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Student interaction in the implementation of the jigsaw technique in language teaching

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CHAPTER 5

INTERACTION ANALYSIS CLASSIFICATION AND CATEGORIES

In this chapter the different types of interaction analysis are presented. The first includes a macro analysis based on the types of episodes. The next includes a micro analysis in which IRF moves are analysed using a more detailed categories.

5.1 Macro Interaction Analysis Classification

The initial analysis carried out to the transcribed data aims at segmenting them into units of analysis which are turns distributed over episodes. An episode in this study is defined as “ ... ‘candidate phenomena’ such as classroom discussions, or ‘virtuoso moments’ in which some particular interactional or, more broadly, educational accomplishment is evident in the talk” (Freebody, 2003: 98). Three types of episode adapted from Bales (1951), Blatchford et al. (2006), Ellis (1997), Hogan et al. (1999), Jacques (2000), and Sinclair & Brazil (1982) are characterized.

Content episode indicates that the on-task interaction centers on the substantive topic in finding the meanings of words, implied information or main idea(s) of a passage. This also includes the discussion on formulating comprehension questions. *Content episode* in this study then covers four sorts of episodes: (1) Main Idea-oriented episode which centers on the interaction related to the main idea discussion, (2) Inference-oriented episode which centers on the interaction related to the discussion on the implied information found in the text, (3) factual-oriented episode which centers on the interaction related to the factual information found in the text and (4) question-making episode which indicates the interaction when the students are in the process of formulating comprehension questions to be taken to the home team to ensure the home team members understand peer sharing.

Organization episode refers to the on-task interaction centering on the planning and organizing of the reading task in the group discussion rather than addressing specific issues in understanding the text. This includes talk about the reading task procedures; for example, describing what the group members should do related to a certain task, assessing

or evaluating the group's degree of progress or understanding and communicating the nature and goals of the reading task according to what the group should achieve.

Off-task episode is typically social interaction which is linked to the use of language for socializing purposes. The interaction has nothing to do with the reading task assigned. It indicates talking about issues or topics unrelated to the content of the passage. In this study *off-task episode* such as humming by a student (found in Data 2; Turns 183, 185 and 186) is disregarded as it belongs to non-verbal behavior which is excluded in this study (non-verbal behavior is excluded as it might be hard to code it and it is beyond the scope of this study).

Table 5.1 is presented as a summary to the descriptive paragraphs above revealing the classification employed for the macro analysis in this study.

Table 5.1 Interaction Analysis Classification

Content Episode	It centers on the substantive interaction in finding the important ideas in the text. (1) Main Idea-oriented episode centering on the interaction related to the main idea discussion. (2) Inference-oriented episode centering on the interaction related to the discussion on implied information found in the text. (3) Factual-oriented episode centering on the interaction related to the factual information found in the text. (4) Question-making episode indicating interaction when the students are in the process of formulating comprehension questions to be taken to the home team.
Organization Episode	It centers on interaction in planning and organizing or managing the reading task rather than addressing specific issues in understanding the text. It includes talk about reading task procedures, the nature and goals of the reading task, assessment of the group's degree of progress.
Off-task Episode	It is non-task interaction linked to the use of language for socializing purposes. It has nothing to do with the reading task assigned. It indicates talking about issues unrelated to the content of the text.

The three types of episodes in Table 5.1 become the macrocodes for the transcript analysis. The units for the macrocodes are conversational turns. A turn begins when a person takes the floor in the interaction and ends when another person takes the floor (Hogan et al., 1999). In this study one turn can belong to two different episodes (the example is provided later in [5.3.1]). Each sort of episodes may be interrupted and continued later in the course of the interaction (the example is provided also later in [5.3.1]).

5.2 Micro Interaction Analysis Categories

Interaction analysis is based on the idea that everything that a group says or does may be coded (Jacques, 2000). The micro interaction analysis in this study is carried out by adopting the idea proposed by Schiffrin (1994) in Ellis & Barkhuizen (2005), namely that it entails the analysis of utterances – defined as “... continuous part of speech uttered by a single which starts with an interruption of the other speaker and finishes by being interrupted by the other speaker” (Brenner & Hjelmquist, 1974:4). This interaction analysis incorporates both approaches to discourse analysis in that it addresses the semantic and pragmatic aspects of discourse (i.e., what individual utterances mean in their contexts of use) and the sequential organization of utterances in the transcript (i.e., how utterances combine to form continuous discourse).

5.2.1 First Micro Interaction Analysis Categories

In the first micro analysis the utterances in each interaction turn are, as mentioned in Chapter 4, coded for the three-phase exchange namely IRF (Initiation-Response-Feedback) moves. The three moves adapted from Cazden (1988), Mehan (1979) and Sinclair & Coulthard (1975) are characterized as follows:

The Initiation move includes (1) elicitation or questioning, (2) directing or regulating, and (3) informing. Included in questioning is asking for confirmation, requesting clarification, and checking comprehension.

The Response move covers a reply to an elicitation, and a reaction or a non-verbal reply which is an action to Initiation. A non-verbal reaction to initiation is not explicitly pointed out in the transcript as non-verbal interaction is excluded in this study. The Response move also includes acknowledgement. Acknowledgement is performed when a student replies to a question confirming that the student is listening and thus displaying the understanding or knowledge to the issues discussed. The Response move is also performed when a student simply shows that he or she is following what is being discussed. Moreover, it includes completion of an unfinished assertion thus showing also that a student is following what is being discussed, and it also comprises repetition of what has been said by peers.

The Feedback move principally evaluates the preceding Response move and commonly terminates the exchange. In the present data, it includes accepting peers' responses or giving explicit agreement to peers' responses and/or initial information. It

also comprises providing comments by adding more information or explanation to peers' previous response, and providing repair defined as "an attempt by a speaker to alter or rectify a previous utterance which was in some way lacking in clarity or correctness (either self- or other-directed)" (Chaudron, 1988:45).

Table 5.2 sums up the descriptive paragraphs above illuminating the categories utilized for the first micro analysis in this study.

Table 5.2 Micro Interaction Analysis Categories

Initiation (I)	Questioning, directing, informing.
Response (R)	Replying a question, acknowledging previous initial information, making completion of an unfinished assertion and repetition of what has been spoken by peers.
Feedback (F)	Accepting, commenting, providing repair.

The three categories of move appearing in Table 5.2 become the first microcodes for the transcript analysis. The units for the first microcodes are statement units. In this study a statement unit is defined as – adapting Hogan et al.'s (1999) idea – the meaningful codable unit of speech within a turn (the example follows in [5.3.2]).

5.2.2 Second Micro Interaction Analysis Categories

The second micro analysis involves coding the transcribed data for the interaction variables termed 'scaffolding categories' to facilitate further understanding of student interaction. In this study we modified Lim's (2000) categories (another modified version of Lim's appears in Brown & Rodgers, 2002).

Two categories labeled **RI** 'Recruitment of Interest' and **Q2** 'Questioning' in Lim's are combined as their definitions are similar in nature – resulting in Clar.R 'Clarification request' in our analysis categories. Two others labeled **M** 'Modeling' and **F** 'Feedback' are also combined as they are similar in nature with regard to correcting peers – resulting in Ind.Cor 'Indirect correction' in our analysis categories. Additional new categories which are not found in Lim's but which emerge from the data of the present study include Ref.Q 'Simple referential question', Oth.As 'Other assertion', Di.Cor 'Direct correction', and Un.As 'Unidentified assertion'. Rewording of some categories of Lim also occurs for the sake of familiar labeling. Lim's **A** 'Assertions without explanations', for example, is relabeled Sim.As 'Simple assertion'. Lim's **GM** 'Group Maintenance' is extended in our categories resulting in GrM+ 'Positive Group Maintenance' and GrM- 'Negative Group Maintenance' where Lim's **FC** 'Lack of frustration control' is embedded. As our study

focuses on student interaction in understanding a text – which is different from Lim’s study that focuses on text reconstruction, our categories are then adapted to the nature of text understanding.

The last categories in this study appear in the modified version explicated in Table 5.3. It is used to analyse the episodes of content. The episodes of organization and off-task are excluded in the second micro interaction analysis. The reason for excluding organization episodes is that they concern procedural tasks, not the actual reading tasks. Besides it is found that the students’ involvement in the procedural tasks constitutes not more than a quarter of the whole data set on average (see Figure 6.2 in the subsequent chapter). Meanwhile the students’ involvement concerning off-task amounts to the average of 1.6% – which is much less than 24.7%, the one of the procedural tasks (Figure 6.2). This then becomes the reason for excluding off-task episodes in the second micro analysis. The second reason is that off-task episodes are simply not relevant enough to analyse when the analysis is actually focused on investigating student interaction during the discussion of a reading text.

Table 5.3 Scaffolding Interaction Analysis Categories

<u>Dir.M</u>	Direction maintenance: keeping each other in pursuit of the task and working towards its completion, directing action on the task, or initiating a point of discussion.
<u>Ref.Q</u>	Simple referential question: a simple appeal for information; request of verbal response as a sort of checking the prepared answer after individual work or checking the result of the individual work.
<u>Cla.R</u>	Clarification request: a probing question asking for help for the purpose of clarification; asking for re-explanation or, following Chaudron (1988), requesting further information from peers about a previous utterance. This then indicates that a request is made for an issue being discussed and not to a new issue.
<u>Conf.Ch</u>	Confirmation check: a question asking for confirmation, for focusing, for evaluating, or for inquiring whether peers agree with a proposition conveyed. Confirmation checks are “any expressions . . . immediately following an utterance by the interlocutor which are designed to elicit confirmation that the utterance has been correctly heard or understood by the speaker” (Long, 1983:137).
<u>Com.Ch</u>	Comprehension check: an attempt to check if peers have understood the previous issue discussed, or it is an attempt, adopting Long (1983:136), “to anticipate and prevent a breakdown in communication”.
<u>Sim.As</u>	Simple assertion: an initial assertion without explanation as a start of new issue discussion. It functions to state an opinion or to provide a relevant answer about something or about an issue discussed for the first time.
<u>Fur.As</u>	Further assertion: an assertion or answer to issues that show the on-going discussion of a particular issue and not to new problems (self or from peers’). More primarily it is the answer to a clarification request or confirmation check. Included here is then a response to a question or request that shows the progress of making sure the point of discussion. Included also as <u>Fur.As</u> is (1) a simple repetition of the issue discussed, of complete or incomplete utterances previously stated (self- or other-repetition) as a sign of participation during discussion, and (2) a simple completion to an unfinished response or answer (self or from peers’).

<u>Fb.As</u>	Feedback assertion: an evaluation of the previous response as the answer of or an opinion about something the group is discussing. It is characterized by the typical accepting expressions like 'Yes', 'OK', 'Yeah'. Utterances coded <u>Fb.As</u> also include those commenting the previous response as the answer of or an opinion about an issue by adding another statement or remark.
<u>Oth.As</u>	Other assertion: a statement or response that does not provide an answer expected from the previous request. Coded also as <u>Oth.As</u> is (1) 'Bidding' utterances revealing a permission to answer or nominating oneself to speak, (2) an excuse for not participating or answering, and (3) an introductory response before the 'real' response.
<u>Ext.Exp.</u>	Extended explanation: an assertion that provides detailed help. This function is typified by modification or rephrasing; it may also contribute new ideas or provide a segment of information or details by referring to the text to help peers self-restructure what is being discussed. It might display the ability to read between the lines. Included as <u>Ext.Exp</u> is a clue assumed to contribute to a solution, answer or understanding of an issue discussed by referring to the parts of the reading text – by mentioning either the exact sentence or the place (the line or paragraph number) where the issue being discussed is found in the text.
<u>Ind.Cor</u>	Indirect correction: a more target-like reformulation of peers' previous utterances. Both partial and complete reformulations are included.
<u>Di.Cor</u>	Direct correction: explicit corrections with or without a metalinguistic explanation; a prompt intended to elicit an exact imitation or to serve as an exemplary response to an elicitation. A learner explicitly states that a peers' utterance is incorrect. Chaudron (1988) and van Lier (1988) respectively use the terms 'model' and 'repair' to mean the same as direct correction in this study.
<u>Mo.Op</u>	Modified output: a reformulation of a previous utterance or a response to feedback (self or from peers') resulting in a more accurate or complex form. This is an additional code following <u>Fur.As</u> or <u>Fb.As</u> . <u>Mo.Op</u> is also identified by a more accurate response to peers' clarification requests as well as confirmation checks.
<u>Nom</u>	Nomination: an additional code accompanying a question mentioning the names of peers as an invitation to participate or speak. <u>Nom</u> is realized by items like peers' names, 'you', or 'your'.
<u>Gr.M+</u>	Positive Group Maintenance: an additional code accompanying a question or an assertion likely to maintain harmony in the group and lower affective barriers in interaction. Utterances that encourage peers (e.g. praise) and, thus, provide affective support and the ones that make explicit indication to peers' contribution are coded <u>Gr.M+</u> . This <u>Gr.M+</u> is also coded for utterances revealing there is an invitation to participate (a group member invites peers' participation).
<u>Gr.M-</u>	Negative Group Maintenance: an additional code accompanying a question or an assertion that might lower group cohesiveness or decrease harmony maintenance. Utterances coded <u>Gr.M-</u> cover those showing lack of confidence, readiness, and frustration control.
<u>Err.Exp</u>	Erroneous explanation: another additional code to an assertion that gives misleading or inaccurate information.
<u>Un.As</u>	Unidentified assertion: an attempt to participate but not executed resulting in an utterance with no clear function or with meaning hard to understand thus hard to code.

Note: Cl.R 'Clarification request' and Conf.Ch 'Confirmation check' allow a student to correctly interpret reactions by his friends; Cl.R are much more open ended and Conf.Ch presuppose a positive answer (Chaudron, 1988:131).

Two major categories are then implied in our approach to further analyse the data: the *independent* codes covering Dir.M, Ref.Q, Cl.R, Conf.Ch, Com.Ch, Sim.As, Fur.As, Fb.As, Oth.As, Ext.Exp, Ind.Cor, Di.Cor, and Un.As, and the *additional* ones covering Mo.Op, Nom, Gr.M+, Gr.M-, and Err.E. The independent codes refer to the scaffolding categories showing how the students actually assist one another in group interaction, but

the additional codes do not as they are those added to the independent codes when applicable. Both become the second microcodes for content episode analysis. Like the first microcodes, the units for the second microcodes are statement units defined as – adapting Hogan et al.’s (1999) idea – the meaningful codable unit of speech or utterance within a turn (discrete as well as more integrated examples follow in [5.3.3]).

5.3 Interaction Analysis Exemplified

This section presents exemplifications – both discrete and integrated ones – of how the categorization is applied in analyzing the data. The sequence of exemplifying will similarly follow the above organization of presenting the classification and categories – firstly the macro then secondly the micro analyses.

5.3.1 Macro Interaction Analysis Exemplified

Based on Table 5.1, two episodes are identified from the transcribed data presented in Excerpt 5.1:

Excerpt 5.1: (Appendix 12; Data 1)

E1	1	KI2	: Er OK friends, let's skip the 'K' part and now let's er ... silent reading ... do the silent reading.
	2	KI4	: Yes, er we have er ... 10 minutes for silent reading and individual completion.
	3	KI2	: OK, thank you. ((laughter))
E2	4	KI2	: ((About 8 minutes later after the individual completion of the 'W' part of the worksheet)) Er, OK then (let's do) the discussion. Er OK, have you all ... finished with your reading?
	5	KI4	: I haven't find the main idea. ((spoken softly))
	6	KI2	: Er ... er ... I find one main idea ... maybe, er but I don't know if ... if it is right or wrong ((laughter)) ... I think the main idea is the example story of endangered language.
	7	KI4	: Sorry?
	8	KI2	: The example of story, eh /oh no/ the example story of endangered language.
	9	KI4	: Where is it?
	10	KI2	: Er ... the first line ... <u>famous cases which can be done to give new life to languages that are seriously endangered</u>
	11	KI5	: Er ((laughter)) I have the same idea ... with you.
	12	KI4	: The example ...
	13	KI2	: The example
	14	KI4	: --the example the example what?
	15	KI2	: Story. The example story... of the endangered language. Something like this. (Maybe, but) I don't know (if it's correct). What do you think?
	16	KI4	: I have no idea. I can't concentrate, I don't know. ... How about you, KI5?
	17	KI5	: I have the same main idea with her. ((long silence)) so ...
	18	KI4	: ((laughter))
	19	KI5	: What do you think?
	20	KI4	: OK, OK ... because I have no idea ((laughter)) so (I'll just follow) ((laughter))

Note: E1: Episode 1; E2: Episode 2; segments underlined indicate the sentence(s) appearing in the text.

On the whole Excerpt 5.1 can be labeled as an on-task episode type. The first identified episode covers Turns (henceforth T.) 1-3. It is an organization episode type. The second identified episode covers T.4-20. It is a content episode type which reveals a main idea-oriented episode.

Excerpt 5.1 shows that two episodes are obtained from a stretch of turns. Another example is worth presenting to show that interaction classification is a bit more complex as one episode may be interrupted and continued later in the course of the interaction.

Excerpt 5.2: (Appendix 12; Data 4)

E1	199	KI1	: After this we have a quiz again.
	200	KI2	: Er?
	201	KI1	: We have a quiz again.
	202	KI4	: This is the last.
	203	KI1	: Today is the last quiz. ((long silence; writing))
E2	204	KI3	: I need factual information, friends.
	205	KI4	: Factual information?
	206	KI3	: I need to write our factual information.
	207	KI4	: OK mine mine is
	208	KI2	: --Er ... I don't get yours. I haven't write yours.
	209	KI4	: My factual?
	210	KI2	: Ya.
E3	211	KI4	: 'Renee and Julie ... they became best friends while working for a Manhattan executive-search firm. From line 1, 2, 3, 4. 4
E4	212	KI1	: --35 minutes
E3 cont.	213	KI4	: 'Renee and Julie they became best friends while working for a Manhattan executive-search firm'
	214	KI2	: 'became best friends ...
	215	KI4	: 'while working for a Manhattan executive-search firm'.
	216	KI1	: And what are your facts, KI2?
	217	KI2	: 'Mary McCarthy is forty two years old, and he is a senior vice president at MGM/UA Communications in Beverly Hills'. ((long silence; writing))
E5			OK. So we just have ... 2 questions?
	218	KI5	: (No) I have one question (more).

As shown in Excerpt 5.2, the first two episodes are identified from T.199-210. They are off-task and organization episode types which are found in T.199-203 and T.204-210 respectively. The off-task episode type is then exemplified in Excerpt 5.3.

Excerpt 5.3: (Appendix 12; Data 4)

199	KI1	: After this we have a quiz again.
200	KI2	: Er?
201	KI1	: We have a quiz again.
202	KI4	: This is the last.
203	KI1	: Today is the last quiz.

The organization episode type is exemplified in Excerpt 5.4:

Excerpt 5.4: (Appendix 12; Data 4)

204	KI3	:	I need factual information, friends.
205	KI4	:	Factual information?
206	KI3	:	I need to write our factual information.
207	KI4	:	OK mine mine is
208	KI2	:	--Er ... I don't get yours. I haven't write yours.
209	KI4	:	My factual?
210	KI2	:	Ya.

The next episodes are identified in the remaining T.211-218. More complex classification, however, takes place as the next three episodes are not indentified as easily as the first two episodes. A one-turn organization episode type is identified in T.212 (see Excerpt 5.5):

Excerpt 5.5: (Appendix 12; Data 4)

212	KI1	:	--35 minutes
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One content episode type revealing a factual-oriented episode is started from T.211, continued to T.213 till T.217. The last episode – another organization episode type – is spotted in T.217-18. T.217 is then an example of one turn which can belong to two different episodes. The beginning of T.217 – “Mary McCarthy is forty two years old, and he is a senior vice president at MGM/UA Communications in Beverly Hills” – belongs to the previous episode which is a content episode type. Meanwhile the ending part – “OK. So we just have ... 2 questions?” – belongs to the organization episode type.

The content episode type which is factual-oriented looks like the one in Excerpt 5.6a:

Excerpt 5.6a: (Appendix 12; Data 4)

211	KI4	:	'Renee and Julie ... they became best friends while working for a Manhattan executive-search firm. From line 1, 2, 3, 4. 4
213	KI4	:	'Renee and Julie they became best friends while working for a Manhattan executive-search firm'
214	KI2	:	'became best friends ...
215	KI4	:	'while working for a Manhattan executive-search firm'.
216	KI1	:	And what are your facts, KI2?
217	KI2	:	'Mary McCarthy is forty two years old, and he is a senior vice president at MGM/UA Communications in Beverly Hills'. <i>((long silence; writing))</i> <i>OK. So we just have ... 2 questions?</i>

The part in italics in Excerpt 5.6a (T.217) *OK. So we just have ... 2 questions?* shows that it does not belong to the factual-oriented content episode type. Note also that T.212 has been deleted in the excerpt since it is an episode of its own as previously explained. In the data analysis later, the episode to analyse further eventually looks like the one in Excerpt 5.6b:

Excerpt 5.6b: (Appendix 12; Data 4)

211	K14	: 'Renee and Julie ... they became best friends while working for a Manhattan executive-search firm. From line 1, 2, 3, 4. 4
213	K14	: 'Renee and Julie they became best friends while working for a Manhattan executive-search firm'
214	K12	: 'became best friends ...
215	K14	: 'while working for a Manhattan executive-search firm'.
216	K11	: And what are your facts, K12?
217	K12	: 'Mary McCarthy is forty two years old, and he is a senior vice president at MGM/UA Communications in Beverly Hills'.

Meanwhile another episode type, i.e., organization episode is exemplified in Excerpt 5.7a:

Excerpt 5.7a: (Appendix 12; Data 4)

217	K12	: <i>'Mary McCarthy is forty two years old, and he is a senior vice president at MGM/UA Communications in Beverly Hills'.</i> <i>((long silence; writing))</i> OK. So we just have ... 2 questions?
218	K15	: (No) I have one question (more).

Similarly, the part in italics in Excerpt 5.7 (T.217) '*Mary McCarthy is forty two years old, and he is a senior vice president at MGM/UA Communications in Beverly Hills*' indicates that it does not belong to the organization episode type. The identified episode is then reformed as follows:

Excerpt 5.7b: (Appendix 12; Data 4)

217	K12	: OK. So we just have ... 2 questions?
218	K15	: (No) I have one question (more).

5.3.2 First Micro Interaction Analysis Exemplified

Four sections will be covered. The first three sections are meant to provide discrete examples of the Initiation, Response and Feedback moves respectively. The last section is presented for the purpose of exemplifying a more integrated application of the first micro interaction analysis categories to a stretch of continuous discourse produced in the student group work.

5.3.2.1 Initiation Exemplification

The examples of Initiation coded (I) are:

- 1) "What what do you think about Welsh? Welsh is the kind of 2 language or ... what do you think?" (Data 1, T.39) which is eliciting or questioning others,
- 2) "OK so ... er how about the the main the main ideas." (Data 4, T.54) which is directing members for the group task, and

3) “And ... my ... er ... my ... my main idea is “The story is about Roosevelt family ...” (Data 3, T.16) which is informing peers about one’s opinion.

5.3.2.2 Response Exemplification

One utterance coded (R) is indicated in the reply of KI5 “O ya, it’s OK.” after the initiation of KI3 “May I ... er ... say my ... inferences first?” (see Data 4, T.18-19).

Another Response move is a non-verbal reply. Though non-verbal reaction to initiation was, as mentioned in [5.1], not analysed, an example is presented in Excerpt 5.8:

Excerpt 5.8: (Appendix 12; Data 2)

→	1	KI1	:	Ok, friends, er today we will read about the passage Noah Webster. I think we should do ... the silent reading ... Now, start. (About 9 minutes later after the individual completion of the ‘W’ part of the worksheet)
	2	KI1	:	OK everybody done? xx I think we should start with the discussion. OK, I think we should start with the discussion. Er ehm related to main ideas main discussion or purpose of the text. KI3, what you got?

The response which belongs to a reaction can be found implicitly in Excerpt 5.8 between T.1 and T.2 – to be exact, after “Now, start” (the end of T.1).

Another Response move is a repetition of what has been said by peers. Excerpt 5.9 may clarify this point:

Excerpt 5.9: (Appendix 12; Data 4)

→	186	KI2	:	What women should do ((writing))
→	187	KI5	:	What women should do ((writing))
→	188	KI1	:	What women should do ((writing))

In Excerpt 5.9, T.187 and T.188 of KI5 and KI1 respectively are both coded (R).

Also coded (R) is a completion of an unfinished assertion thus showing also that a student is following what is being discussed. Excerpt 5.10 reveals that a Response move is indicated in T.140 when KI1 completes the unfinished sentence of KI2 in the previous turn (T.139).

Excerpt 5.10: (Appendix 12; Data 2)

→	137	KI2	:	How about you?
	138	KI1	:	M2? Different from all of you.
	139	KI2	:	I think er ... KI4 and KI3 ...
→	140	KI1	:	have the same idea.

The last sort of utterances coded as a Response move are acknowledgments. When asked “It’s the name of country?”, a student responds, “Yeah, it’s a name of country and ... it’s a name of a language.” indicating that it is a response which is an acknowledgement to the previous question (see Data 1, T.50-51).

Acknowledgement is also performed when a student simply shows that he or she is following what is being discussed. A Response move showing a student is following what is being discussed is indicated in T.129 when KI2 utters “Emm” as a response to KI4 “Yah ... so we can share or xx or save something about the language.” (Data 1, T.128-29).

In our data, a Response move may also take place after a Feedback move as shown in Excerpt 5.12:

Excerpt 5.12: (Appendix 12; Data 1)

	110	KI2	:	Yeah. ((laughter)) so I think it's not 'the example story of endangered language' ... because it's not ... it it talk not only about the language, but but also the action.
→	111	KI4	:	Ya.
→	112	KI5	:	--Ya.

As indicated in Excerpt 5.12, both KI4 and KI5 (T.111 and T.112) respond “Ya” to acknowledge KI2’s utterance after KI2 provides feedback to the previous discussion on the main idea (Feedback examples are presented in the next section).

5.3.2.3 Feedback Exemplification

As revealed in Table 5.2, Feedback covers accepting, commenting, and/or providing repair. Excerpt 5.13 presents a Feedback move identified in T.79:

Excerpt 5.13: (Appendix 12; Data 1)

	76	KI2	:	<u>It was spoken in very ... in five very different dialect.</u> ... So ... what is Romansch? It's the name of place or (language?)
	77	KI5	:	--I think it's the name of language language.
	78	KI2	:	--Language.
→	79	KI5	:	Yeah, yeah it's the language, because in here the xx passage ... it was spoken in five dialect.

Excerpt 5.13 shows that in giving feedback to the previous discussion (T.76-78), KI5 (T.79) makes an acceptance by saying “Yeah, yeah it’s the language”. Furthermore, KI5 also comments by adding more information or explanation “because in here the xx passage ... it was spoken in five dialect.”

Excerpt 5.14 is another brief excerpt to accommodate the example showing the repair function in a Feedback move.

Excerpt 5.14: (Appendix 12; Data 2)

	172	KI2	:	Webster's American Spelling Book is a good book.
→	173	KI1	:	Webster's American Spelling Book was a good book.

As shown in Excerpt 5.14, KI1 gives feedback by providing a repair or a correction (as in the use of “was”) to the previous utterance of KI2.

5.3.2.4 IRF Exemplification

In this section, a more integrated example of the application of the first micro analysis categories to a stretch of continuous discourse is presented to provide a clearer picture. We will center on one particular content episode type revealing factual-oriented group discussion.

Excerpt 5.15: (Appendix 12; Data 4)

28	KI3	:	(I)	And factual information?
29	KI5	:	(R)	Er ... Oh, ya. I have the factual information in line in er ... line er ... 9 9 up to 10 ... er ... <u>may be a tendency for women to be more jealous of one another than men are of their colleagues, says Niles Newton, a scientist at Northwestern Medical School.</u>
30	KI3	:	(I)	How about you, KI4?
31	KI4	:	(R)	Yes,
			(I)	for factual information or the inferences?
32	KI3	:	(R)	Factual information.
33	KI4	:	(R)	Well, er factual information, my factual information er ... <u>Lawyers Renee ... Renee Berliner Rush, and then Julie Anne Banon, they became best friends while working for a Manhattan executive-search firm.</u>
34	KI5	:	(I)	What about you, KI2?
35	KI2	:	(R)	Er ... Mary McCarthy is 42 years old and she is a senior vice president at MGM/UA Communications in Beverly ... Hills. Paragraph 5 line 3 ... up to ...
36	KI3	:	(R)	Paragraph 5.
37	KI5	:	(I)	How about your factual information, (KI3)?
38	KI3	:	(R)	My factual information is in line 15 to 16 e ... <u>Women have to understand that being competitive with someone doesn't mean you don't like them. And Men ... can be competitive and still be friends</u>
39	KI5	:	(I)	So we have different factual information.
40	KI3	:	(F)	Ya, I think it's OK for factual information even though it's different, right?

Note: Segments underlined indicate the phrases or sentences appearing in the text.

T.28 in Excerpt 5.15 shows KI3's initiating a discussion by questioning – thus the utterance is coded (I). T.29 shows KI5's response to the previous initiation; as it is a reply to a question, it is then coded (R). T.30 indicates a new attempt of KI3's asking another student in the group – thus the utterance is also coded (I). T.31 obviously indicates a turn which possesses more than one code – a reminder from the result of Pilot Study 1. Firstly, the utterance “Yes” is coded (R) although it is only a ‘partial’ response – as it is not yet the expected response to the question posed in T.30. Secondly, the following utterance “for factual information or the inferences?” is coded a new (I) as KI4 reinitiates by asking back. Clearly seen in T.32 is a reply to the initiation in the previous turn. It is then coded (R). As it is obvious for KI4 what is asked by KI3 (T.30), KI4 (T.33) makes a reply which is thus coded (R). T.34 consists of KI5's question directed to KI2. The utterance is then coded (I). The reply of KI2 to KI5's previous initiation is clearly seen in T.35 thus (R) is coded for it. The utterance “Paragraph 5” (T.36) is coded as (R) since it is the response of

KI3 as the repetition of the ending part of KI2's previous utterance. T.37 which is evidently similar to T.34 is coded (I) as KI5 makes a similar question to another student. T.38 is coded (R) as it is unmistakably the reply to the previous question. The utterance in T.39 is a new initiation made by KI5 since she is informing something after listening to the previous utterance. T.40 is coded (F) because KI3 clearly closes the episode by making an acceptance "Ya" to the conclusion made by the previous student in T.39. KI3 also closes the episode by adding a comment "I think it's OK for factual information even though it's different, right?"

5.3.3 Second Micro Interaction Analysis Exemplified

The aim of this section is to exemplify how the second micro interaction analysis is carried out. Prior to the example of integrated analysis to a stretch of continuous discourse, specific examples for each scaffolding category are presented.

5.3.3.1 Discrete Exemplification

All examples indicate issues related to substantive interaction when the content of the text is discussed.

<u>Dir.M</u>	Direction maintenance. An example found in the data is: "OK, now ... er we make comprehension question." (Data 3, T.153).								
<u>Ref.Q</u>	Simple referential question. A typical <u>Ref.Q</u> found in this study is: "Excuse me, could I ask something? You know, what does it mean er ... Isaac is one of the company name?" (Data 3, T.129).								
<u>Cl.R</u>	Clarification request. The following shall exemplify an utterance coded <u>Cl.R</u> : "Er ... ya, what is it, again?" (Data 2, T.82).								
<u>Conf.Ch</u>	Confirmation check. Here is an example of <u>Conf.Ch</u> found in the data: "The last line, right?" (Data 3, T.52).								
<u>Com.Ch.</u>	Comprehension check. An example of utterance coded <u>Com.Ch</u> found in Data 2, T.152 states: "He ... so he must be a teacher, right?" The last word "right?" equals 'You get it?'. Another example is revealed in Data 3, T. 53 which states: "Yeah ... er do you want to ask something? Er do you still confuse ... about something?"								
<u>Sim.As</u>	Simple assertion. In the following Excerpt 5.16, the example of <u>Sim.As</u> appears in T.82 following the question which appears in T.81. Excerpt 5.16: (Appendix 12; Data 3) → <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="padding-right: 10px;">81</td> <td style="padding-right: 10px;">KI4</td> <td style="padding-right: 10px;">:</td> <td>What is your inferences, (KI2)?</td> </tr> <tr> <td style="padding-right: 10px;">82</td> <td style="padding-right: 10px;">KI2</td> <td style="padding-right: 10px;">:</td> <td>My inference is 'Most of the Roosevelt families become president of the US'.</td> </tr> </table>	81	KI4	:	What is your inferences, (KI2)?	82	KI2	:	My inference is 'Most of the Roosevelt families become president of the US'.
81	KI4	:	What is your inferences, (KI2)?						
82	KI2	:	My inference is 'Most of the Roosevelt families become president of the US'.						

<u>Fur.As</u>	<p>Further assertion. The answer “2nd line” to the question “Which ... line?” (Data 1, T.42-43) is an example of <u>Fur.As</u> category. Excerpt 5.17 provides an example of repetition which belongs to <u>Fur.As</u>. It is indicated in T.169 – the repetition made by KI4 as a sign of participation after KI1 states his answer.</p> <p>Excerpt 5.17: (Appendix 12; Data 4)</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>168 KI4 : Mine is ‘Lawyer Renee Berliner Rush and Julie Anne became best friends while working for a Manhattan executive-search firm’. And then ... the second ... ‘Mary McCarthy became a senior vice president at MGM/UA Communications’</p> <p>→ 169 KI1 : ‘Lawyer Renee Berliner Rush and Julie Anne became best friends while working (for a Manhattan executive-search film)’</p> </div> <p>An example of <u>Fur.As</u> indicating a simple completion to an unfinished response or answer is presented in Excerpt 5.18.</p> <p>Excerpt 5.18: (Appendix 12; Data 1)</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>149 KI2 : Oh language is spoken from generation to the ...</p> <p>→ 150 LL : to the next generation.</p> </div>
<u>Fb.As</u>	<p>Feedback assertion. Here is an example taken from Data 1, T.139: “OK. ... So ... all of us agree that the main idea is ‘the action to revive language’.”</p>
<u>Oth.As</u>	<p>Other assertion. “I haven’t got (any inferences)” which is obtained from Data 3, T.21 is coded <u>Oth.As</u> as it is not yet an expected response to the previous implicit request “What’s the inferential information you found in the text?” An example of <u>Oth.As</u> which is of ‘bidding’ type is “May I ... er ... say my ... inferences first?” (Data 4, T.18) – a student’s request to give an answer. The examples of (1) an excuse for not participating or answering and (2) an introductory response before the ‘real’ response are respectively exemplified in the followings: “Hmm, wait ...” (Data 4, T. 198) and “Er, I get one factual information but I don’t know if ... true or false” (Data 1, T.32).</p>
<u>Ext.Exp</u>	<p>Extended explanation. An example of utterance coded <u>Ext.Exp</u> is “... so I think it’s not ‘the example story of endangered language’ ... because it’s not ... it it talk not only about the language, but but also the action.” (Data 1, T.110) which is the assertion of KI2 providing detailed assistance when the group is discussing the main idea of the text.</p>
<u>Ind.Cor</u>	<p>Indirect correction. KI1’s “inadequate” [ɪnædɪkwɪt] (in Data 2, T.156) which is pronounced correctly is an example of indirect correction to his friend’s mispronouncing the word. The coding of <u>Ind.Cor</u> also occurs when a learner implicitly states that her interlocutor’s utterance is incorrect. KI3’s “What are what are” is an example of indirect correction to KI5’s “What is” (Data 2, T.211-12).</p>
<u>Di.Cor</u>	<p>Direct correction. After realizing the ungrammatical sentence of KI3 “To succeed women must helping each other”, KI1 responds “Women must help each other not helping each other.” – which is coded <u>Di.Cor</u> (see Data 4, T. 131-33 for further illustration).</p>
<u>Mo.Op</u>	<p>Modified output. “Come to New York... eh /sorry/, came ... came to New York... from Holland ...” found in Data 3, T.150 shall exemplify <u>Mo.Op</u>.</p>

<u>Nom</u>	Nomination. An example coded <u>Nom</u> is “What do you think?” (Data 1, T.15) as it is clear from the context that KI2 is asking KI4.																				
<u>Gr.M+</u>	Positive Group Maintenance. “Hmm ... good.” (Data 2, T.27) is an example showing <u>Gr.M+</u> is coded for it. This <u>Gr.M+</u> is also coded for utterances revealing there is an invitation to participate as found in “What about you, KI1? Your inferences.” (Data 3, T.26). The utterance of a member who makes explicit reference to peers’ contribution, also coded <u>Gr.M+</u> , appears in Data 4, T.150 “No. (We should also consider) KI5’s inference.”																				
<u>Gr.M-</u>	Negative Group Maintenance. An assertion coded <u>Gr.M-</u> indicating lack of confidence is: “Ya, he wants to demonstrate ... Maybe.” (Data 2, T.120). Another is “Er ... er ... I find one main idea ... maybe, er but I don’t know if ... if it is right or wrong” (Data 1, T.6). Lack of readiness or making an excuse not to answer is shown in “I haven’t find the main idea.”, and “Oh ... wait ... wait.” (Data 1, T.5, Data 2, T.145 respectively). Lack of frustration control is exemplified in “I have no idea. I can’t concentrate, I don’t know.” (Data 1, T.16).																				
<u>Err.Exp</u>	Erroneous explanation. When a sentence in the paragraph is discussed by the group members, one example coded <u>ErrE</u> is the utterance of a member saying “I think the language is only Welsh, Faroese and Romansch. Ya ... Maori is a name of of an organization ... so it is not a language.” It shows a misunderstanding of ‘Maori’ which is in fact a language not an organization (for the complete discourse, see Data 1, T.63-97).																				
<u>Un.As</u>	Unidentified assertion. T.117 in Excerpt 5.19 shall illustrate the coding of <u>Un.As</u> as it shows that KI1 is trying to participate in the discussion on the implied meaning found in the text; however, it is not executed. Excerpt 5.19: (Appendix 12; Data 2)																				
	<table border="1" style="margin-left: 40px;"> <tr> <td>114</td> <td>KI3</td> <td>:</td> <td>--Paragraph?</td> </tr> <tr> <td>115</td> <td>KI2</td> <td>:</td> <td>From paragraph 2 ... line 13 up to 15</td> </tr> <tr> <td>116</td> <td>KI4</td> <td>:</td> <td>Er ... here xx different, right? He wants to demonstrate that that American language is developing. Er ... Here ... that American English is already developing but he wants to demonstrate it.</td> </tr> <tr> <td>→ 117</td> <td>KI1</td> <td>:</td> <td>Er ...</td> </tr> <tr> <td>118</td> <td>KI2</td> <td>:</td> <td>So (KI4,) you mean that Webster wants to show that American English ... is developing?</td> </tr> </table>	114	KI3	:	--Paragraph?	115	KI2	:	From paragraph 2 ... line 13 up to 15	116	KI4	:	Er ... here xx different, right? He wants to demonstrate that that American language is developing. Er ... Here ... that American English is already developing but he wants to demonstrate it.	→ 117	KI1	:	Er ...	118	KI2	:	So (KI4,) you mean that Webster wants to show that American English ... is developing?
114	KI3	:	--Paragraph?																		
115	KI2	:	From paragraph 2 ... line 13 up to 15																		
116	KI4	:	Er ... here xx different, right? He wants to demonstrate that that American language is developing. Er ... Here ... that American English is already developing but he wants to demonstrate it.																		
→ 117	KI1	:	Er ...																		
118	KI2	:	So (KI4,) you mean that Webster wants to show that American English ... is developing?																		

5.3.3.2 Integrated Exemplification

As an integrated exemplification is likely to help us see more clearly how the second micro interaction analysis is carried out, this section is presented with this particular purpose.

Excerpt 5.20 is one content episode showing student interaction which is main-idea oriented. This episode is coded using the scaffolding categories described in Table 5.3. It is to be noted that some utterances served at least two categories, and are therefore coded more than once (the first shows the independent code; the second or the next the additional one).

Excerpt 5.20: (Appendix 12; Data 1)

4	KI2	: <u>Dir.M</u> <u>Ref.Q</u> <u>Nom</u> <u>Gr.M+</u>	Er, OK then (let's do) the discussion. Er OK, have you all ... finished with your reading?
5	KI4	: <u>Oth.As</u> <u>Gr.M-</u>	I haven't find the main idea. ((spoken softly))
6	KI2	: <u>Oth.As</u> <u>Gr.M-</u> <u>Sim.As</u>	Er ... er ... I find one main idea ... maybe, er but I don't know if ... if it is right or wrong. ((laughter)) ... I think the main idea is the example story of endangered language.
7	KI4	: <u>Cla.R</u>	Sorry?
8	KI2	: <u>Fur.As</u>	The example of story, eh /oh no/ the example story of endangered language.
9	KI4	: <u>Cla.R</u>	Where is it?
10	KI2	: <u>Ext.Exp</u>	Er ... the first line ... <u>famous cases which can be done to give new life to languages that are seriously endangered</u>
11	KI5	: <u>Sim.As</u>	Er ((laughter)) I have the same idea ... with you.
12	KI4	: <u>Fur.As</u>	The example ...
13	KI2	: <u>Fur.As</u>	The example
14	KI4	: <u>Cla.R</u>	--the example the example what?
15	KI2	: <u>Fur.As</u> <u>Gr.M-</u> <u>Cla.R</u> <u>Nom</u> <u>Gr.M+</u>	Story. The example story... of the endangered language. Something like this. (Maybe, but) I don't know (if it's correct). What do you think?
16	KI4	: <u>Oth.As</u> <u>Gr.M-</u> <u>Ref.Q</u> <u>Nom</u> <u>Gr.M+</u>	I have no idea. I can't concentrate, I don't know. ... How about you, KI5?
17	KI5	: <u>Sim.As</u> <u>Conf.Ch</u>	I have the same main idea with her. ((long silence)) So?
18	KI4	: <u>Cla.R</u>	((laughter))
19	KI5	: <u>Cla.R</u> <u>Nom</u> <u>Gr.M+</u>	What do you think, (KI4)?
20	KI4	: <u>Oth.As</u> <u>Gr.M+</u>	OK, OK ... because I have no idea ((laughter)) so (I'll just follow) ((laughter))

Excerpt 5.20 reveals student interaction in the three-key informant group. The three key informants were KI2 (a high achiever who became the captain), KI4 (a middle achiever who became the encourager and time keeper) and KI5 (a low achiever who became the secretary and speaker). They were discussing paragraphs 6-8 of the reading material entitled 'Saving Language' in their expert team.

KI2 initiated by directing the members on the task saying "Er, OK then (let's do) the discussion." (T.4). The very first coding Dir.M is then performed in this student interaction. KI2 continued with another initiation asking "Er OK, have you all ... finished with your reading?" which is coded Ref.Q as it is a simple referential question meant to check the members' answers after individual work. Two additional codes follow Ref.Q.

First it is Nom as it is clear that KI2 nominates the other group members addressing them with 'you'; second it is Gr.M+ as there is an invitation to participate.

The utterance of KI4 "I haven't find the main idea" (T.5) is coded Oth.As as it is a response that does not provide an answer expected from the previous question. Gr.M- 'Negative group maintenance', an additional code, is identified for this utterance because it shows lack of readiness. Realizing a member's lack of readiness, KI2 initiates to share her answer.

Prior to her assertion "I think the main idea is the example story of endangered language." (T.6) which is coded Sim.As – a simple assertion to an issue discussed for the first time, KI2 provides an introductory assertion before her actual answer. "Er ... er ... I find one main idea ... maybe, er but I don't know if ... if it is right or wrong." is then coded as Oth.As. This particular assertion shows lack of confidence from KI2 so the additional code Gr.M- is put right after Oth.As.

KI4's question "Sorry?" (T.7) is coded Cla.R as she obviously poses a question asking for clarification. She does not get what KI2 thinks is the main idea.

Responding to the clarification request, KI2 then repeats what she thinks is the main idea. "The example of story, eh /oh no/ the example story of endangered language." (T.8) is then coded Fur.As – a further assertion to the clarification request.

KI4 then requests further information from KI2 about what she thinks is the main idea of the paragraph being discussed. "Where is it?" (T.9) is then coded Cla.R – a probing question asking for clarification.

In the next turn, KI2 provides detailed help. She refers to the part in the reading material. This particular KI2's response "Er ... the first line ... famous cases which can be done to give new life to languages that are seriously endangered" (T.10) is then coded Ext.Exp – an extended explanation.

In T.11 it is the first time for KI5 to be involved in this particular episode (even the first time so far in the group discussion). She simply states "Er ((laughter)) I have the same idea ... with you." – the utterance coded Sim.As – a simple assertion.

Trying to understand the idea mentioned by KI2, KI4 repeats. This repetition "The example ..." (T.12) is coded Fur.As. KI2 also tries to repeat what she has said. The repetition "The example" (T.13) is also coded Fur.As although it is not completed as it is interrupted.

In the next turn, it is apparent that KI4 still needs help for clarification. Her utterance “the example the example what?” (T.14) is then coded Cla.R. Similar to KI2’s assertion in T.8, KI2’s assertion “Story. The example story... of the endangered language. Something like this. (Maybe, but) I don’t know (if it’s correct).” (T.15) is coded Fur.As; however, as the utterance “Something like this. (Maybe, but) I don’t know (if it’s correct)” indicates lack of confidence, an additional code Gr.M- is also noted. KI2’s lack of confidence leads her to initiate a question asking others’ opinion. “What do you think?” is then coded Cla.R – a request for help to the issue being discussed. Additional codes Nom and Gr.M+ follow Cla.R as KI2 nominates her interlocutors and invites participation which shows positive group maintenance.

“I have no idea. I can’t concentrate, I don’t know. ...” – the utterance of KI4 (T.16) – is coded Oth.As as it is not yet the expected response to the previous question. An additional code Gr.M- follows as it indicates lack of frustration control. Checking to see if the answer of KI5 is the same or different as the one of KI2, KI4 asks a referential question “How about you, KI5?” which equals “What do you have as the main idea, KI5?” – the one coded Ref.Q; also Nom and Gr.M+ as KI5 is nominated and invited to participate.

The simple assertion of KI5 “I have the same main idea with her.” (T.17) is coded Sim.As. As the group keeps silent, KI5 initiates by asking a confirmation “So?” – the one coded Conf.Ch. A laughter of KI4 in T.18 is left uncoded as non-verbal interaction is not analysed. Eager to know if KI4 has got her idea or answer about the main idea, KI5 is brave enough to initiate – asking “What do you think, (KI4)?” (T.19). Her ‘last’ hope goes to KI4 to get further clarification or re-explanation indicating a request to the issue being discussed and not to a new issue. This particular utterance is coded Cla.R, Nom and Gr.M+. The last two codes are the additional ones revealing the presence of nomination and an invitation made by KI5 for KI4 to participate.

The content episode which is main-idea oriented is terminated in T.20 with the response of KI4 “OK, OK ... because I have no idea ((laughter)) so (I’ll just follow).” It is coded Oth.As as it is not yet the real expected answer from the previous question; it is also coded Gr.M+, an additional code accompanying an assertion likely to lower affective barriers in interaction.

5.4 Summary

This chapter primarily addresses three basic issues on coding the data. First the macro interaction analysis classification designed to segment the data into episodes is presented. The two micro interaction analysis categories set up to further analyse the research data follow. Eventually this chapter exemplifies how the classification and categories are employed to analyse the data. Both discrete and integrated exemplifications are presented. The result of the data analysis can be found in the next chapter.