EDUCATIONAL TECHNOLOGY AND ICT

Dr. Sarita Anand

Department of Education, Vinaya Bhavana

Visva-Bharati, Santiniketan

Week-04

Lecture-19

Module-19: Classroom Interaction and Flanders Interaction Analysis System

Hello dear learners, welcome to SWAYAM-NPTEL course on Educational Technology and ICT. I am Dr. Sarita Anand from the Department of Education, Vinaya Bhavana, Visva-Bharati, Santiniketan, West Bengal, India. I am the course coordinator for this course, and today Module 19 on the topic Classroom Interaction and Flanders Interaction Analysis System will be discussed. This is Lecture 19. Before going to Lecture 19, we have covered concepts like effective classroom communication, classroom communication skills in teacher training programs, strategies for developing classroom communication skills, and the role of teachers in effective classroom communication.

Now, we will talk about classroom interaction. Teaching is fundamentally an interactive process that occurs between teachers and students as well as among the students themselves. The methods and effectiveness of these interactions largely determine the success or failure of the teaching process. In contrast to traditional perceptions where university teaching was viewed as lecturing uninterrupted for one or two hours before leaving, contemporary teaching practices show that interactions between teachers and students have significantly improved.

Teachers now place greater emphasis on engaging with students because classroom interaction is a dynamic process in which teachers and students engage in meaningful communication to achieve learning objectives. It includes all forms of verbal and non-verbal exchanges that occur within the classroom environment. These interactions not only shape learning experiences but also contribute significantly to the professional development of teachers.

Now, the meaning of classroom interaction: we know that classroom interaction refers to the reciprocal communication between teachers and students or among students during

instructional activities conducted in the classroom. Various forms of dialogue, such as teacher-led discussions, student responses, peer interactions, group activities, and non-verbal communications like gestures and eye contact. Effective classroom interaction creates a collaborative and engaging learning environment, promoting the exchange of ideas, clarification of concepts, and critical thinking. We can take the definitions of different educators, like Agrawal (2010), who described classroom interaction as the process of reciprocal communication and the exchange of ideas between teachers and students, which helps in constructing knowledge collaboratively. It involves questioning, feedback, and student participation, playing a crucial role in the learning process.

Another definition by Sharma (2011) states that it is a dynamic and deliberate activity aimed at creating a learning environment where teachers facilitate and students actively engage in the construction of meaning through dialogue, activities, and feedback. Another definition by Singh and Sudarshan (2012) states that classroom interaction encompasses verbal and non-verbal exchanges between teachers and students, aiming to create an active learning environment that fosters critical thinking and collaboration.

These definitions emphasize the collaborative and communicative aspects of classroom interaction and its role in an effective teaching-learning process. The types of classroom interaction: now we will talk about different types of classroom interaction that occur in the classroom. Each type of classroom interaction is described below-

Highlighting its importance and how it enhances the learning process in the classroom. The first type is teacher-student interaction. Teacher-student interaction is a fundamental aspect of the teaching-learning process, significantly influencing students' academic success, social development, and emotional well-being. This dynamic relationship promotes an environment of mutual respect, trust, and collaboration, making the classroom a space for growth and exploration.

Effective teacher-student interaction extends beyond mere academic instruction and includes the emotional, social, and motivational support given by the teachers to the student. In the next slide, we will elaborate on the teacher-student interaction in detail. The first one is building rapport between, and trust between the teacher and student. Establishing a strong rapport between the teacher and student is essential for creating a positive classroom environment, especially when we are talking about teacher-student interaction.

Teachers who show empathy, understanding, and respect for the students' individuality build trust, which encourages students to express themselves freely. For example, by addressing students by their names, actively listening to their concerns, and responding with kindness, teachers can create a sense of belonging and safety. This trust promotes open communication and strengthens the teacher-student bond. The second one is encouraging active participation. Teacher-student interaction involves encouraging active participation.

Effective interaction motivates students to actively engage in classroom activities. They get involved in the classroom, participate in discussions, and solve problems. Teachers who create opportunities for dialogue and give students a voice in their learning process encourage participation and collaboration. For example, interactive teaching methods such as group discussions, debates, role-playing, and peer teaching allow students to engage meaningfully with the content. This active involvement not only enhances understanding but also builds students' confidence and critical thinking skills.

The third one is enriching academic achievement. By the dialogue between the student and teacher, we call it interaction, they enhance the academic achievement of the student. Regular and constructive interaction helps students clarify doubts, receive timely feedback and develop a deeper understanding of a subject matter. teachers who are appreciable, approachable to the students and willing to provide individual attention ensure that student stay on track academically.

For example, by using formative assessments, one-on-one feedback and differentiated instructions, teacher can modify their guidance to meet the specific need of each student, ultimately improving academic performance and the fourth one is providing emotional support. This is very important to be the empathetic in the class with the students. Teacher-student interaction plays a crucial role in supporting students' emotional well-being. Teachers who are sensitive to the students' emotions, challenges and aspirations create a supportive environment that promotes resilience and self-esteem among the students. For instance, recognizing students' achievement no matter how small and offering encouragement, giving reinforcements during tough times help them feel valued and motivated to perseverance.

So, promoting the positive behavior is also very important in the classroom interaction. Through meaningful interactions, teachers can influence students' attitudes and behaviors. By showing respect and kindness, giving responsibility by the teachers, set a standard for

the student to follow. Consistent communication about expectations and constructive feedback on behavior promotes a positive and disciplined classroom culture.

For example, praising the student for good behavior and scolding for bad behavior or addressing the conflict calmly encourages students to adopt socially acceptable conduct and behaviors. The second type of interaction is student-student interaction. Student-student interaction plays a very important role in promoting peer learning, collaboration, and social skills development in the classroom. When students work together, they exchange ideas, clarify doubts, and build upon each other's understanding, which deepens their learning.

Interaction among students occurs in various contexts, such as group discussions, pair work, collaborative work, or informal conversations. That's why schools, colleges, or institutions are important for learning. Effective student-student interaction encourages cooperative learning. Students develop teamwork, leadership, and conflict resolution skills. These skills are very important for the social environment. For example, collaborative activities like group projects, debates, or peer reviews create opportunities for students to engage actively with their peers.

Teachers play a significant role here in facilitating positive student-student interaction by creating a supportive environment. Setting clear norms and monitoring group dynamics ensures respect and collaboration among all students. The third type is teacher-whole class interaction. This teacher-whole class interaction is normally part of classroom management where effective teaching occurs. This form of interaction involves the teacher addressing the entire group of students, providing instruction, facilitating discussion, and delivering the lesson.

Actually, most of the time this is one-way interaction. It is important to setting the tone of the classroom, establishing the rule and creating a shared environment by the learning goals. During whole class interaction, the teacher ensures that the students are encouraged to engage and focused in the content. The strategies like asking open-ended questions, using real-life experiences and incorporating storytelling can make these interactions more engaging. Moreover, whole class discussions allow students to learn from their peers' contributions, broadening their perspectives.

A teacher's ability to manage this type of interaction effectively ensures that the learning remains inclusive and participatory from the student side. The fourth type is student whole classroom interaction. This student whole class interaction refers to the individual students

addressing or engaging with the entire class, such as through presentation, answering questions or leading discussions. Many times, in higher education when they are giving the seminar presentation in classroom these comes under the student whole class interaction. This interaction is vital for the building confidence, public speaking skills and a sense of accountability.

When a student interacts with the whole class, they learn to articulate their thoughts clearly and respond to diverse viewpoints. It also encourages peer-to-peer learning as classmates gain insights from their peers' contributions. The next type is non-verbal interaction. This non-verbal interaction refers to the exchange of information, messages without using the word which we have already discussed in non-verbal communication.

It includes facial expressions, gestures, body language, eye contact, and tone of voice. Teachers use non-verbal cues to manage the classroom, express emotions, and emphasize important points during class. For example, maintaining eye contact can convey attentiveness, while a smile can create a welcoming atmosphere. Students also communicate non-verbally, often indicating their level of engagement. Understanding through their posture, expressions, or alertness.

Like. if they are nodding like this, then they are definitely understanding or not understanding. They are replying without saying any words. Recognizing and interpreting nonverbal cues allows teachers to adapt their strategies to better meet students' needs. The sixth one is digital interaction. Digital interaction has become an integral part of the modern education system, enabling teachers and students to communicate through various online platforms and tools.

It includes emails, virtual classrooms, discussion forums, and collaborative software like Google Classroom, Zoom, or any other virtual video conferencing websites, tools, or apps. Digital interaction offers flexibility, allowing students to learn at their own pace, revisit recorded lessons, or access resources. It also broadens access to education, enabling collaboration across geographical boundaries. However, effective digital interaction requires teachers to design engaging online activities.

If they are not able to design online activities engaging, then student will be distracted. Ensure the clear communication and address the potential challenges like technical issues or digital literacy gaps. The last one is feedback interaction. Feedback interaction is exchange of information between the teacher and the students to evaluate and improve the learning outcome. Effective feedback is specifically, timely and constructive, helping

students understand their strengths and areas for improvement. They can understand where they are performing well and what is their lacunas or the weak points.

The teachers provide feedback through comments on assignments, one-on-one discussions or classroom evaluation or putting the comments on the notice board, these are the feedback interactions. Student also gives feedback to the teachers through survey, discussions or non-verbal cues or sometimes we use the one-minute paper or muddiest point. These all comes under the feedback interaction enabling educators to refine their teaching methods.

Feedback enables a culture of growth where both teachers and students work collaboratively to achieve the learning goals. for better recalling. A table is also prepared for you all on types of interactions in next slide which you can see here I have made this table and you can go by the interaction type and its short description. It will be helping you to recalling at the time of examination.

So, the next point is strategies to enhance the classroom interaction in teacher training. Definitely, we need to enhance our interaction as a teacher, as a teacher educator and you as a pupil teacher if you are getting any kind of teacher training. To maximize the benefit of classroom interaction, teacher training program should incorporate the following strategies like role playing and simulation. We do that in our teacher training program where trainees can practice real life classroom scenarios to develop interaction skills. Collaborative learning activities, encouraging group work and peer discussion enhances both learning and social interaction.

The third one is use of technology: Interactive tools like smart boards, online quizzes and discussion forums can make classroom interactive and more engaging. The fourth one is feedback mechanism, providing constructive feedback to the trainees on their interaction strategies help refine their techniques. So, timely feedback should be provided by the teacher educators to their trainees on the time. The next one is observation and peer review. Analyzing interaction in real time or the simulated classroom allows the trainees to learn from each other's experiences at the time of their training.

Now, this is the time to talk about, the Flanders Interaction Analysis System: This Flanders Interaction Analysis System is basically all about the classroom verbal interaction analysis. The Flanders Interaction Analysis System is a well-known method developed by Ned A. Flanders (1967) for analyzing the patterns of interaction between teachers and students in a classroom setting. It is systematic and objective approach to studying verbal communication during the teaching learning process. So, in short, we call it FIAS provides

valuable insights into the dynamics of classroom interaction helping educators access the improve their instructional techniques.

For this purpose, FIAS (Flanders Interaction Analysis System) is Its aim is to evaluate the quality and quantity of teacher-student interaction. Focusing on verbal behavior, it works only on classroom verbal interaction. It helps in identifying the extent to which the teacher dominates the classroom conversation and encourages students' participation. This system is instrumental in achieving a balanced and effective communication pattern that promotes active learning and engagement in class. So, what is the structure of the Flanders Interaction Analysis System? This system categorizes classroom interaction into 10 categories based on the type of verbal behavior of the teacher and the student. They are categorized into teacher talk, student talk, and silence or confusion. So, we will go through these categories one by one.

The first category is, teacher talk: This teacher talk has one to seven categories. This refers to the verbal behavior of the teacher and is further divided into the following subcategories. The first one is accepting feelings. The teacher acknowledges and responds to the student's emotions without criticism, creating a supportive environment.

Whenever students are replying, then teacher is accepting either it's the right answer or wrong answer, but teacher is accepting the answer key yes, okay, at least you have replied well in the class, maybe it's right or wrong, that will be told by the teacher later. Praises or encourages, the category 2, the teacher provides positive reinforcement such as compliments or encouragement to motivate the student. The third category accepts or uses student's ideas. The teacher incorporates or appreciates the student's idea during the discussion. At the time of teaching, teacher utilizes, uses the words told by the student or their idea, then definitely student appreciates.

Get involved in the class very well. The fourth category is; ask questions. The teacher poses questions to the student to stimulate the thinking and the participation of the student. The fifth category is lecturing; the teacher provides information or explanation in a monologue form. The normal lecture process going on in the class. The sixth category is giving direction. The teacher issues command, instruction or request for the specific task or takes the name that you tell what is the right answer. Then these kinds of activities come under the giving direction. The seventh category is criticizing or justifying authority.

Sometimes the teacher points out the errors, offers constructive criticism or defends their authorities. No, you are wrong, sit. This kind of commands they give to manage the class

and this comes under the verbal communication during the classroom teaching. The second type of category is the student talk which comes under the category 8 and 9. This pertains to the verbal behavior of the students during the classroom interactions.

The student talk response and initiation: Two types of activities are categorized here in a student talk where the first one is that the category 8 is students respond to the teacher's question or interaction or the instructions. The category 9 talks about the students initiate discussion or by asking questions or sharing ideas by their own without asked by the teacher. The third type or the category that is the last category of this Flanders interaction analysis is the silence or the confusion. This includes the moments of the silence, pauses or confusion during the classroom interaction.

For example, when teacher asks some question and nobody is going to give the answer at that moment, a silence creates in the classroom. or a confusion creates in the faces of the students and nobody is replying, then that moment is coming under the category 10. So, these were the 10 categories of the Flanders interaction analysis. Then now, how we are going to use this interaction analysis system? So, for that there is the procedure, there is the steps.

The first one is observation. A trained observer records classroom interaction using the Flanders Interaction Analysis Matrix. There is a matrix, a table where many categories are mentioned, and we have to observe the verbal classroom behavior interaction. Every three seconds, the observer assigns a category code to the observed verbal behavior. The second is coding.

The verbal interactions are categorized into 10 categories based on their nature. The third step is analysis. This recorded data is analyzed to determine the percentage of time spent on teacher talk, student talk, and silence in the classroom and the fourth step is interpretation. The patterns are identified to evaluate the teacher's dominance, the level of student participation, and how much silence was there in the class during observation.

Now, the application of Flanders Interaction Analysis System. This system is widely used in teacher training, research, and classroom evaluation, and the major applications include teacher training. Mostly, this full Flanders Interaction Analysis is utilized in teacher training. It helps the trainee teachers reflect on their training, teaching methods, and improve their communication strategies. Classroom improvement. It is utilized to identify areas for enhancing student engagement and reducing teacher-centered instruction.

Research. It provides a framework for studying classroom dynamics and instructional effectiveness during research.

The feedback mechanism: It serves as a feedback tool for teachers to refine their teaching styles, as they will be able to understand the type of verbal interaction occurring in their classes. What are the advantages of Flanders interaction analysis? The first one is objective analysis. There is full objectivity, with no subjectivity from the observer's side.

It provides a systematic way to assess classroom verbal interaction. It promotes reflective teaching. It encourages teachers to analyze their verbal behavior and improve their teaching style. It also focuses on student engagement. It highlights the extent of student participation in the learning process. They are participating well or not. It depends on the student's talk. Versatile application. It can be used across the different educational levels and the subject. Whatever is the level of the class, this Flanders Interaction Analysis can be utilized from the primary to higher education.

Now, the limitation of the Flanders Interaction Analysis system. limited scope. It focuses only on the verbal communication and neglecting the non-verbal interaction. This is the main limitation of this interaction analysis system. Because we cannot ignore, avoid the non-verbal communication and interaction in the classes, this is the biggest limited scope of this analysis system.

Observer bias, the quality of analysis depends on the observer's training and judgment. Maybe the observer, if the biased observer is there, they can change the ratio of the student talk and the teacher talk categories at the time of observation. The time consuming, yes, it is time consuming process, it requires significant effort to record and analyze the interaction and static categories. may not fully capture the dynamics and the complex nature of modern classroom teaching learning process which is going on in the classes. So, these were the limitations of the Flanders interaction analysis.

So, in conclusion, we can now say that the Flanders Interaction Analysis System is a valuable tool for understanding and improving classroom interaction. By analyzing the patterns of students' and teachers' talk, the Flanders Interaction Analysis System helps educators create a more balanced and participatory learning environment. Although it has some limitations, its contributions to teacher training, research, and classroom improvement remain significant. When used alongside other evaluation tools, the Flanders Interaction Analysis System provides a comprehensive picture of the teaching-learning

process, making it an indispensable resource in education, especially in teacher education. These are the references for your further reading. You can go through them.

Thank you.