher who helps me most", and from this, good qualities were compiled that a good teacher must give cooperation, is merciful and takes care of every student, has perseverance, is justified, has over all knowledge, has good personality and is polite, is interested in student's problem, admires, praises and awards the student and has special skill in teaching each subject.

Biddle (1967: 346) has commented about studying the characteristics of teacher that, 3 aspects will be emphasized. The first aspect is the teacher's deed which can directly be studied and
observed from various activities of teacher, i.e., accepts students feeling, praising them, listen to student's opinion, asking about their problem, give a guideline, make comments on student's deed. Second aspect is manners, able to control his own behaviour, is firm and regular, contrals manners. The third aspect is teacher's behaviour while teaching in class.

With all and Lewis (1967: 693) mentions that personality and teacher's behaviour while in his class, if the teacher gives direct instruction and tells the students directly, the students will be aggressive. But if the teacher uses behaviour which gives opportunity to students to be able to select doing things according to what they are interested in, the teacher will receive co-operation and friendly feeling from students which corresponds with Maple's research (1971) who found out that teacher's verbal behaviour in indirect way will be more beneficial in studying and it is to improve atmosphere in class to have good relationship too. The teacher will feel that students will give more co-operation and have better attitude towards teacher and in the event that the teacher knows more about students' behaviour, he can improve himself and his method of teaching by cooperating with students in class.

Ryon (1960: 82) has studied in observing teacher's behaviour by critical incident technique and has compiled teacher's behaviour as follows:-

- Is always alert.
- Is interested in students and activities of the class.
- Is gay and bright.
- Can control himself and is not easily hopeless.
- Has sense of humour.
- Accepts when doing wrong.
- Does not side certain student.
- Has perseverance.
- Shows that he understands student.
- Shows that he is friendly and be polite with students.
- Helps with student's private problem as well as studying problem.
- Praises or admires student who performs work well.
- Accepts other's opinion.
- Prepares teaching properly.

Buabucha Suetrong (1978):68-70) has made a research on analyzing speaking behaviour in learning/teaching Thai language, social science and mathematics in junior high school of Demonstration School, Chulalongkorn University in 1978 and it was found that verbal behaviour characteristics in class summarily, the teacher is the party who shows verbal behaviour and gives lecture more than other methods. The teacher uses direct influence more than indirect influence, and controls behaviour of students more than encouraging them. As regards speech of student, majority students speak in order to respond to teacher's speech more than they speak by themselves.

Tirachai Buranachote referred from Technological Department (1975): 15-16) has made a research on manners and speech between primary teacher and students as well as initiation of students and compiled data on 2 methods, that is, use analysis method on verbal
behaviour in class by Flander and Torrance's Test Creative Thinking with students which was used as group example and the result appeared that:

1) Has positive correlation with significance in statistics between marks of initiation with:
   a) Proportion between direct and indirect influence.
   b) Percentage of time used in accepting feeling of student.
   c) Percentage of time used in admiring or giving encouragement to students.
   d) Percentage of time used in accepting opinion of student.
   e) Percentage of time used in initiating by student.

2) Has negative correlation with significance in statistics between marks of initiation with:
   a) Percentage of time used in explaining.
   b) Percentage of time used in advising students.
   c) Percentage of time used for students to answer to teacher's question.

3) Has no correlation between initiative marks with:
   a) Percentage of time used when teacher uses teacher's power.
   b) Percentage of time used in silence or in chaos.

4) Has high correlation between teacher's influence and initiation in girls more than boys.

Varaporn Chaiopas (1972: 134) found out that responsive behaviour and initiative behaviour of students will change according to teacher's behaviour. If the teacher uses a lot of indirect behaviour, students will have much initiative behaviour. But if the
teacher has much direct behaviour, students will have much responsive behaviour.

Somboon Suriyawong (1974): 13-14) has analyzed manners and speech between teacher and students in class with result of study in primary mathematics by using Flander's Interaction Analysis Technique between teacher and students and was found that teacher who uses indirect and direct influence and students whom the teacher has given opportunity to speak up and students whom the teacher does not give opportunity to speak, does not make the result of study in mathematics by student different.

Nara Buranachai (1975: 52-55) has studied about teaching behaviour of mathematics teacher at primary bevel and junior high school level under the jurisdiction of Common Education Department (1974), Bangkok, numbering 51 students, it was found that teacher will use interaction behaviour between teacher and students, The teacher will use in different volume. But behaviour which the teacher will use most is the behaviour which teacher will encourage the students to answer. As for the least behaviour is the behaviour which the students initiate, and it was found that behaviour in teaching interaction aspect between teacher and students of teacher who teaches in different grade, different sex, different qualification as well as different teaching experience have behaviour in teaching inter-action between teacher and students of no difference.

Nalinee Wanchai (1967 : 50) had studied about relationship between teacher and students and found that teacher that students want is teacher who best communicate with students, is close to students
and does not ignore them, does not look down and does not show that he is better than students which corresponds with the study of Munthana Piyamada (1968:98) who found out that apart from qualification in teaching, and giving training to students, the teacher has to have good relationship with students, promotes and encourages students, praises, admires and gives advice, has mercy, is justifiable and be reasonable as well as having good personality.

Education Research Division Ministry of Education (1975:248) has analyzed and compared teachers' and students' behaviours in primary level in Bangkok where social science was taught totalling 9 characteristics. Sample groups used were teachers from 120 classrooms from 30 schools, by observing teaching in a systematic way according to Flanders' method wherein result of study was found that:

- Teacher's qualification has no relationship with learning/teaching of teacher with significance at level .05 in 16 characteristics which shows that whatever qualification that teacher have, they will teach similarly.

- Teacher's experience has no relationship with teaching behaviour with significance at level 0.05 in only 7 characteristics which shows that by majority, teachers who are single and those who are married have different teaching behaviour.

Verachai Mechobtham (1975 : 98) has advised about teaching behaviour as follows:-

1) Promote the adult students in class to be acquainted with one another.

2) Be sure that every one is friendly with one another.
3) Create friendliness as much as possible.
4) Promote every one to exchange suggestion and help the group to carry out activity.
5) Assist every one to feel that his opinion is also important.
6) Always realize that teacher is a member of the students' group who keeps giving guideline in technology only.

From condition of learning/teaching which appears in the result of research, it may be mentioned that teacher is important person in implementing learning/teaching activity. Teacher is the one who is influential directly and indirectly. That is, teacher's teaching behaviour in class will have a part in changing students' behaviour. Studying in inter-action behaviour between, teacher and students is one of the guidelines in developing quality of learning/teaching as well as quality of education.

Ned A. Flanders (1951) commented that in observing and analyzing teacher's teaching behaviour in class is one of the important guidelines for improving quality of learning/teaching and it is necessary for developing teaching by teachers, This will help the teacher to take care in behaviour and is able to control his own teaching behaviour so that it is a guideline which will promote knowledge to the students and examination of teacher's behaviour will be a guideline for improving teaching efficiency of teacher which will send a result in advancement of students.
In observing teaching behaviour, it is a method which will help in improving quality of teaching of teacher because in observing teaching behaviour so that the teacher sees his own teaching pattern including capability in evaluating himself, it will make such teaching attain the aim which corresponds with suggestion of Vichit Sisa-arn (1981) who commented that observation of teaching behaviour in class is to evaluate teaching efficiency of teacher by having important aim in order to improve teaching procedure of teachers and learning procedure of students in order to improve curriculum wherein observation of behaviour in classroom will help us to learn about characteristics of preparing content/subject as to whether or not it is suitable and in order to make educational research, it will make us learn as to what type of teaching behaviour sends an impact to studying by students at its best, and what type of teaching behaviour which happens in class will cause inertness or is an obstacle to learning.

In observing teaching behaviour of teachers in the old days, the observer of behaviour has observed teachers' behaviour in general without definite aim. Giving advice by observers in a mere conclusion obtained from observing learning/teaching behaviour and uses suggestion guideline together with experience of the observer as a criteria in giving advice to teachers, But in the present time, it is regarded that behaviour which originates from inter-action between teacher and students has linkage and co-ordinates with one another, This type of learning/teaching behaviour is rather complicated, but
it is able to indicate, classify, evaluate and analyze by observing learning/teaching behaviour.

Ganjana Kiatpravat (1980) mentioned that in analyzing interaction between teacher and students it enables the teacher to develop and control his own teaching behaviour and enables us to be able to study teaching behaviour of teacher which has result toward interaction between teacher and students in class.

**Analysis of teaching behaviour in a systematic way.**

We are able to observe or measure teaching by teacher in 2 main categories, i.e. verbal and non-verbal behaviour. These 2 categories will surely happen in teaching one lesson, whatever method of teaching it may be, because learning/teaching is interaction between teacher and students. Therefore, those who will be either teacher or Teachers' Training graduate are necessary to understand and criticise about these two categories of teaching behaviour, because at least, analysis method of teaching behaviour will be brought for use in evaluating teaching or for evaluating his own teaching.

1. **Verbal behaviour.**

   It is teaching behaviour which originates from teacher's speech or student's speech or speeches of teacher with students while teaching. The person who thinks about analyzing verbal teaching behaviour in a systematic way is N.A. Flanders. After that many people tried to improve and after Flanders' analysis in verbal behaviour for their own or for other patterns at a later date.
FLANDERS' INTERACTION ANALYSIS CATEGORIES (FIAC)

Principle

In observing teaching behaviour of teacher, majority like to observe from general teaching behaviour which has very subjective characteristics, that is, the observers normally use explaining or write a literature, i.e. writing that the teacher explains too much and does not give opportunity for students to ask or give opinion as it ought to be. This observation or criticism is unable to make the teacher sees his own teaching clearly in vision. Flanders has, therefore, found a method to analyze teaching behaviour which is questioning/answering reaction between teacher/student which is rather systematic and is highly objective. The principle is verbal behaviour between teacher and students is sufficient example or is representative of total behaviour in class. Therefore, this method is merely to observe only behaviour which teacher and students show verbally only. The reason why selection is made to observe verbal behaviour is because we are able to observe with reliability more than non-verbal behaviour. From research, it was found that Flanders' method is of good use in observing learning/teaching which is a lecture and discussion and general teaching. As regards learning/teaching in performance room, a lot of students participate wherein a lot of non-verbal behaviour is used. Hence, example of verbal behaviour will not be sufficient example of the total behaviour in class.

Flanders' Interaction Analysis Categories was developed by Ned Flanders and colleagues at Minnesota University between 1955–1960. Flanders' system is used for analyzing verbal inter-action between teacher and students which are classified into 10 categories, as follows:
1. Accepting the Feeling means the state that teacher tells us that he understands how the child feel and he knows that the child has the right to feel so. Therefore, he will not punish the child due to the child's feeling. In saying so, it is to make the child understand about the acceptance and understanding in such feeling. This item includes the wordings which mentioned about the past feeling, the joyous feeling and uneasy feeling in the present time or feeling sad in the future.

2. Admiring or Giving Encouragement means admire or give encouragement to student's reaction or behaviour, such as, say a joke in order to reduce straineousness (but must not cause annoyance to other people) by nodding head and ask "what else", etc.

3. Acceptance or Use Student's Opinion. Acceptance herein means accepting only opinion and does not include accepting emotion which that student shows. When student proposes an opinion, the teacher may:
   a) Repeat the student's speech
   b) Speak out in order that such opinion becomes easy to understand.
   c) Summarize the student's answer.

   In addition, the teacher might say that "good opinion, interesting, I understand what you mean". But very often that the teacher normally looks over his own opinion.

4. Raising Question This question means question relevant to content or procedure that the teacher wants reply from student. It does not mean raising question which uses with explanation without wanting a reply, give instruction or make criticism. This question may be classified into 2 categories, i.e. :-
a) Direct question. Point out to student's answer or limit freedom in answering.

b) Wide question. This gives more freedom in answering by student.

5. Explanation means giving the fact or suggestion relevant to content or procedure or the teacher expresses his own opinion.

6. Tell About Method for Doing., i.e. method for doing or instruction which the students have to follow.

7. Make Criticism or Blame Students, i.e. a sentence or wording that is used for changing student's behaviour from not accepting to accepting, refusing student, explanation as to why the teacher did what he is doing or talking too much about himself.

8. Student speaks in order to respond means whatever it is that the student speaks in order to respond to teacher's requirement. For example, answering to a question, answering to instruction verbally, answering to teacher's instruction.

9. Student Speaks in Order to Initiate, means when student raises hand so as to ask for permission to speak or ask a question in spite of the fact that the teacher did not initiate. The student speaks out himself and does not speak because he has to answer to the teacher.

10. Silence or confusion means short interval that there is silence. The observer is unable to record behaviour in groups 1, 2, 3 and 4 of the teacher. This is regarded as having indirect influence towards the learners. As regards behaviour in groups 5, 6 and 7, it is regarded as having direct influence towards learners. Result of analysis was found that when the teacher uses verbal behaviour which has a lot of indirect influence, the result of study by learners will be higher than teacher who has direct influence of verbal behaviour.
TABLE 2.1
Various Categories of verbal behaviour between teacher and students
which has been altered from Flanders' method.

<table>
<thead>
<tr>
<th>Silence</th>
<th>Student speaks</th>
<th>Teacher speaks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Direct influence</td>
</tr>
<tr>
<td>1. Keep silence or confusion</td>
<td>1. Student speaks</td>
<td>1. Describes.</td>
</tr>
<tr>
<td>: In leaving interval in speech,</td>
<td>: Student speaks</td>
<td>: Describes about the fact</td>
</tr>
<tr>
<td>interval of silence or confusion</td>
<td>by having teacher</td>
<td>: Suggestion, about the verbally in</td>
</tr>
<tr>
<td>wherein behaviour in such interval</td>
<td>: Student initiates</td>
<td>: Content of sympathetic way,</td>
</tr>
<tr>
<td>cannot be classified into category of silence which is in accordance with the objective, i.e.</td>
<td>: Teacher in speaking i.e. opinion.</td>
<td>: Various satisfied by the teacher or not.</td>
</tr>
<tr>
<td>giving opinion, in questioning the silence which teacher.</td>
<td>: Gives guideline.</td>
<td>: Instruction,</td>
</tr>
<tr>
<td>gives guideline with an aim to making the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silence</td>
<td>Student speaks</td>
<td>Teacher speaks</td>
</tr>
<tr>
<td>---------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td></td>
<td>Direct influence</td>
<td>Indirect influence</td>
</tr>
<tr>
<td>T Teacher does various activities, i.e. T Teacher does various activities, i.e.</td>
<td>S Students speak- students follow in performing.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Admires or criticism or supports in giving</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Makes uses teacher's power: encouragement:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>opens-thinks teacher's behaviour which shows admires or supports</td>
<td></td>
</tr>
<tr>
<td></td>
<td>about studying instruction or that teacher student's deed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>media, writes what teacher is superior in verbal behavior,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>on the specifies or studying, scolds students, by saying</td>
<td></td>
</tr>
<tr>
<td>W Students write instruction to criticises &quot;Very good&quot; or &quot;continue</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>i.e. jot down sing without student's wordings or speaking&quot; or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>various reports causing nuisance student's speaks in</td>
<td></td>
</tr>
<tr>
<td></td>
<td>in their copy-books, do their student's deed, chases</td>
<td></td>
</tr>
<tr>
<td></td>
<td>excercises, etc Student speaks not to tease or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>read books: student out</td>
<td></td>
</tr>
<tr>
<td>Silence</td>
<td>Student speaks</td>
<td>Teacher speaks</td>
</tr>
<tr>
<td>---------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>D</td>
<td>Students do their various activities, i.e. separating into groups for performing work that they have been entrusted, racing game, etc. Silence which is not in accordance with the objective is:</td>
<td>Students read books according to teacher's instruction or what teacher specifics or they read on their own wherein this must not be ready that would cause nuisance or causing trouble to the room.</td>
</tr>
</tbody>
</table>
### TABLE 2.1 (Continued)

<table>
<thead>
<tr>
<th>Silence</th>
<th>Student speaks</th>
<th>Teacher speaks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct influence</td>
<td>Indirect influence</td>
</tr>
<tr>
<td>which cannot be classified as to which category of behaviour.</td>
<td>opinion in class and explaining or making alternation to the content expressed by student, to a clearer one. Whenever the teacher inserts his opinion, it will be recorded in category 5 of the behaviour.</td>
<td>4. In questioning. It is to question about content or various methods with an objective to let students answer.</td>
</tr>
</tbody>
</table>
Method of using Flanders' system in observing teaching behaviour.

Step # 1 Study, make it understood and remember by heart the 10 categories of verbal behaviour.

Step # 2 Practise method of observing and record behaviour with the one who knows and is experienced in this method until there is a high level of reliability. The first method of exercise normally practised from tape recorder, short lessons first, later practice can be done from longer tape recorder and practise from the real classroom accordingly.

Step # 3 After practising until there is a high reliability, one is able to start observing and recording behaviour. Method of observing and recording behaviour will have to be recorded in blank paper every 3 minutes or 20 times a minute. The method is, record in a row from top to the bottom. Three is also a principle before or after teaching, figure 10 is normally used, because before teaching it is time for silence and confusion, for example, "0 (zero)", figure has to be underlined too.

10
5
5
5
4
8
2
10
In the event that classroom has changed into non-verbal behaviour, i.e. teacher and student perform activity or experiment, do exercise, figure '10' is applied and it is to be underlined. At the same time, if we start a new verbal behaviour, it has to be recorded again in order to interpret the meaning of data.

Step # 4 After recording the behaviour, this data is to be recorded in table for analyzing behaviour which is called 'MATRIX' which comprises of 10 channels of Horizontal Table. In recording, data has to be distributed on frequency of behaviour in each category by making behaviour into a pair of code (one code a pair) as per following sample:-

<table>
<thead>
<tr>
<th>Raw data</th>
<th>Method of criticism</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

After tally in Matrix Table, it will appear as follows :- (From the above record and from the above pairs)

Step # 5 Change each channel of frequency into percentage of the total frequency, Add up percentage of frequency in vertical line,
then calculate the important words by using ratio, i.e.:

- Indirect/Direct Ratio or I/D Ratio.
- Teacher Question Ratio or TQR.
- Pupil Initiation Ratio or PIR.

Step # 6 To interpret the meaning of data from Matrix Table according to ratio which is required to compare. It will make us learn that one lesson or one teaching of the teacher, the teacher is talkative or students are talkative and how much does the teacher use direct or indirect influence.

Purpose and The Nature of The Category System. Important characteristics of analysis system on interaction of Flanders has an emphasis at Initiative and Response.

Initiative herein means beginning to apply Initiative or any concept for the first time, showing about intention of a person.

Response means taking action after initiating in order to respond so as to enlarge the sentence of reaction towards someone's thinking which had shown out in order to follow any intention which other people had shown out wherein Flanders expects that by majority, teacher will have more initiation than student.

In Flanders' system, balance between initiation and response can be noticed when the teacher speaks, student speaks and silence or confusion. Data alone in spending time is not a good indicator for learning or thinking of student because of the quality of result to children, therefore, we cannot consider about quantity only. But since the teacher has the right and power in class more than student, therefore, it is not peculiar that verbal behaviour which is
part of the total behaviour of teacher may be important component which sends an impact towards balance of initiation and response. Due to the reason mentioned above, Flanders' system is classified into 7 categories of teacher's speech:

In estimating balance between initiation, response in class by comparing frequency in groups 1, 2 and 3 as well as groups 5, 6 and 7.

Response by teacher means when teacher mentions a speech which supports the student or when teacher brings student's idea for use, the teacher encourages student, this is behaviour in groups 5, 6, 7.

Flanders and colleagues normally found out that teacher's response and initiation give an impact to student as follows:- Teacher who uses a lot of behaviour in groups 5, 6 and 7 will relate with student's behaviour in group 8 while teacher who uses a lot of behaviour in groups 1, 2 and 3 has relationship with students in group 9.

Balance of response and teacher's initiation is similar to that of student, that is, it will not be stable, but changes according to learning activity. In addition, it changes according to teaching characteristics of teacher, content of subject that is being taught, age and maturity of student as well as classroom environment. In following up those changes it will make us learn about teaching behaviour and relationship between the thing which the teacher is doing and students' reaction.

In conclusion, every group of behaviour of the system has an aim and this system is used for studying balance between initiation and responses.
The Procedure of Observation.

The observer sits in class where he can see and hear clearly and tries to record at his best. The observer must decide as to what group such behaviour is in, and jots down figure while he is observing the following behaviour. Speed in recording has to be the most regular as possible. Normally the observer can jot down 20-25 times a minute or in every 3 minutes. Apart from finding out that the observer who has experience can jot down for a while will be able to jot at the above rate. As for Flander’s system, the observer has special gift and he can record faster than that. For certain system, the observer may record slowly.

In maintaining the speed to a regular one, it is more important than trying to be fast, specifically, in summarizing, it has to use regularity in recording, not the rapidity. For example, comparison between 2 categories of behaviour in one observation, it can only be done when there is speed of record only. The observer normally has a trend to misunderstand, by trying to record faster the behaviour which is difficult to find and slow down recording speed. When the teacher explains or lectures for a long time, there is no observer who can record perfectly, but the two observers can practise themselves to have speed near one another.

Observers who are newly trained do not have to worry about speed in recording. Emphasizing on speed should be done at later stage or after 4 hours of training. Regular recording speed will occur after many observations in class. It will waste time if emphasizes at the beginning stage.

Actual recording procedure in class or from sound and picture must use one of the observation patterns depending on
requirement relevant to data. But during practising period, the observer may use ordinary paper to record figure of behaviour group accordingly while practising. The observer ought to examine correctness with other observers.

Recording may be done in many methods. Selection for use depends on suitable requirement.

Analysis of inter-action of verbal behaviour of Flanders is wellknown and used most, and many more things. The person who invented it is to apply Flanders' technique for use, i.e.

Brown's Interaction Analysis System (BIAS).

Brown's Interaction Analysis System is the period when it has been altered from Flanders' RIAC for easy use in observing teaching (Brown, 1975-81) It has been created for teaching in micro pattern because there is easy and short code, that is convenient for use and it is not complicated like that of Flanders' Calculation and interpretation of behaviour is much easier'

Behaviour category of BIAS has the following codes and meanings:-

- TL (Teacher Lectures) means the teacher describes, explains, tells, points out, lectures.
- TQ (Teacher Question) means the teacher ask about the content or method of implementation so that the pupils would answer.
- TR (Teacher Responds) means the teacher answers by accepting total pupils'feelings explaining about the past and future positive feeling, admires, promotes, say humourous joke with students, accept or use the student's opinion and talk in addition to pupil's response, use a light criticism such as 'this ought not to be right'
- PR (Pupils Respond directly and predictably) means pupils
respond to the question and perform directly according to the teacher's instruction predictably.

- PV (Pupils Volunteer) means pupils give opinion or ask question voluntarily.

- S (Silence) means pupils and teacher stop talking, silence which occur periodically.

- X (Unclassifiable) means it cannot arrange into groups, when pupils and teacher do not understand in communicating, they become dazed. There is abnormal activity, i.e. blaming the pupils, demonstrating without teacher's speech or pupils' speech coupled together while the teacher writes on the blackboard without both parties' speech.

Remarks: This system has been created for use in conversing between two parties. It will be a waste if used in other activity in class, i.e. experimenting, copying down something which is time-consuming, learning singly by student, or a stage show.

The Use of BIAS

1. Prepare table for analyzing system together with codes
2. When beginning to observe, draw a mark in the various channels on the same line as the code in every 3 seconds
3. Every time when we begin to draw "/" mark in row "/" in order to be prepared, draw next mark. If there are "/" in the channel "/" more than 2 marks, write down what happens or what you see. In addition, in certain subjects, i.e. science, when the teacher asks, we may write down 'high' question or 'low' question or may write "h" or "l"
4. After finishing the lesson, bring the result of observation to see how the teacher or teacher trainee student teachers,
i.e. the professor can tell that if there are TQ more than 3 channels, it means that the trainee student repeats the question. Pupils cannot answer or have no chance to answer. But if there are many PR or PV close to one another from TQ or S, it means that studying by "discussion" carries on well. If there are many PV behind TL, it means that there is a problem on controlling pupils or in communicating, etc.

2. **Non-Verbal Behaviour**

In general teaching procedure, whether it be in classroom or outside the classroom, one thing which the teacher can use is 'Non-verbal Communication or 'Non-verbal Behaviour' The importance of teaching which is non-verbal behaviour is the teacher performs activity, pupils perform activity, i.e. writing, showing facial expression, makes bodily movement, walking from one pupil to another pupil, the use of sight to praise pupil in class, etc. these has meaning toward learning and teaching because psychologists believe that showing an action without speech is showing out by emotion, i.e. anger, hatred, afraidness, restless/agitated, self-confidence, etc.

The use of non-verbal behaviour in teaching:-

1. Teacher's training student has to practise himself with mirror before the real day.

2. Observe teacher's training student in class for 15-30 minutes while teaching.

3. Use tape recorder in order to obtain a feed back in practising to teach or it is micro-teaching method.

4. Peer teaching. This will enable a friend to feed back his own action while teaching which is better than teaching ordinary
pupils because general pupils are unable to tell.

5. Use teaching skill to train teaching or try to teach in a systematic teaching, i.e. skill in using manners, speech, action, skill in changing interest, skill in giving encouragement, etc. wherein each skill is able to observe non-verbal behaviour.

5. Use of evaluation pattern or questionnaire to examine behaviour or teaching action, by letting pupils answer questionnaire or evaluation form without signature.

From the above inter-action behaviour, it may be summarized that inter-action behaviour between teacher and pupils in class while implementing learning/teaching activity can be classified into 3 characteristics of behaviour, i.e.

1. Teaching behaviour of teacher
2. Learning behaviour of pupils.
3. Learning/teaching behaviour of teacher and pupils.

Teaching Behaviour of Teacher means behaviour which the teacher shows out classified into 12 behaviours for analysis and comparison, i.e. spending time in speaking, spending time in explaining, spending time in teaching by emphasizing on content, using direct influence, indirect and direct influence ratio, ratio in using encouragement and behavioural control, use of indirect influence to respond to pupils' speech, use of direct influence to respond to pupils' speech, trend rate in questioning and using time for doing non-verbal activity.

Learning behaviour of pupils means behaviour which the pupils show out classified into 8 behaviors for analysis and comparison, i.e.
spending time in speaking, spending time in singing, spending time in reading, spending time in speaking in order to respond to teacher's speech, spending time in initiating or giving opinion, spending time in writing or making exercise which is non-verbal, spending time on non-verbal activity as well as initiation rate.

Learning/Teaching Behaviour of Teacher and Pupils means behaviour which the teacher and pupils have to show out together or has responsive reaction between each other classified into 7 behaviours for analysis and comparison, i.e. spending time to speak, silence which occurs totally, silence which has an objective, silence which has no objective or confusion, total speech rate towards total silence, ratio between spending time in speech by teacher and time spent by pupils in talking, ratio between objective silence and non-objective silence.

Teacher Talks means total time which the teacher shows talking behaviour.

Teacher Explains means time spent in explaining the fact which is teacher's behaviour or gives opinion relevant to contents of subjects in learning/teaching.

Content Cross Area means when there is questioning behaviour and describing by teacher, and questioning behaviour description which occurs next to other behaviours, it is the role of action by teacher.

Indirect influence means behaviour which the teacher speaks in order that it might show out action in non-independence way, i.e. pointing out guideline, giving instruction, criticism and explanation or discussion.
Indirect Direct Ratio means when there is behaviour which the teacher encourages pupils (accepting the feeling, admiring, giving encouragement and accepting opinion) when comparing with time which the teacher controls pupils' behaviour (gives guideline, criticism and uses power).

Using indirect influence to respond to pupils' speech means behaviour which the teacher speaks next to pupil in order to accept the feeling, opinion give admiration, gives encouragement and questioning, either it be pupil answering to question or shows opinion or initiation.

Using direct influence to respond to pupil's speech means behaviour which the teacher speaks next to pupil's speech in order to describe about the fact or shows opinions relevant to content of the subject, gives instruction or guideline and scolds pupils or analyze pupil's deed.

Rate in using teacher's question means behaviour in spending questioning time of teacher when compared with discription.

Trend rate in using teacher's question means behaviour which the teacher will respond to pupil's speech, by raising new question when compared with explanation by teacher.

Spending time in non-verbal activity means behaviour which the teacher shows out without speaking, i.e. picking up book, prepare learning/teaching media, write on the blackboard, etc.

Spending time in speaking by pupil means the total time spent in speaking, i.e. questioning, answering to question, showing opinion, singing and reading books.
Spending time in singing means behaviour which the pupils sing according to teacher's instruction or the pupils sing together without agitating others.

Spending time in reading means pupils' reading behaviour of students which is to read loudly, it may be due to teacher's instruction, or majority would read themselves without bothering the class.

Spending time speaking in order to respond to the teacher's speech means behaviour which the pupils speak next to the teacher by having teacher initiating first, i.e. answering to question, follow the teacher's speech, etc.

Spending time in initiating first or shows opinion. Behaviour which the pupil initiates, i.e. expressing opinion, questioning teacher, etc.

Spending time writing or doing exercise which is non-verbal means behaviour which is non-verbal by pupils, i.e. writing, doing exercise, copying down work, etc.

Spending time doing various activities which is non-verbal means non-verbal behaviour of pupils in order to do various activities which are not exercises, writing down in copy-books, but it has to be activities which separate into groups, competing in games entrusted by teacher, etc.

Rate of initiation means behaviour which pupil uses when initiating or when expressing opinion when comparing with the time when pupils speak to respond to the teacher.
Spending time in speaking by teacher and pupils means when total behaviour in speaking between teacher and pupils.

Objective silence means when there is silence while there is learning/teaching, i.e. pupils write, do their exercise or lesson, perform activities as well as teacher doing his activities.

Silence which has no objective or confusion means when there is silence which has no learning/teaching or when there is confusion in spite of the fact there is or there is no speech occurring.

Proportion in total speech and silence which arises mean the total time spent by teacher and pupils in speaking when compared with total time when silence occurs, both are silence which has learning/teaching and without learning/teaching.

Ratio in spending time to speak by teacher and time spent in talking by pupils mean total time spent by teacher in speaking when compared with total time spent in talking by pupils.

Ratio between silence which has objective and without objective means when silence occurs while there is learning/teaching (i.e. teacher does activity, pupils are writing, pupils are performing activities compared with the time when there is silence while there is no learning teaching or confusion.
In observing inter-action behaviour between teacher and student which educationist suggested at the first stage by majority cannot measure every aspect of behaviour, i.e.

In 1914, Horn (citing by Gage, 1965: 254) has prepared seating plan of pupils and brought it for observing the class in order to find out how much do pupils participate in behaviour of the class in every observation that pupils have the chance to participate behaviour in the class, i.e. answering to teacher's question. The observer will record as a mark in that seating in order to find out how many pupils are calls in each hour.

In 1928, Puckett (citing by Gage, 1965: 254) has applied Horn's method for improvement for use by specifying symbol instated of pupil's behaviour, i.e. Mark recorded: Behaviour that happened.

- Pupils raise hands
- pupils raise hands and teacher call them to answer.
- Pupil did not raise hand.
- Pupil did not raise hand, but teacher asked him to answer, but the pupil did not answer.
- Pupil asked question.
- Pupil spoke when the teacher did not ask him to speak.

Wrightstone (citing by Gage, 1965: 255) has suggested in creating code for recording responsive behaviour and encouragement by teacher wherein these behaviours have occurred while the whole class is having inter-action or by individual, i.e.

- Allowed the pupils to express opinion by using code '5a'
- Encourage the pupils to answer by using code '5b'
Bale (referred from Sakorn Mipriyai (1973: 60) has created recording measurement telling about behaviour of teachers who teach in small groups by emphasizing on inter-action procedure, it can be counted that Bale was the initiator who brought method for specifying period for recording procedure for use.

Later, Flanders (1970:31) has created a tool for analyzing teaching behaviour in class of Withall which is a tool which did not mention about behaviour of pupils. Flander has classified categories of behaviour into 10 categories in order to study language interaction characteristics which the teacher and pupils used during learning/teaching. Flanders' observation system is called FLAC (Flanders' Interaction Analysis Categories), as follows:

**Teacher speaks.**

a) Answers (indirect behaviour)

1. Shows response or a good feeling towards pupil's speech.
2. Admires and praises.
3. Shows acceptance of pupils'speech.
4. Teacher is the one who asks according to teacher's guideline.

b) Teacher begins (direct behaviour)

5. Teacher explains
6. Teacher instructs
7. Teacher makes criticism

**Pupil speaks.**

a) Answers


b) Pupil begins

9. Pupil is the one who begins to speak.
10. Silence-confusion (which is special atmosphere separated from
9 categories above.

Hough (1964) has created a tool on the Observation System for Interaction Analysis. He has made a sub-behaviour of teacher into more detail, i.e. pointing out the wrong place, criticism, refuse to accept pupil's suggestion.

Ober and party (1971:37-89) has arranged category system of behaviour into 2 categories:-

1. RCS (The Reciprocal Category System).

It is the system improved from Flanders' PIAC by being the system which enables observation of teacher's and pupil's speech by having code as follows:-

**TABLE 2.2 Reciprocal Category System**

<table>
<thead>
<tr>
<th>Teacher's code</th>
<th>Category of behaviour</th>
<th>Pupil's code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Friendly explanation which is warm and encourages and joyful which creates good atmosphere.</td>
<td>11</td>
</tr>
<tr>
<td>2</td>
<td>Acceptance</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>Explanation in order to be clear</td>
<td>13</td>
</tr>
<tr>
<td>4</td>
<td>Question in order to find out additional fact</td>
<td>14</td>
</tr>
<tr>
<td>5</td>
<td>Respond, reaction</td>
<td>15</td>
</tr>
<tr>
<td>6</td>
<td>Using the real content, to submit</td>
<td>16</td>
</tr>
<tr>
<td>7</td>
<td>Instruct, point out</td>
<td>17</td>
</tr>
<tr>
<td>8</td>
<td>Correct the mistake</td>
<td>18</td>
</tr>
<tr>
<td>9</td>
<td>Strict atmosphere</td>
<td>19</td>
</tr>
<tr>
<td>10</td>
<td>Silence and confusion</td>
<td>20</td>
</tr>
</tbody>
</table>
2. ETC (Equivalent Talk Categories) is another system which classifies groups of verbal/speech characteristics into 9 categories and it is used as a criteria for observing conversation in class. In preparing category of speech behaviour, numbers 1-9 are teacher's code and 11-19 are pupils'code, while "0" represents silent atmosphere. In observing, we can observe and record every 3 seconds.

Anderson (1971:305-321) analyzed about language interaction of teacher and pupils by using analysis technique in the characteristics of discussing content of subject in order to explain about distribution speech frequency used and in order to compare number of liaison words which occurs between speaker. Tisher (1971:1-8) has studied about method of arranging category behaviour of Smith and Meux which classifies characteristics to be observed into 12 categories, as follows:

1. Describing 2. Stating or summarizing
3. Defining 4. Evaluation
5. Classifying 6. Comparing or contrasting
7. Designating 8. Reporting
11. Condition referring 12. Explaining

Amidon & Hunter (1967:10-15) have made a tool for measuring interaction between teacher and pupils called "Interaction Categories System (ICS) comprising of 5 main categories, i.e. :-

3. Pupil Response. 4. Pupil Initiated Talk
5. Other behaviours which are not included in the above 4 categories, i.e. silence, conflict and confusion.

Later, the researcher has tried to improve observation system
in order to analyze content, i.e. Lundgrand's system (citing by Nuthall, 1972: 497) which has classified categories of content in differential. Calculates into 5 groups, as follows:

1. Practise according to theory.
2. Practise according to sample.
3. Doing exercise
4. Test or examine homework.
5. Prepare test or homework.

Smith and others (citing by Nuthall, 1972: 479) proposed a system which aims at specifying type of speech and controversy which the teacher uses in improving content of subject. This system is classified into 8 categories:

1. Relevant to concept, i.e. giving meaning, interpreting the meaning or using certain definition.
2. Relevant to evaluation, i.e. evaluation or evaluating the price of a material or certain activity.
3. Relevant to a cause, i.e. in specifying or in giving reason or result obtained from setting certain conditions or certain event.
4. Relevant to interpretation of result, i.e. discussing about meaning, giving meaning of or interpreting the meaning of text.
5. Relevant to process, i.e. description, improvement or using certain process to a useful one, i.e. used for remedying problem.
6. Relevant to reason, i.e. in specifying or showing evidence of reason for performing a deed or for making judgement in certain events.
7. Relevant to criteria, i.e. description, using criteria or relationship which has a plan for beneficial use.
8. Relevant to description, i.e. discussing about the fact widely concerning detail of material, event, a place or a person.
Tool for observing behaviour of Donald M. Medley and Harold E. Mitzel

As for tool for observing behaviour of Donald M. Medley and Harold E. Mitzel, it is called Observation Schedule and Record II Instrument or short form 'OSCAR II', it is 'Sign System' which is used for observing behaviour and record many behaviours, that is, it emphasizes on atmosphere of emotion, verbal behaviour and social behaviour which is behaviour between teacher and pupils occurring in class by developing from Paul H. Withall’s and Denny L. Cornell’s to a better one by integrating together and change and improve it in many ways.

Pattern for observing behaviour of OSCAR II is the tool used for observing behaviour in learning/teaching with multiple dimension of classroom observation behaviour which is classified into 6 parts, i.e.:

1. Activities Section, i.e.
   1.1 Working with individual pupil.
   1.2 Lead in singing gymnastic songs or playing games.
   1.3 Description

2. Material Section, i.e.
   2.1 Blackboard, small poster/sign.
   2.2 Map, chart, pictures
   2.3 Earphone equipment etc.

3. Sign Section
   3.1 Teacher makes free movement.
   3.2 Pupils make free movements.
   3.3 Pupil pretends to show to the teacher.

4. Expressive Behaviours Section, i.e.
   4.1 Teacher looks and shows acceptance of pupils.
   4.2 Teacher blames pupils.
   4.3 Teacher introduces student etc.
In 1966, Stanford Center of Research and Development in Teaching is the institute which initiates study focusing on teaching ability of teacher by using The Stanford Teacher Competence Appraisal Guide as a tool. This project is called "Appraisal Guide Revision" and later changed to "A Taxonomy of Teaching Behaviour" by improving the tool in order to explain about teacher behaviour widely. This tool comprises of a sentence which mentions about teaching behaviour which is able to give ranking or there are 2 methods for calculating frequency.

Stanford Center of Research and Development in Teaching has created a tool for observing teaching behaviour of teacher in many aspects including teaching behaviour of teacher in inter-action aspect between teacher and pupils which occurred in class by classifying behaviour into 4 categories, i.e.

1) Behaviour which the teacher initiates, i.e.
   1.1 Teacher improves performance of pupils.
   1.2 Teacher introduces pupils about method of behaving in class.
   1.3 Teacher greets pupils in order to create acquaintance.

2) Behaviour which teacher is controller and let pupil respond, i.e.
   2.1 Teacher divides pupils into groups to discuss problem from lesson.
   2.2 Teacher encourages pupils to participate in activity.
   2.3 Teacher lets pupils work according to instruction, etc.

3) Behaviour which pupils respond are:
3.1 Pupils divide into groups to discuss problem.

3.2 Pupils participate in discussing problem.

3.3 Pupil answers teacher’s question and pupil’s question.

4) Behaviour which pupil initiates are:

4.1 Pupils select group’s representative to report.

4.2 Pupil raises question to teacher.

4.3 Pupil argues or explains the error in a reasonable way.

In preparing a tool for observing behaviour, it is aimed at studying the behaviour focusing on Sign, Sention, and Expressive Behaviours Section by selecting specifically behaviour on interaction between teacher and pupils only from study research, it was found that Observation Instrument (OSCAR II) is the instrument used as a base in creating suitable behaviour, that is, it is the tool used for observing one person, it can also be used for observing many aspects also, as well as observing in class where there is teaching/learning.

From the principle, theory and above experience, it can be mentioned that observation in teaching by teacher in a systematic way while there is learning and teaching is the method which gives good result, because it helps the teacher to change the role and teaching behaviour in order to improve teaching efficiency of teacher which makes pupils prosper and let the pupils change behaviour according to the aim specified in the curriculum.

It can be summarized that creating instrument for observing behaviour and for analyzing teaching behaviour in class as mentioned above, will be seen that there are many methods which can be classified into 2 main categories, as follows:-

Cherdsak Kowasin (1976 : 4-7) mentioned that they are Sign System and Category System.
1. **Sign System** It is the system which specifies manners or behaviour which is expected to happen. It may not arise while it is being observed. Result of record will tell us what has happened during observation how often does behaviour happen. Sample is "The Florida Taxonomy Cognitive Behaviour". Behaviours shown from easy one to difficult one has been prepared according to priority order as follows:- Learning the content.

   Learning how to implement.
   Learning about the concept in the content.
   Interpreting the meaning.
   Translate the meaning into more detailed one.
   Applying it for use.
   Analyzing it.
   Synthesis.
   Evaluating it.

2. **Category System** It is to specify various sub-characteristics which composed into one aspect of behaviour. Those compositions are independent from one another and there are explanations relevant to such category system in a clear manner, use the behaviour during sample period. Instrument used in this system is Withall's Flanders Interaction Analysis Category (FIAC) and The Verbal Interaction Analysis Category System (VICS)

As regards the problem as to which system ought to be used, Mecley & Michell (citing by ober 1971: 36) has given advice that the use of Category System when studying one aspect is to be used. But if study of behaviour in teaching which has many important aspects, or we do not know which behaviour of teaching is important, the use of Sign System will be better.
2.2 Theoretical Orientation and Related Literature in the Field of Achievement Motivation

A number of research studies conducted in the field of achievement motivation can be classified under the following heads:

2.2.1 Measurement of Achievement Motivation and Validation of Tools

2.2.2 Basic Nature of Achievement Motivation

2.2.1 Measurement of Achievement Motivation and Validation of Tools

The pioneering efforts on measuring human motives, especially, the need achievement (n.Ach.) was done by McClelland (1953) and his co-workers. They adopted Murray's TAT technique (1938) and established the Thematic Apperception Test (TAT) for the measurement of human motivation. In this technique certain pictures are used to obtain stories from the subjects for analysis of their motivation. Stories obtained for the purpose of measurement of achievement motivation are scored in a particular way, following a scoring system developed by McClelland and his associated (1953). This is narrated in a manual by Feld and Smith (1958). The Thematic Apperception Test (TAT) seems to be the most reliable single instrument for the measurement of n.Ach. levels, as this method of measurement is used by many researchers as emphasized by the works of McClelland, Atkinson and et al. (1953), McClelland, Rindlishbacher and Decharms (1955), Atkinson (1958,1964), McClelland (1961,1965) and others.

The TAT type of n.Ach. measure was strongly recommended by McClelland (1958). On the ground that it has a 'trio of ventures' Validity, Flexibility and Generality.

Moreover, it has been shown by McClelland and et al. (1953) that the discriminative power of the TAT method is the best under
neutral test conditions and with pictures of moderate achievement cue-value. This shows that different pictures have different cue-values. Mehta (1969) has also found different cue-values for different pictures in his study with Indian pupils.

McClelland (1961) further argued that the achievement motive like other forms of human motivation, can best be studied in the realm of fantasy. Freud believed that basic motivations are revealed in fantasy in day-dreams and nightdreams. Projective tests also, such as Murray's TAT and the Rorschach, depend upon imaginative content.

Beside TAT technique, the other measured are also developed. Mukerjee (1966) has prepared a Sentence Completion Test (SCT) consisting of 50 forced choice items. This is also used in several studies e.g. Mukerjee (1968), B.De and A.Khan (1969), Cokulnathan (1970), B.De and S.Priya (1972) and V. Lahiri (1969)

These studies have sought to measure achievement, anxiety and risk taking. Some other studies like Bhatnagar (1966), Basumallik and Banerjee (1967) have used the Edward's Personal Preference Schedule (EPPS). They have tried to relate the results to sex, culture, and risk-taking. Dhaliwal (1971) used EPPS for assessing achievement motive as a non-intellectual and Singh (1971) have used the Bendig's Achievement Motive Scale to study the relationship of achievement motivation with religious beliefs and practices. Bendig's Achievement Motivation Questionnaire consists of twenty items. It requires the subject to check anyone of the three alternative answers 'yes', 'No' and '?'. Eight of the items of the scale measure, that Bending (1946) calls, Personal Need Achievement (PNA) and the remaining twelve items are supposed to reflect one's Social Need Achievement. The reliability of PNA and SNA scales were found to be approximately 0.61 and 0.67.
Murtein (1963) in one of his studies noted that medium achievement structured TAT cards were most differentiating. The study of Caplehorn and Sutton (1965) suggests that pictures of different achievement cues, may measure different values. They showed that out of McCelland's gave scores positively correlated with examination grades, while the scores on the other two did not.

Morrison (1964) concluded in his study that measurement of n,Ach with sentence completion test is not much feasible. He measured n.Ach. sentence completion items: and correlated the scores with indicators of n.Ach. obtained through TAT's and found only a correlation of 0.3 between the two.

Block (1964) while investigating correlates of a projective measure of n.Ach. with a sample of physically disables, questions the contention that projective technique in social and industrial research is useful since, it is not threatening the subjects. He found some respondents experiencing high anxiety and felt threatened at the time of taking projective

Praful N. Dave (1972) undertook "A comparative study of Validity, Reliability and Cue-Values of Two Sets of TAT Pictures: American And India". He noted:

The cue-values of picture and sets were significantly different. Supporting evidence to theory was incidentally obtained by checking the frequencies of stories containing n.Ach. in males and female by the either set. The statistical values showed significant difference in frequencies of male but no such difference in stories written by females.

On the line of McClelland's work, Mehta (1969) developed a test achievement specifically for use with children. Six pictures
were selected on the basis of their discrimination power, evocable of achievement imagery, correlations with school marks and inter scorer reliability. The test-retest reliability of this set of pictures after an interval of four months was found to be 0.56 (N = 22) in one case, and 0.73 (N = 24) in another. In a latter replication Chaudhary (1972) found a test-retest reliability of 0.70 (N = 100) after an interval of one month and a split-half reliability of 0.54 (N = 300). In other studies with TAT: Haber and Alpert (1968) obtained correlations ranging from 0.36 and 0.59 after a interval of three weeks, Feld (1960) obtained a test-retest reliability of 0.38 after an interval of six years and (1956) reported a split-half reliability of 0.64 corrected. The obtained reliability of the Indian set of cues, therefore, is comparable with other similar results.

Theoretically as proposed by Atkinson and Litwin (1960), as classified high on n.Ach. and low on motive to avoid failure and likely to show greater performance at a comparative than those low on one and high the second. Such a conception was confirmed results obtained on TAT and AVAI (Mehta, 1969). This provided some theoretical validation for the TAT measure.

Chaudhary (1972) checked its construct validity against a measure of persistence. She found that Sa classified as high on Achievement persisted more on the task than those classified as low.

Pandharipande (1972) again checked the validity of Mehta's TAT and the EPPS against teacher's assessment. The TAT and EPPS were administered to 5 top and 5 low n.Ach. students. The C.R. was found to be significant to TAT but not to EPPS.

The studies discussed so far suggest that TAT type of measurement still dominated more efficiency with reference to this measure.
2.2.2 Basic Nature of n.Ach.

Two types of research studies can be generally located in this area: The research seeking factor analysis of n.Ach. and the other exploring the nature and origin of n.Ach.

McClelland (1958) uses the term n.Ach. to describe a measure of achievement motivation derived from content analysis of fantasy and N.Achievement to describe self ratings of motivation and finds them uncorrelated.

Khal (1965) comparing the interrelated studies of achievement orientation, found that the orientation consists of at least four separate components—"achieveness of mastery", "trust", "independence of family" and "occupational primary accomplishment".

The first three were found positively correlated with one another and with socio-economic status. The fourth was found negatively correlated with others and socio-economic status. Interpreting the findings in the light of the critical problems about achievement orientation, social mobility and economic development, Khal hypothesised that n.Ach. is an unconscious motivational need and occupational achievement values have a conscious belief system.

Scanzoni (1977) tested the hypothesis of Khal by examining the relationship between the kind of child-rearing practices which promote n.Ach. (as claimed by McClelland) and occupational achievement values and found no significant relationship between the two. This suggests that Khal's hypothesis has a certain amount of validity.

Holmes and Tyler (1968) tested the projective validity of three techniques of measuring n.Ach. i.e. TAT Projection cards self report on a rating scale and two self-peer rating measures, (here each
subject listed 10 of his friends and then rated himself in relation to each friend on two criteria measure: class-grade and two short laboratory tasks) Both the self-peer rating scores were significantly correlated with grades. Holmes and Tyler concluded on the basis of these results that n.Ach. is a conscious phenomena and subject to direct self report if the means of responding is made specific.

Shreble and Stewart (1967) proved AI, TI and UI responses non-monotonic. Traditionally Achievement Imagery (AI), Task Imagery (TI) and Unrelated Imagery (UI) responses have been scored as monotonic though they form a continuum into AI indicating the highest achievement motivation and UI the lowest. They examined certain scoring procedures of McClelland and Atkinson's projective measure of n.Ach. and found that the three responses are non-monotonic, on certain personality variables. Ss responding predominantly with AI were similar to those with UI responses. Both AI and UI Ss were significantly different from those responding predominantly with TI.

The findings of a study undertaken by K.N. Singh and Kumkum Pal (1974) have clearly shown that farmers too, like other individuals, so aspire for higher achievements but, the degree of this aspiration varies. Some have very high degree of achievement motivation, others have moderate and still others have very low. It was also observed in the study that socio-economic status and education were highly associated with achievement motivation.

The results discussed so far lead one to conclude that n.Ach. is a conscious phenomena and every individual has n.Ach., irrespective of the sex, SES, education or occupation but, the level of n.Ach. differs with different individuals, depending upon many known as well as unknown factors.