Chapter III

Method and Procedure

This chapter outlines the method and procedure adopted for the study. It gives the profiles of the schools selected for study, the criteria of their selection, and the vignette of the informants, namely, the students and the teachers selected for the study. It also describes the tools employed for the collection of data, the method of data collection, the deviations that occurred during the study, and the methods adopted for the analysis of data.

3.1. Selection of schools

It was initially proposed to observe four classrooms from two schools following the state syllabus, one in the urban area and the other in the suburban area of the city. The focus was to be on the lower and lower-middle class. These would be representative of the majority of ESL learners in Kerala. However, the pilot study made it clear that the situation demanded a sharper focus. The detailed study was thus conducted on one class each from two schools following the state syllabus in the city. One was a government-aided school, representative of the lower-middle class and middle class. The other was a government school, representing the lower and lower-middle class students. One class each from two prestigious schools under private management in the city following the
ICSE syllabus was also observed, for cross-reference. These were illustrative of the upper-middle class and upper-class students, the privileged minority.

The government-aided and government schools were selected for main study because they illustrate the typical milieu of ESL learning and teaching in the classroom, the usual pattern of CI found in an ESL classroom in Kerala. The schools under private management would not have given a representative picture of CI, since they exemplify only what happens in ideal situations, where the learners and the teachers are mostly from the upper strata of society, and are fairly competent in English with good exposure to English. CI in such a situation becomes only an added embellishment to language acquisition instead of a mandatory accessory.

The government-aided school chosen for this study is the St. Mary’s Higher Secondary School (S I) at Pattom, Thiruvananthapuram. The government school chosen for this study is the Medical College Higher Secondary School (S II) at Kumarapuram, Thiruvananthapuram. The schools chosen for cross-reference are the Christ Nagar Group of Schools (S III), Kowdiar, Thiruvananthapuram, and the Loyola School (S IV) at Sreekariyam, Thiruvananthapuram. S I is designated so because it is the data from this school that is the chief material for detailed analysis. S II, S III and S IV are designated according to the significance of their data for the study. S II becomes more important than S III or S IV because it is representative of the greater part of ESL learners in the state than the privileged minority as represented by S III and S IV.
The locale and backdrop of the four schools short-listed for the study is briefly described below to present a comprehensive picture of the school atmosphere.

3.1.1. St. Mary’s Higher Secondary School (S I)

The government-aided school chosen for this study, St. Mary’s Higher Secondary School (S I), is located in the heart of the city, near an arterial road to the city. The complex is large, with a five-storied main building and several other buildings for classrooms, two auditoriums and tracks and courts for sports and games. Classrooms are medium-sized, and learners sit crammed, five rows on each side. Apart from the desk and bench, there is a table and chair for the teacher, a blackboard, a duster, and a speaker for transmitting the announcements. There are no lights and fans, but four windows and a door let in plenty of light and air. The compound is big, but rather plain. There is only one entrance where a watchman stands on guard. Entry into the compound is highly restricted. The students, once they are inside the school-compound, have to remain there even during break-time. They can go out only with a pass or a letter of permission from the Principal. There is a fully equipped computer lab, science labs and photocopying facility for the use of students. A well-furnished library is in the offing. There are about fifteen school buses, and several private vehicles for the conveyance of students and teachers.
Celebrations include School Day, exhibitions, Youth Festival, observing national holidays as service days and so on. Various clubs, teams for sports and games, and a very active NCC are there in the school. Picnics, study-tours and excursions are conducted, and there is also a regular school magazine to which students at all levels contribute articles. The school recently celebrated its Diamond Jubilee, in relation to which an auditorium was inaugurated and a Diamond Jubilee Souvenir was issued.

The PTA is not very active, at least at the Higher Secondary level, but parents of individual students are always seen around, consulting the teachers. The mark lists of the mid-term examinations are shown to the parents, and the results are discussed by the teacher and the parent, in the presence of the student.

This school is claimed to be Asia's biggest school, with more than 12,200 students studying here. They come from diverse walks of life, but a large chunk belongs to the middle-class. There are classes from nursery level to the plus two level, all accommodated into various buildings in the same compound. Till the higher secondary, boys and girls have separate school buildings. At the higher secondary level it is co-educational, though they are strictly instructed not to mingle with each other. Teachers are assigned to watch the students during break-time, and also when they leave after school time. There are separate stairways for boys and girls, and they are to leave in two separate lines when classes are over, with teachers posted at every floor and in the ground to keep
vigil. During break-time, the boys might stand outside the classroom, on the corridors, but most of the girls remain inside the classroom. All the students remain in the classrooms during free-periods, minding their business or chatting in a low tone. Usually in the mornings the Principal strolls about the buildings and checks the classrooms, sometimes even browsing through the notebooks of the students.

There are more than 300 teachers in the school, accommodated into 10 staff rooms. Most of the teachers belong to the middle-class, and many of them are postgraduates in Education. A number of nuns and priests also form part of the teaching staff. Separate staff-rooms are allotted for male and female teaching staff. The teachers actively take part in organizing and conducting various activities of the school, but have to keep a close watch over the students and their performances all the time. A large majority of the teachers carry a three-feet long cane with them during class-time, and beating the students both within and outside the classrooms is not a rare sight.

3.1.2. Medical College Higher Secondary School (S II)

The government school chosen for this study, Medical College Higher Secondary School (S II), is situated a little away from the heart of the city, but still within the city-limits, and quite close to a busy junction in the city. The building is rather old, and not kept clean. Classrooms are bigger than in S I, but badly maintained. The props include desks and benches for students, and a
dilapidated table [with no chair] for the teacher. There is a blackboard, but chalks and dusters are scarce. There are no lights or fans, and no power points. The compound is big, with plenty of trees, growing wild on their own. In front of the school there is a raised platform in the shape of India, a flag mast and an empty pond. There are two gates in front, one of which is always locked, and the other is always open. There are no laboratories, photocopying facility, library or school buses.

The PTA is active, funding most of the activities in the school, although there are not many activities or tours to be mentioned. The students are asked to bring their parents to the school if their “misbehaviour” exceeds permitted limits, but there are students who refuse to do so, and even tell the teachers that their parents cannot be bothered so often.

There are classes from the fifth standard to the plus two level. The learners are mostly from the lower strata of the society. They are straightforward, with simple tastes and desires, but suffer from inferiority complex. It is a co-educational school, and boys and girls mingle freely and healthily. The atmosphere is free – anyone can come in or go out. The students often go out of the school during lunch-break, and even bunking classes. Many are active in politics, going for rallies and functions organized by political parties, and the school is often described as “notorious”.

Majority of the teachers belong to the lower-middle class, except a few guest lecturers who are appointed on a contract basis. Group politics is very strong, with
friction existing between permanent teachers and guest lecturers, teachers and the Principal, teaching and non-teaching staff, and between teachers and students. There is no caning, at least in the higher classes, but friction between teachers and students often results in verbal abuse by the teachers, both within and outside classrooms.

3.1.3. Schools for Cross-Reference

Christ Nagar Group of Schools (S III) is a prestigious institution situated in a posh area, but away from the hustle and bustle of the city. It is a coeducational school. Both teachers and learners belong to the higher strata of society. The kindergarten section of the school is outside the main building of the school, but just outside the compound wall. The rest of the classes till plus two are accommodated in the main building. The teachers and students mingle freely, and so do boys and girls. The students are encouraged to chisel their organizational and creative prowess. The teachers believe in entrusting responsibilities to the students themselves so as to egg them on to distinguish and demark their limits and strengths by themselves. The gap between teachers and students, be it social, financial or cultural, is not much. This school was chosen for study because it was recommended by many, especially former students, for its relaxed atmosphere and free interaction, both inside and outside the classroom.

The other school chosen for cross-reference is the Loyola School (S IV) one of the best schools in the city, famous for grooming its students into achievers.
Situated about 12 kilometers away from the city, it is a boys’ school, with all facilities imaginable. All the various facets of education are taken care of, instead of limiting education to mere bookish learning. The students organize inter-school competitions and such other activities by themselves. The teachers opt to remain in the background. The school is very particular about the number of students it admits because it believes in the quality of education imparted to the children rather than their number. The learners and the teachers mostly belong to the upper strata of society.

3.2. Informants

The informants of this study are students at the higher secondary level and their English teachers. The students belong to the age group of 17 to 19 years. They have been learning English for over a decade now, and are on the threshold of entering college life, where they are virtually on their own. The study ventured to find out how much they had gained from, and how confident they felt, after 9 years (at the government school, when they start learning English from the fourth standard onwards) or more (at the government-aided school and private schools, when they start English from the nursery level or first standard) of instruction.

The teachers are post-graduates in English Language and Literature, and graduates in Education. The teachers at S III and S IV have excellent competence in English and those at S I and S II are questionably competent in English.
Except for the teacher in S IV, the other teachers who participated in this study had no particular training in ELT.

3.2.1. Class Profiles

One teacher’s session with one group of students was chosen at a time for observation, and the following are brief sketches of the particular teacher and the particular class selected for the study.

Learner profile at S I

At S I, class XII J was allotted for this research. These are Commerce students, who have their English classes sandwiched between business and accountancy classes. The total strength is 50, and the usual attendance is between 45 and 48. There are 26 boys and 24 girls, who sit separately on two sides. The majority of students hail from middle-class. They admitted in the casual chats with the researcher that they resent their school system, especially the male-female segregation. All of them want English as an aid to their future plans, and most of them have ambitions about a good career. After 11 years of learning English, however, the researcher observed that they lack the confidence to use the language with ease. A few of the girls, and even fewer boys can use it fluently, but they have come from other schools. They, in particular, are not satisfied with this school and its atmosphere.

Teacher profile at S I

The teacher allotted for this study is in her forties. She was frank in her chats with the researcher and said that she had initially belonged to the lower-middle class,
and had to struggle to complete her education. Though her social and financial position has improved now, she still cannot get rid of her emotional complexes. She belongs to a place near the border between Tamil Nadu and Kerala, which affects both her Malayalam and English. She did her BSc and BEd in Chemistry, and her MA in English. She always uses English with her students, both within and outside the classroom, and is forever trying to improve her own language. She has no illusions as to her caliber, and is always willing to help the students, or fellow-teachers. She checks the notebooks of her students regularly, though not in detail, and takes extra-classes to “finish the portions”. She has to submit the lesson-plan every week to the Principal. The researcher observed that being a deeply religious person, she always starts her sessions with a silent prayer. She was always willing to cooperate with the researcher in every way possible, but is usually easily rattled by even minor incidents. In the questionnaire, all the students declared that she was sincere to them, though because of her lack of proficiency in language, she did not always end up helping them.

Learner profile at S II

At S II the class chosen for the study is XII Humanities A. Recognized as one of the worst classes in the entire school, they had only Humanities B as a rival to that position. The total strength is 48, but the attendance will be as low as anywhere between 21 and 39. There are 27 boys and 21 girls. They sit separately during class-time, but mingle freely and healthily with one another during free time. The majority of the students come from lower class or lower-middle class.
The data collected from the questionnaires and the casual chats revealed that all of them see English as a future necessity, and all have dreams of a good career, but none has very high ambitions. It was observed that none of them could use or understand fluent English, despite the fact that they have been learning English for 8 or 9 years. The boys are more on the unruly side - many of them smoke, play cards (sometimes even during class-time), and bunk classes to go for movies or to participate in political rallies or functions. Only a few of them have copies of the textbook, and even fewer listen to the teacher. The girls sit quietly in the class, but some do become lax during the session, reading magazines or applying nail polish while the teacher struggles to "finish the portions". The boys are conscious of their power, and act with solidarity if a teacher offends them.

Teacher profile at S II

The teacher is a guest lecturer, who had taught in the school for the previous academic year also. The questionnaire about background revealed that she comes from an upper-middle class family, has her BA, MA, and BEd in English. The chats with the teacher disclosed that she had her education at the prestigious institutions in the city, and had been in a coeducational institution only for her BEd. She is in her early twenties, unmarried, and was observed to use English only to read from the texts in the class. She never used English with the researcher or with her colleagues. She never checks whether her students understand what she teaches in class, never conducts class tests, never checks the notebooks, and calls the students to the staff
room only to scold them. She does not prepare a lesson-plan, and sometimes finishes a lesson in two sessions, including the notes. The students divulged to the researcher while chatting that they found her to be contemptuous towards them, and hence they ignored her when she sulked, and refused to go on teaching.

**Learner profile at S III**

At S III the class chosen is XII P, again commerce students. The total strength is 45, with only 3 girls and the rest, boys. All the students are well trained in English, at ease with using it, and use it for interaction among themselves and with the teachers in and out the school premises.

**Teacher profile at S III**

The casual chat with the teacher revealed the teacher to be from the upper middle-class, of the same social class as of her students. She did her BA and BEd in English, and used the language constantly both at her workplace and home.

**Learner profile at S IV**

At S IV there are only Science and Commerce students at the higher secondary level, and have a combined session for English. There are only boys, and they are well disciplined. The large majority of students belong to the middle class and upper middle class. For the English class the strength is about 75 in total, and all of them take active participation in the classroom proceedings. It was observed that they used English for the CI and for interacting with their teachers, but used English and Malayalam between themselves and with the non-teaching staff.
Teacher profile at S IV

This school was chosen with the sole objective of observing the particular teacher, who was recommended by many as being very encouraging and interactive with the students. From the casual chat it was learnt that she did not have a BEd, but that she has several other certificates and a degree in ELT to her credit, and is thorough and up to date about the recent trends in ELT. She does not believe in mere theorizing, and puts into practice her knowledge about and training in ELT. It was observed that she is very popular among her students and colleagues. In the interview, she is the only teacher who said that the English classes are a welcome relief to the students, after their hectic sessions in the subjects. [All the other teachers interviewed by this researcher had unanimously claimed that the students did not want English classes, that they had no time for English lessons]. And hers is the only class where this researcher found the learners participating in CI wholeheartedly, and volunteering information.

3.3. Pilot Study

A pilot study was conducted for two weeks in S II. The choice of a government school was deliberate because learner misbehaviour and learner non-cooperation were apprehended as possible and predictable obstacles to the study. The pilot study, however, revealed that teacher resistance was to become the biggest hurdle for the researcher, and that learners were comparatively open to research and change. It became obvious that a quantitative study by itself would
fail to bring to light several critical issues and aspects that lie beneath. This necessitated a change of plan, and thus it was decided to study the CI in a government-aided school in the city (S I), and also to observe classes from two high-profile schools in the city (S III and S IV) for cross-reference in order to see whether the situation was any different, and if so, what was the difference.

3.4. Main Study

The main study was conducted over a period of 12 weeks (3 months). It involved observing the classes of one teacher for one particular batch of students at the higher secondary level for three weeks. The classes at S I and S II were observed for 3 weeks each. The sessions were observed 6 days a week, except when the teacher was on leave, or when there were no classes. The free periods were utilized for mingling with the students and interacting with them through informal chats. Towards the end of the observation period, the uptake recall chart and questionnaires were distributed, and later, collected back. A few sessions at S I were audio-recorded and transcribed for the main study. After the observation was concluded, formal interviews were conducted with the concerned teacher, the class teacher and the Principal, and with the concerned teachers alone at the schools for cross-reference. These were also transcribed, and kept aside for further reference.

The sessions at S III and S IV were observed for 3 days each. The interaction with students and teachers was limited to break-times between the periods. At S III the teacher was apprehensive about a formal interview, and
could not fix an appointment for the interview. The casual chat with the teacher provided enough material about the teacher’s perspective and attitude. At S IV, the teacher could not find enough time for casual chats, but was very cooperative for the interview.

The concerned teachers and Principals were briefed about the research procedures in advance, at the beginning of the observation period itself. The students were briefed about the research project by the concerned teachers, though not in detail, and later by the researcher during the observation period.

3.5. Collection of Data

For the collection of data, triangulation involving non-participant observation, field notes, casual chats, interviews, questionnaires, uptake-recall chart and audio recording was employed.

![Triangulation of methods for data collection.](image)

This was to throw light on the topic of study from different perspectives, so as to get a more comprehensive, a more rounded picture.
3.5.1. Tools for Elicitation

The tools used for collecting data were an audio-recorder, the researcher’s field notes, questionnaires, uptake recall chart, formal interviews with teachers and the Principal, and informal chats with learners and teachers. The researcher opted to be a non-participant observer, and never took part in the classroom proceedings.

During the pilot study and the main study the researcher jotted down extensive field notes. It helped the researcher to become familiar with the classroom, its atmosphere and the classroom proceedings. Remarks about the sessions observed were also written down every day for later reference.

Three sets of questionnaires and an uptake recall chart were used for collecting secondary data. The first set of questionnaire was about the participants themselves. This was used as a sort of breaking of ice with them, since all it asked for was to unveil their likes and dislikes. It helped the researcher in getting to know the backgrounds of the students and the teacher.

The second was about general awareness, which was meant to provide an idea about the awareness of the students and the teacher about things around them. Both the questionnaires were intended to find out the disparity, if any, in the social life of the students and the teacher, and also to find out how much they understood each other, and what their expectations were about each other.

The third was about the teaching of English, and was meant to get the perspective of the participants about the classroom proceedings. It would bring
out the difference, if any, between what the teacher thought was going on in the class, what the students interpreted, and what the researcher understood to be happening inside the classroom.

The uptake recall chart was to record the points that were supposedly covered in the session. It was to point out what the learners picked up in the class, what the teacher thought to have covered in the class, and how much of these were corroborated by the observations of the researcher.

Interviews with the teacher, the class teacher of the class selected for study and the Principal (at S I) were also conducted after the observation period drew to a close. This was to get the perspective of the atmosphere and the happenings from the other side.

3.5.2. Primary Data

Towards the end of the observation period of three weeks, after the researcher had become familiar enough to the learners and the teacher, a few sessions were audio-recorded, at S I. From these, the one with the greatest clarity, and had the natural features of the usual Cl, was chosen as the primary data for analysis.

The sessions from S II were not recorded, and one session transcribed by the researcher at the end of the observation period was used for analysis, though a non-detailed one, since it did not provide sufficient possibilities for a detailed analysis.
3.5.3. Secondary Data

The chief among the secondary data are the field notes taken down by the researcher while observing the sessions, and the remarks written about the sessions after the classes were over.

The data collected using the questionnaires and uptake recall chart was to be treated as secondary data, meant to aid the researcher in getting a complete picture of the situation and the informants. It would later help in the analysis of CI while trying to understand why something happened, or why something did not happen. This data is not brought in directly for the main analysis of the sessions, but they are meant as clues to solving the mystery of what is happening inside the classroom.

Samples of the uptake recall chart and the questionnaires are given in the appendix, along with the excerpts from the interviews with the teachers.

3.6. Method of Data Elicitation

Questionnaires

As the observation period drew to a close, and before the recordings started, the questionnaires were distributed to the students and the teacher. The first questionnaire, about themselves, was given before the recordings started. The next two sets of questionnaires, about general awareness and about teaching of English, were given after the recordings started. They were allowed to take home the first and the last ones and return them the next day. The questionnaire
about general awareness had to be returned after 15 minutes. The teacher was fully supportive, asking the students to cooperate. All the questionnaires were distributed after their English class was over, during the break-time. The uptake recall chart was given before the recordings started, so as to get the students familiar with it by the time recordings started. It was collected back after the recordings were over.

At S II, in the absence of recordings, the second and third sets of questionnaires, translated into L1 (Malayalam) for the sake of convenience of the students, were distributed and collected back after the observation period was drawn to a close. The first set of questionnaire had been distributed and collected back before that. The uptake recall charts were given to the students, again translated into Malayalam. But it could not be properly explained and could not be collected back.

Casual chats

Informal chats with both the teacher and the students were conducted as and when situations arose. Relevant points from these chats were listed down for future reference. These chats were meant to familiarize the researcher with the participants, and to elicit their sincere opinion about certain crucial questions in the questionnaires. It helped to verify some of the tall claims made by the teachers, as well as to bring out certain points passed over by the teachers. These aided the researcher in getting the picture as clear as possible, and also in building up good rapport with the participants.
Interviews

Formal interviews were conducted with the concerned teachers in S I, and S IV. At S I interviews were also conducted with the class teacher and the Principal. These were transcribed, and kept for later reference. One aim of these interviews was to crosscheck several common points, and also to get the opinion of these teachers about teaching, learning, CI, teacher-training and the students. It also provided vital details about the functioning of the school and its atmosphere as perceived by the insiders.

3.7. Derailments

The term "derailment" was used by Allwright and Bailey (1991, cited in ICI 4) to "describe lessons which [. . .] ran off the tracks, that is, did not go according to the planned sequence". Certain "derailments" that occurred during the progress of this research project are mentioned in this section, so as to provide a comprehensive view about the happenings. The term is used here in the sense that it deals with those aspects of this study which deviated from the first outline proposed for this study.

It was planned at the outset to observe four classes from two government schools, one in the urban area and the other in the suburban area of the city. The pilot study revealed issues worth a deeper study, and thus the scheme was modified to narrow down the range of study, and to give more room for the
qualitative study. Thus it was decided to observe one class of teacher in one school, and to study the proceedings in detail over a period of eight weeks.

At S I, time-constraint was the major hazard. Even the lunch-break was limited to thirty minutes, and this affected the distribution and retrieval of the questionnaires, as well as the creation of rapport with the students. They were curious about the study, and always cooperated when the researcher attempted a discussion, but they always had to do something or the other. The uptake recall charts were not properly filled by the learners because some other subject-class followed the English periods, and at the end of the day they could not remember exactly what happened in the English class, point by point. The teacher also had other classes after this batch, and could not properly fill-in the uptake recall chart.

There was no power supply in the classrooms in the S I, which made it impossible to use video camera for the collection of data. It would require extra-equipment and extra hands for the recording, which was not approved inside the school system. The size of the classroom necessitated the camera to be positioned outside the classroom, in the corridor, in order to get the entire room within focus. This was also discouraged by the school authorities. Thus it was decided to audio-record a few sessions, and select for analysis the one that was most natural and most clear.

After two weeks of observation and one set of questionnaires, the recording started. Despite the researcher’s repeated assertions about natural
data, the teacher modified her teaching style a bit, and even requested one particular session to be selected for analysis.

The researcher had also asked the teacher to keep a journal about those sessions which were recorded. She agreed to do so, but never came around to doing it because of time- and other constraints. After her duties at school, she had to travel one-and-a-half hours to reach her home, and had to take over household duties. There were also other assignments to be taken care of. Finally even when she tried to write up a journal, she could not remember the points covered or the happenings during the sessions with this particular batch.

The teacher promised to provide a copy of the lesson plan covering this particular session, but later apologized for failing in her promise. She said she usually prepared general lesson-plans, mentioning what she will cover for various batches for that week, and explained that it was difficult for her to sift the points covered in this particular session.

At S II, teacher non-cooperation was the biggest hurdle for the study. There were two English teachers at the higher secondary level, and one teacher refused to let the researcher observe her classes. The other teacher agreed to participate in the study, and was told in detail what the study meant to do, and how it was to be done including the methods of data collection. The researcher had opted to be a non-participant observer, and was very particular about not taking part in the classroom proceedings. After one week teacher-resistance emerged as the main obstacle in conducting the research, despite the teacher’s
repeated assertions that the students will be least co-operative. Soon the teacher began to take leave or give the wrong time for the session, or swap the period with other teachers without informing the researcher, and finally she complained to the Principal that she would not allow her classes to be recorded. She said in particular that the presence of the researcher in the classroom was becoming a nuisance to her, and thus it affected the quality of her teaching. The Principal gave this researcher the option of getting an order from the higher authorities, which would force the teacher to comply. It was decided not to pursue the matter further since the research required natural data in natural setting, and also because it would further deepen the hostility of the teacher. Thus the observation period was wound up abruptly, on the day before recordings were to commence. The transcription of one session on the last day of observation was selected as data for analysis from this school. This is a typical sample of the usual sessions of this teacher.

At S II, the teacher never collaborated with the researcher in discussing the classroom proceedings, and when the researcher tried to draw her into a discussion about it, she would resort to untruthful explanations/excuses. She thought she was expected to play a particular role to meet certain criteria, and hence was forever changing her style of teaching, trying out various styles of teaching till the very end.

The teacher at S II never participated in the distribution of the questionnaires or the uptake recall chart. The distribution and collection was
done during break-time, and the uptake recall chart sank without a trace because it could not be explained properly to the students. The uptake recall chart and the questionnaire about teaching of English given to the teacher were returned promptly and unattempted. The teacher found it amusing that she was expected to keep in mind such points while teaching. In the absence of a lesson-plan, which she claimed was prepared only for the lower classes, she was asked to keep a journal about those particular sessions which would be recorded, so that it could be used for cross-checking during the analysis. The request was promptly denied.

3.8. Method of Analysis

**Quantitative analysis**

The CI during one session at S I is analyzed quantitatively first, using the time-line display sheet and the categories of the BIAS system (TL, TQ, TR, PR, PV, S, X). All the categories are adopted as predetermined in the system. The unclassifiable “X” can be clarified according to the demands of the situation, and is classified as “writing on the blackboard” here. The session of 45 minutes is coded according to the seven categories in BIAS. The number of occurrences of each category is marked in the time-line display sheet every three seconds, as stipulated in BIAS. These are then summed up into results in numbers. The general sketch of the CI is provided in these numerical terms. This is then demonstrated with the help of a histogram and a pie chart.
The session at S IV was coded in the time-line display sheet while observing it. All the categories are used as pre-determined by the system, and “X” is classified as “confusion” here. This time-line display sheet is provided in section 4.1.3.

Qualitative analysis

For the qualitative analysis, the CI as captured in the transcript of the same session at S I is analyzed generally at first, with the incidents and the comments/questions given side by side. The parameters to be employed for the in-depth qualitative study were derived from this general analysis. This is given as Appendix 2.

Particular incidents of CI are then taken up for further in-depth study. They are analyzed in the order of occurrence, using the parameters generated by the general qualitative analysis.

The results of the studies using the two approaches are added up to test the hypotheses, both the pre-conceived hypotheses and those hypotheses that evolved during the qualitative analysis of data, as is the norm of ethnographic research. The findings resulting from the analysis of data are listed after that.