

*European Journal of Psychology of Education*, 2000, 15 (4), 491-508.

Running head: LEARNING TO COLLABORATE IN PEER-TUTORING

Learning to Collaborate in a Peer-Tutoring Situation:

Who learns? What is learned?

Michèle Grossen and Karin Bachmann

University of Lausanne, Switzerland

## Introduction

Research into peer collaborative work shows that collaboration may bring about learning on condition that peers develop certain modes of collaboration; in other words, “ collaborating to learn ” and “ learning to collaborate ” are two activities which are closely intertwined. Historically, the former activity — collaborating to learn — was the first to be studied and gave rise to numerous studies which relied mostly upon experimental designs, namely pre-test/test/post-test designs, aimed at measuring the cognitive outcomes of peer-interaction sessions. In these studies, the fact that collaboration itself might be subjected to learning was not directly considered and it was only with the development of studies focused upon the characteristics of the children’s dialogues that the mode of collaboration appeared to be a fundamental factor liable to account for the outcomes of peer-interaction sessions. After this first phase of research, scholars (and among them the contributors to this special issue) developed empirical methods which were mostly based upon observations and descriptions of peer collaborative work in “ natural ” settings such as classrooms or work situations (see for example Golay Schilter et al., 1999; Littleton & Light, 1999; Pontecorvo, Ajello & Zucchermaglio, 1991). The analysis of the peers’ modes of collaboration, be it in “ natural ” or in experimentally designed interaction sessions, showed that the quality of children’s talk and the children’s capacity to coordinate their actions and discourse, and to take each other’s perspective were closely linked to the quality of learning. For example, Mercer and his colleagues (1995; 1998; Wegerif & Mercer, 1997; Wegerif, Mercer & Rojas-Drummond, 1999) described three types of children’s talk in classroom collaborative work: disputational talk, cumulative talk and exploratory talk, the latter being characterised by the partners’ critical and constructive involvement, and by their capacity to challenge each others’ suggestions and to offer alternative solutions. As Mercer suggests, the specificity of this type of talk is that “ compared with the other two types, in exploratory talk *knowledge is made more publicly accountable* and *reasoning is more visible in the talk* ” (Mercer, 1995, p. 104, italics by Mercer). Similar

observations were also made by Teasley (1997; see also Teasley, 1995) who showed that “ transactive discussion ”, in which children operate on the reasoning of their partners or clarify their own ideas, were the most likely to promote learning.

In brief, research into peer collaborative work clearly shifted from the study of how certain modes of collaboration may promote learning (“ collaborating to learn ”) to that of how collaboration could be learned in order to make peer-interaction an opportunity for learning (“ learning to collaborate ”). This shift led some scholars, such as Wegerif, Mercer, Rojas-Drummond in particular, to reverse the original empirical paradigm by teaching students the modes of collaboration and the types of discourse which the first phase of research showed to be efficient in promoting learning.

Focused upon the analysis of adult-child or child-child interactions in test or learning situations, our own contribution in peer collaborative work showed that the mode of collaboration itself is interactively accomplished, and can be considered to be the result of a situated learning process (Grossen et al., 1996; Grossen, Perret-Clermont, & Liengme Bessire, 1997). In line with interactionist and dialogical approaches (Grossen & Py, 1997; Linell, 1998; Marková, Graumann & Foppa, 1995), we showed that the definition participants give to the situation and task, the representations they have of their goals and respective roles, the identities they display, are various elements which cannot be determined from outside, namely from a purely objective stance. As a consequence, the notion of “ context ” does not only refer to the external characteristics of a situation and is not merely a “ container ” (Goodwin & Duranti, 1992) in which participants interact, but can be seen as partly constructed *within* the interactions themselves and *through* the effect of the participants’ interactional work. The context is then in permanent transformation and negotiation. Moreover, since interindividual interactions never occur in a cultural or institutional vacuum, the context also constitutes an *heterogeneous space* (Vion, 1992; Grossen & Pochon, 1997) which indirectly involves the subject’s experience and cognitions and which, in the course of the interactions, rest simultaneously or successively upon various definitions of the

situations, involve the interactional achievement of different roles, and the reference to multiple types of discourses, situations, identities, etc. In this perspective, cognitions themselves are defined as the result of the construction of temporarily shared states of intersubjectivity in which participants are able to make hypotheses regarding each others' mental states.

Drawing upon this general framework, the aim of this article is to discuss the issue of “ learning to collaborate ” by analysing a peer-tutoring situation aimed at providing help to students with learning difficulties. We shall show that even in a situation in which students were not explicitly taught to collaborate in a certain mode and could interact as they wished, the tutor and the tutee “ learned to collaborate ”. More specifically, we shall show that the tutor and the tutee did not simply display preconstructed roles, but interactively constructed a certain mode of collaboration by defining their tutor's vs. tutee's roles and identities. The analysis of the data will show that the tutor and the tutee created a particular collaborative environment which does not amount to the sum of their individual social and communicative skills, but relies upon the interactional work and shared understanding they achieved in the course of the interaction and upon the institutional context as interactional resources used for making sense of the situation. Furthermore, we shall show that this interactional work resulted in the construction of an implicit didactic contrat according to which the tutor has the role of taking charge of the cognitive work while the tutee's role is to try his best to show his willingness to cooperate and to provide the right answers.

In the next section, we shall briefly present the peer-tutoring pedagogical experiment from which our corpus has been taken and describe the specificity of this teaching-learning situation in comparison with teacher-student interactions. Analysing a corpus composed of a six-lesson cycle between a tutor and her tutee, we shall then focus upon two sets of tasks which are central to the construction of the tutor's and tutee's construction of roles and modes of collaboration: the first set of tasks refers to the tutor's evaluation of her tutee's state of knowledge and diagnosis of her tutee's

difficulties; the second refers to the tutor's teaching and explanations. Finally, we shall show that the issue of "learning to collaborate" raises a question which was classical when the activity "collaborating to learn" was put under scrutiny, namely what is it that is learned? Do students learn to challenge each others' conceptions with the consequence that they re-elaborate their own thinking? Or do they only learn social routines which, on the contrary, lead them to abandon any cognitive work?

### A Peer-Tutoring Pedagogical Experiment at School: Presentation and Specificity of the Situation

Peer-tutoring is a vast research field which has already a long past at both pedagogical and empirical levels (Allen, 1976; Barnier, 1994; Goodlad, 1995; King, Staffieri & Adlegrais, 1998). It is also an interesting domain to confront with research into the role of peer interaction in learning and thinking, given that these two fields have many common points. However, since our scope is to analyse the interactional dynamics at work in peer interactions, we shall not report the scientific literature, but limit ourselves to describing the institutional context in which our corpus has been collected and then briefly show the specificity of this teaching-learning situation.

#### Description of the Pedagogical Experiment, Corpus and Method of Analysis

The peer-tutoring learning situation we shall analyse is extracted from a larger corpus of a study which was carried out in the French-speaking part of Switzerland in a lower secondary school (Bachmann, in progress). This school had recently introduced peer-tutoring as pedagogical remedial measures for helping students with learning difficulties. On a practical level, peer-tutoring took the form of a six-lesson cycle between a tutor and a tutee (sometimes two tutees). Once a week and out of their school timetable, the tutor-tutee dyads met in a classroom which was reserved for peer-tutoring. A supervisor (namely a teacher) was present in order to answer their questions if necessary. The dyads were composed by students who, as a general rule, attended

different school grades, the elder being the tutor. However, this was not always possible, in particular for the students attending the last year of the lower secondary school system. In the latter case, the dyads were usually made up of students belonging to the same classroom. The tutor was a “ good ” student in the discipline he or she had to teach (1), while the tutee was a poor achiever (2). The former was paid six Swiss francs a lesson by the school (3), while the latter paid a contribution of two Swiss francs.

For the scope of this article, we selected the lesson-cycle of a 15 year-old tutor, Melanie, and her 14 year-old tutee, Eric, who had difficulties with German. The reason for our choice was that, at first sight, Melanie displayed what could be labelled “ good ” teaching abilities (or what corresponded to our own stereotype of a “ good ” teacher!). Our first scope was then to go beyond this naive statement and to check the characteristics of the interactive space created by the students. Both students were in the same class, but Melanie came to this school in the course of the academic year, namely three weeks earlier. Five lessons of the cycle were videotaped and fully transcribed (unfortunately one lesson could not be videotaped).

The method of analysis of the corpus consisted firstly of dividing the corpus into sequences defined by the activity carried out by the students, and in subsequences defined by IRF (Initiation-Response-Feedback) format-like routines; secondly, of coding these subsequences according to a coding scale which referred to categories linked to our theoretical framework and our first observations of the corpus; these categories referred for example to the presence of negotiations about the didactic contract, diagnosis sequences, face-work repairs, explanations, indirect questioning; thirdly, of submitting all the occurrences of a same category to a fine-grain analysis.

### The Specificity of the Didactic Contract in the Tutor-Tutee Interactions

In order to account for the specificity of this peer-tutoring situation, we shall draw upon the notion of metacommunicative contract which, according to Rommetveit

(1976; see also Elbers, 1986; Grossen & Perret-Clermont, 1994), refers to the implicit assumptions and taken for granted ground rules at work in any social situation. But since the situation we observed is aimed at teaching vs. learning a body of knowledge (e.g. German), we prefer the term “ didactic contract ” (Schubauer-Leoni & Grossen, 1993) which refers to the contract of communication at work between a *pupil*, a *teacher* and a *body of knowledge to be taught vs. learned*, namely the three poles of a single system.

In the peer-tutoring situation we shall analyse, the didactic contract has two main characteristics which differ from a class didactic contract between a teacher and his (or her) students: The first is that the tripolar system “ tutor - tutee - German ” is put under the control of a supervisor, namely a teacher who teaches languages (German and French). Thus, the peer-tutoring didactic system has not three, but *four poles*, even though the supervisor might not interfere very often. The second is that, as Figure 1 shows, the peer-tutoring didactic system partly overlaps the class didactic system, which, in our case is composed of the class teacher, the students (including Melanie and Eric), and German as a contextualised body of knowledge taught by *this* teacher for *these* students in *this* micro-context at *this* moment of the curriculum.

-> insert Figure 1 about here <-

The overlap between these two didactic systems makes the tutor-tutee didactic system very complex. In fact, *the tutor, Melanie*, becomes her *classmate Eric's teacher*. Thus, on a social level, she has to position herself as a teacher and to enact the tasks which pertain to her new role; and the latter is especially difficult to play since a tutor's role is not that of teaching new bodies of knowledge, but of *repeating and explaining* those which have already been introduced by the class teacher. In other words, a tutor is not supposed to substitute the class teacher, and this expectation implicitly obliges him or her to have an accurate overview of the school curriculum.

However, with her new role, Melanie also becomes the *supervisor's student and apprentice* as regards the activity of teaching. As a legitimate peripheral participant in

the teaching practice (Lave & Wenger, 1991), she is now accountable for her actions towards the tutee. Moreover, on a institutional level, she becomes a member of a wider community, that of the tutors who, within this school, are publicly recognised as “ good ” students in a certain taught discipline.

If we now try to describe the situation from an external point of view and prior to any analysis of the actual interactions, we can hypothesise that for the tutor, these changes of roles and identities imply that: — on a cognitive and discursive level, she must show herself able to master the body of knowledge at stake and to explain it to her tutee; — on an interactional level, she must be able to guide and plan the interaction, to keep control over the situation, to motivate and encourage her tutee, to maintain a pleasant interpersonal relationship, etc. In fact, failing to master even part of these tasks could pose a threat on her own face and that of her tutee, can call into question her legitimacy as representative of the tutors’ group, and, more concretely, lead her to lose her job!

As regards *the tutee Eric*, the situation is no less complex. As a tutee, he becomes the student of three teachers: Melanie, the supervisor and the class teacher. In the tutoring situation, he is subjected to a double asymmetry and is situated at the crossroads of three possible ways of teaching German or, to put it better, of contextualising this body of knowledge within a didactic system. On an institutional level, his status, like that of Melanie, changes and his student identity acquires new facets which challenge the previous one, since he is now a member of a group (the tutees) which is institutionally known to be composed by students who are “ poor ” in a discipline.

This brief preliminary analysis shows that the complexity of the peer-tutoring situation is not only due to the various tasks to be carried out *within* the situation, but also to the meaning this teaching-learning activity takes on *outside* the situation, that is to say within the institutional school context. It also enables us to realise that becoming a tutor or a tutee relies upon the capability of simultaneously managing different

didactic systems, roles and identities, and in particular upon the capacity of creating and maintaining the asymmetry and complementarity of roles which are necessary for any didactic system to reach its goals.

#### Construction of Asymmetry and Complementarity in the Tutor-Tutee Interactions

In this section, we shall focus upon two sets of tasks which appear to be central in the tutor's activity and illustrate the processes through which the tutor and the tutee negotiate their new roles and identities and, little by little, establish a mode of collaboration. The first set of tasks is that of evaluating the tutee's state of knowledge and making a diagnosis of his difficulties; the second is that of teaching and explaining certain German notions (vocabulary, grammar) which have already been studied in class. As a matter of fact, these two sets of tasks do not cover all aspects of the tutor's activity, but seem to be the most relevant with respect to the issue of "learning to collaborate". We shall first show that one important aspect which contributes to the construction of the tutor-tutee asymmetrical and complementary roles and, thus, to a certain mode of collaboration is the tutor's increasing capability to build herself a representation of the tutee's competence by referring both to her own knowledge of the school curriculum and to previous activities carried out with the tutee. We shall then focus upon the tutor's indirect questioning and the tutee's indirect strategies in order to show that the construction of the tutor's vs. tutee's roles and identities, and the resulting mode of collaboration rely upon the active contribution of both students.

#### Evaluating the Tutee's State of Knowledge and Making a Diagnosis of his Difficulties

As we mentioned before, being a tutor implicitly implies having an accurate overview of the school curriculum in the taught discipline. However, gaining such an overview depends upon a number of factors a tutor cannot control: the tutee's class grade, the moment of the academic year, the teaching rhythm in the class didactic system, the teacher's personal planning, the programme taught by preceding teachers,

etc. Now, without a representation of the contents the tutee is already supposed to know, the tutor might have difficulties in determining the contents he or she should teach and to feel legitimate in having certain expectations towards the tutee. This uncertainty might then make it difficult for the tutor to take on his or her teacher's role. In Melanie's case, it might be even more difficult since, as we already mentioned, she is new in the school. What does then the analysis of our corpus show?

As a matter of fact, the corpus contains many traces of the tutor's uncertainty. The analysis shows in particular that when the tutee answers one of her questions with a mistake, a silence or a declaration of ignorance (" I don't know "), Melanie constantly has to decide whether Eric *does not know* or whether *he did not yet learn* this specific content, as illustrated in Excerpt 1 (4):

*Excerpt 1 (Lesson 3)*

The tutee is asked to translate from French to German a sentence containing the past participle of the verb " to steal " (" gestohlen ").

E 250 it's the past simple found the- the money gesX oh I don't know X . I never saw this before then  
gestoe-

M 251 gesto-gestohlen you never saw this'

E 252 yeah

After having explicitly stated his ignorance, Eric (E250) claims that he never learned the past participle " gestohlen " at school, and Melanie (M251) does only ask for confirmation without putting his argument in jeopardy. In other words, at this moment of their interactions, her position does not allow her to cast any doubt upon Eric's claim. As a consequence, the tutee keeps control over the contents which can be taught to him and manages to preserve a self-presentation which prevents him from appearing ignorant, or having forgotten what he should already know.

However, confronted with this uncertainty, the tutor proceeds to an evaluation of the tutee's state of knowledge which has at least three interrelated functions:

The first function is to enable the tutor *to confine within the limits of her tutor's role*, by taking up already taught contents and avoiding teaching new ones. Being unable to evaluate the tutee's state of knowledge may provoke a rupture of this implicit rule of the didactic contract and cause uneasiness, as Excerpt 2 shows:

*Excerpt 2 (Lesson 4)*

Eric does not find the German translation of the word “ to leave for a trip ” which is part of a sentence prepared by the tutor.

M 303 apparently you didn't learn the verb or you learned it I think

E 304 which verb'

M 305 abreisen you surely learned it

E 306 abreisen' no

M 307 abreisen is to leave for a trip, no' you don't know either (smiles) sorry I don't know, I don't know the vocabulary you know so err

Here again, the tutee accounts for his non-response by claiming that he did not learn the word. The tutor's apology (M307) may then be considered as repairing the threat she posed to the tutee's face by asking him a question which did not enter his zone of competence. But, by asking her question, the tutor also presents herself as ignoring the school curriculum, with the consequence that the tutee might also call into question her legitimacy to teach him and to evaluate his productions. The tutor's repair is thus also a way of protecting her own face and preserving her identity as a legitimate tutor.

The second function of the tutor's evaluation of the tutee's state of knowledge is to *establish an intersubjective basis* which enables the tutor to guide the tutee's learning and, by the same token, to plan the lessons on short and long term scales, as illustrated by Excerpt 3:

*Excerpt 3 (Lesson 5)*

Melanie asks Eric to translate a sentence from French to German. Eric's answer is correct.

M 618 he has found (Eric has written the correct answer) oh this I think you have understood well .  
you you just need, what you need it's that you need to learn err you'll have to learn the  
irregular verbs won't you'

The glide from Melanie's evaluation (" I think you have understood well ") to her directive concerning the contents Eric should learn (" you'll have to learn the irregular verbs ") shows that being able to evaluate the tutee's state of knowledge might be a condition which enables the tutor to guide the tutee towards the acquisition of specific contents. Consequently, it is an intrinsic part of the interactional accomplishment of the tutor's role.

The third function of the tutor's evaluation of the tutee's state of knowledge is to enable the tutor to build herself a representation of the causes of the tutee's difficulties or, to put it differently, *to make a diagnosis of his difficulties*:

*Excerpt 4 (Lesson 3)*

Eric carried out an exercise in which he had much difficulties in making the adjectives agree with the correct cases. He is then asked to translate a series of sentences which require the use of cases, but contain no adjectives. He does it rather correctly.

M 692 so... actually the problem is- is rather the- as soon as you have an adjective then you don't  
know where to put it anymore

E 693 yeah yeah sometimes I mix up [so act-]

M 694 [xx]

E 695 -ually the declensions of the adjective

M 696 yeah

E 697 and of the determinant

M 698 err (proposes another exercise)

By pointing to a content which causes difficulties (the adjectives) and to a tutee's procedure (M692: " then you don't know where to put it anymore "), Melanie allows herself to make a diagnosis of the tutee's difficulties and indirectly to evaluate his

production. She creates an asymmetry which is not called into question by the tutee and thus can be considered to be interactionally accomplished.

Diagnosing the causes of the tutee's difficulties also proves to go hand in hand with planning, as Excerpt 5 shows:

*Excerpt 5 (Lesson 4)*

During this lesson, Eric often lacked the vocabulary necessary to translate a series of sentences proposed by Melanie. Near the end of the lesson, Melanie gives him a list of words:

M 652 and then here these are the- the words you never remember . you'll have to learn them

E 653 mm (nods)

M 654 plus the first vocabulary err we did in . in the book you know when we had a written proof, but apparently you don't remember them very well

After the exercise she submitted to Eric, Melanie is not only able to evaluate her tutee's state of knowledge, but also to attribute a cause to his difficulties (M654: " apparently you don't remember them very well ") and to propose a remedial measure. The choice of the latter (learning vocabulary), together with other observations in the corpus, show that she does not seem to attribute the tutee's difficulty to an internal cause, such as " lack of memory " (or at least not only), but rather to a lack of work. Her reference to the vocabulary which has been studied in the class didactic system also testifies that she now feels entitled to make an explicit evaluation of her tutee's state of knowledge. Moreover, the way in which she delivers her diagnosis contains a mitigator (M654: " not... very well ") which, as Bergmann (1992) observes in psychiatrist-patient first encounters, may be seen as a sign indicating that the discussed topic is " delicate " or, in other words, threatens the listener's face and is liable to disturb the partners' relationship.

The preceding examples show that as the tutor-tutee interactions develop, the tutor becomes more able to gain a representation of the tutee's state of knowledge and difficulties. This may be due to different reasons:

— one reason is that, since she is also the tutee's classmate, the tutor sometimes knows which contents have already been taught in the class didactic system, and thus can refer to her own experience as a student. For example, in Excerpt 5 (see above), Melanie (M654) asserts that Eric should know by referring to a written proof they had in class;

— a second reason is that the tutor can draw upon her own knowledge of the broader school curriculum in order to decide whether a given content should, or should not, be known by the tutee. In other words, the tutor's knowledge of the curriculum is used as an interactional resource in order to establish a state of intersubjectivity with her tutee and to create an asymmetry in their roles;

— a third reason is that, with the sequentiality created by their own interactions, Melanie can refer to activities which were previously carried out in the situation itself.

Excerpt 6 illustrates the two latter aspects:

*Excerpt 6 (Lesson 4)*

M 335 so to ask what is it'

E 336 wiederhol- no this is to question (9 sec with a sigh)

M 337 this I am sure that you know it also I am sure that you have learned it because-

E 338 yeah yeah no this I know it . so err (11 sec) I- I don't see xx to ask (6 esec) ver- no

M 339 I am sure that you know it, we already saw it you had difficulty two weeks ago with this word

E 340 yeah yeah (...)

By referring both to her broader knowledge of the school curriculum and to their previous lessons, Melanie (M337, M339) explicitly asserts the tutee's state of ignorance, while Eric does not challenge the tutor's authority but on the contrary makes his ignorance explicit. Here again, by showing that she knows what Eric should know, Melanie positions herself as a teacher who is entitled to expect some basic competence from his student, while Eric, by accepting the tutor's evaluation, actively contributes to create the asymmetry and complementarity which characterise any teacher-learner interaction.

To sum up, under the effect of the interactional work and by referring to the school and class curricula and to their previous activities, the tutor seems to consider herself as more able to evaluate the tutee's state of knowledge. She also presents herself as somebody who has a representation of the tutee's difficulties, with the consequence that she is not always prone to attribute the tutee's ignorance to the fact that the content has not been taught in the class didactic system. In other words, her own certainty concerning the tutee's state of knowledge and causes of difficulties, and the tutee's acknowledgement contribute to the construction of the tutee's and tutor's roles and increase their asymmetry and complementarity.

Through the interactional work and the tutor's use of the school and class curriculum as interactional resources, the tutor and the tutee construct an asymmetric and complementary system of roles and thus learn a certain mode of collaboration. Hence, we cannot claim that the tutor's and tutee's actions and talk simply demonstrate their individual communicative skills or their preconstructed representations of teacher-student interactions. In fact, on a theoretical level, such a claim would amount to neglect the interactional work and to consider the context as a shutter which under some conditions releases a preexisting individual competence.

#### Teaching and Explaining Already Taught German Notions

The negotiation and construction of the tutor's and tutee's roles can be observed during another set of tasks which institutionally define the tutor's role: teaching bodies of knowledge (vocabulary, grammar, etc.) which have already been taught in class, and explaining them to the tutee. In the completion of these tasks, questioning appears to be the tutor's central activity, as it is also in teacher-student interactions. In fact, the analysis of the corpus shows that, most of time the tutor does not directly supply her tutee's ignorance or error by providing him with an answer or by correcting his error, but uses *indirect questioning* (or cued elicitations in Mercer's terms; see Mercer, 1995) in order to guide the tutee towards the expected answer. Let us see how the interactional process makes this indirect questioning possible.

Since the major part of the lessons is dedicated to the completion and correction of exercises prepared by the tutor, the latter uses indirect questioning especially when the tutee makes an error. Her questioning may then follow more or less complex routines. Excerpt 7 gives an illustration of a rather complex routine:

*Excerpt 7 (Lesson 5)*

The tutee tries to translate the German sentence “ He asked me if she was well ” (in German: “ er hat mich gefragt ob es ihr gut geht ”), but the subordinate sentence contains a difficulty he cannot bypass, namely the idiomatic expression “ es geht ihr gut ”.

M 218 you don't know anymore, well listen, I am helping you for this one because apparently you have difficulties . so . xxxxxx yeah it's right ob . no here after this it becomes wrong, how do you say how how are you'

E 219 wie geht err geht es dir

M 220 yeah and how do you say she is well'

E 221 euh ah sie geht

M 222 no dat- what was the subject before'

E 223 es geht sich sir no ihn well

M 224 did you learn the pronouns' (laughs)'

E 225 yes yes I learned ihr

M 226 well

E 227 oh yeah it's in dative

M 228 es geht ihr gut

E 229 oh es geht ihr gut

M 230 this is she is well . so here how do you say if she is well because what is this' it's a'

E 231 it's a err con- err ooh

M 232 yeah

E 233 conjunction yeah

M 234 yeah it's a conjunction

E 235 so if she is well is'

M 236 ob sie gut- ob es

E 237 oh yeah yeah this yeah yeah then es then I put the pronoun after, i- err ihr

M 238 yeah

E 239 and gut after anyway'

M 240 yeah

E 241 gut . geht

M 242 yeah

This long excerpt may be divided in the following way:

— It begins by a one-turn *opening sequence* (M218) which follows the tutee's difficulties in translating a subordinate sentence. In this opening sequence, the tutor takes the control of the interaction by giving an explicit evaluation of the tutee's state of knowledge and production, announcing that she will help him, justifying the reason for her help, pointing to the tutee's error and questioning him. In so doing, she simultaneously (a) defines her own role (which, from her own perspective, appears then to be that of evaluating the tutee's production and helping him); (b) asserts her capacity to carry out the task and hence her identity as a competent and legitimate tutor; (c) takes the execution of the task in charge by planning it. By the same token, Eric is put in a complementary position he contributes to create by entering into the type of dialogue initiated by Melanie.

— After this opening sequence, the remainder of the excerpt may be divided into *three subsequences*: in the first (M218-M220), the tutor reduces the level of difficulty of the task by asking the tutee to translate a German idiomatic expression (" wie geht es dir? ") students learn in their early school curriculum; in the second subsequence (M220-M230), she increases a little bit the level of difficulty by asking him to translate the same sentence in the third person in the singular of the indicative form (" es geht ihr gut "); in the third sequence (M230-M242), she reintroduces the initial subordinate sentence (" if she is well "; in German " ob es ihr gut geht ").

On a pragmatic level, the effects of this complex questioning routine are twofold:

(a) the tutee finally succeeds in providing the correct answer. However, a closer look to the interactional machinery of this excerpt calls into question the idea that the final correct sentence has actually been provided by the tutee. In fact, while in the first subsequence, the tutee directly gives the correct answer (“ wie geht es dir ”), in the second, he repeats an answer which has been provided by the tutor (M228) and in the third, he initiates a move (E235: “ so if she is well is ”) which he then interrupts, with the consequence that the tutor gives him a new clue by formulating the beginning of the subordinate sentence (“ ob sie gut- ob es ”). At that point, the tutee only has to complete the sentence! Hence, the formulation of the subordinate sentence “ ob es ihr gut geht ” appears to be a *joint* product of the tutor’s and tutee’s collaboration in a particular type of discourse and the result of the interactional accomplishment of their roles.

(b) Another consequence of the tutor’s planning and guidance is that during the five lessons which were videotaped, the tutee never produced a complete sentence in German. Moreover, the production of German sentences is so broken up that only a careful reading of the corpus enables the reader to reconstruct the complete sentence which is being translated. This observation raises an issue we shall not develop here: what does, in these conditions, the activity “ learning German ” mean to the tutee?

These two series of observations might give the impression that the tutee is a passive participant who is led by the tutor’s activity. It could also lead us to stress the tutor's pragmatic skills as if they were individual competence which were displayed in this particular situation. One can thus ask what is the tutee’s contribution to the construction of the asymmetry and complementarity of their roles. As a first answer to this question, the analysis of the corpus shows that the tutee’s participation in the dialogue changes over time. While in the first lesson, Eric asked direct questions to Melanie when he did not understand (or when he was unable to answer) and often received direct answers, in the next lessons, he developed *indirect strategies* in order to obtain information or to be guided towards the expected answer. One of these strategies consists of trying different answers one after the other, as Excerpt 8 shows :

*Excerpt 8 (Lesson 3)*

The tutee is asked to translate from French to German a complex sentence which begins by “ the eldest children of my best friend ” (in German “ die älteren Kinder meiner besten Freundin ”).

E 447 so die- die . xx . the very old child [oh no]

M 448 [no no]

E 449 der alte . then die-die . oh älter das xx älteres

M 450 what err . what number is it, is there only one child or what'

E 451 Kinder err yeah' (...)

After Melanie's negative feedback (M448), Eric (E449) formulates another answer which is not followed by any more feedback . He then tries all the articles (“ der... die... das ”) and also varies the gender of the adjective “ alt ” and its agreeing with the noun. The tutee's intervention has various pragmatic effects: (a) on a discursive level, his enumeration is followed by Melanie's turn (M450) which contains precious clues to find the right answer; (b) on a face-work level, the tutee's strategy can be seen as a way of giving the impression that he is trying his best to answer and is actually on the point of finding the right answer. In this excerpt, it seems to work, since the tutor does not make an explicit statement about the tutee's ignorance; (c) on an interactional level, the tutee gives the impression of being fully involved in the interaction, of actively participating in the lessons and in the tutor's effort to help him. As a matter of fact, the tutor does not call into question his “ good will ” and cooperation.

Other observations show that the tutee can also display more direct strategies for eliciting supplementary clues. Except direct questioning, a tutee's pervading strategy consists of proposing a “ riddle-like routine ”, as the one illustrated in Excerpt 9:

*Excerpt 9 (Lesson 4)*

The tutee is asked to translate “ the expensive records ” from French to German, but he does not remember the word “ expensive ”.

E 116 Platten (21 sec) der err billig is cheap and expensive. is. (4 sec)

- M 117 the contrary (3 sec)
- E 118 the contrary (laughs) yeah I know this
- M 119 what is it' I'm sure that you learned it too
- E 120 yeah yeah xx there is a U in it
- M 121 mm, (nods) (3 sec)
- E 122 no .
- M 123 it begins with a T, doesn't it remind you'
- E 124 xx . oh I'll find . T trtr . tr (4 sec) no no I don't see,
- M 125 teuer

In Excerpt 9, the “ riddle-like routine ” is initiated by the tutee (E120) and taken up two turns later by the tutor (M123) who, in so doing, gives a chance to the tutee to find the answer. Finally, as time runs out (like in a TV quiz?), the tutor (M125) provides the answer. This observation, together with others, shows that the tutee plays an active role in the management of the tutor's guiding strategies. To put it roughly, it is not simply the tutor who “ knows ” how to guide the tutee (or “ has the competence ”, “ is able ”, etc.), but also the tutee who “ knows ” how to monitor the tutor's guiding. In this perspective, the tutor's mode of questioning cannot simply be considered as a sign of the mastery of complex discursive forms, but a response to the tutee's own discourse and framing. As a consequence, the tutor's guiding strategies can be considered to be the result of an *interactional* process which leads to the — always temporary — construction of an asymmetric and complementary role system.

In this specific case, the type of asymmetry and complementarity which is interactively accomplished leads to the following double-sided outcome:

— On the one hand, the tutor gains a stronger control over the situation and the tutee's actions by planning the activities to be carried out, gaining a more accurate representation of the tutee's state of knowledge, diagnosing the tutee's difficulties, referring to previous activities and contents, developing guiding strategies which frame the tutee's activity, and asserting her own competence. However, while all these

features seem, at first sight, to meet the qualities which might be expected from a “ good ” tutor, this assumption might be called into question.

— On the other hand, in fact, the tutee’s activity is constrained within a frame which, as has been shown, favours the production of a correct answer, but does not necessarily elicit a reflective stance from the tutee. Under the effect of the interactional work, the course of the tutee’s actions appears to be so tightly monitored that the tutor-tutee interactions seem to lead to a restriction of the tutee’s thinking activity, with the tutor assuming the largest part of the cognitive work associated with the various tasks, and finding frequent opportunities to reflect upon the body of knowledge she has to teach. Given this division of cognitive work and according to previous results of research into the "collaborating to learn" issue and into peer tutoring, we would expect the tutor to learn more from this situation than the tutee. But, of course, our data do not allow us to make such claim.

### Conclusions

The analysis of the interactions between Melanie and Eric showed that the tutor's and tutee's roles are not completely predefined by the institutional context in which their interactions take place, but that the tutor and the tutee “ learned to collaborate ” by developing a mode of collaboration which was interactively achieved. Little by little, the tutor and the tutee constructed an asymmetrical and complementary system of roles, with on the one hand, the tutor questioning the tutee, evaluating his production, planning his actions, guiding him, asking for justifications in case of ignorance, etc., and on the other hand, the tutee showing himself willing to cooperate, trying to answer the tutor's questions and requests, accepting to be evaluated and to receive instructions, making attempts to elicit clues from the tutor, hiding his ignorance, etc. Thus, the students’ interactions constitute an heterogeneous space which is made of various elements, such as role management, face-work, cognitive abilities, discursive coordinated strategies, management of the situation and tasks.

More specifically, we showed that one of the tutor's major activity, namely evaluating the tutee's state of knowledge and diagnosing his difficulties, is achieved by a step by step construction of intersubjective states which is contingent upon the interactional machinery and thus relies upon the tutee's active contribution. We also showed that the tutor developed indirect questioning routines (resembling Socratic types of dialogues) which elicited the tutee's right answer, while the tutee, on his part, used indirect strategies in order to elicit the right answer from the tutor. What is achieved then is a specific communicative contract according to which the tutor takes the responsibility of the cognitive work, while the tutee tries his best to cooperate and fill the slots prepared by the tutor's questioning strategies. However, the intertwining between the tutor's and the tutee's activities does not allow us to see the development of these routines and strategies as a mere emergence of individual communicative or social skills. We would rather claim that they are fundamentally a mixture of cognitions and skills which have been developed in other situations and the product of the interaction itself. In this regard if we consider the way in which Melanie and Eric managed their relationships throughout their interactions, the type of dialogues they constructed, the identities (or fronts) they put on stage, their co-orientation towards the activity of teaching vs. learning, we cannot help linking them up with the metacommunicative contracts (or ground rules) which organise teacher-student relationships within the school institution. It could then be argued that the mode of collaboration which was observed in our corpus does not only result from interactional work, but is also a sign of more general representations the tutor and the tutee have on a teaching-learning situation, on teacher's vs. student's roles, and on German as a body of knowledge to be taught vs. learned. Without disagreeing completely with this statement, we would however reformulate it in a more dialogical stance and claim that the reference to the institutional context (for example to the school curriculum or to the class activities) is not a simple "social cognition" (or pragmatical knowledge) the students retrieve when they think it to be relevant, but interactional resources which are elicited by the

particular configuration of the interaction as a given moment. In this respect, cognitions themselves are part of the heterogeneous space which is created by the interactions between two or more individuals.

The intertwinement between collaborating and learning finally leads us to a question which was fundamental in the “ collaborating to learn ” issue : *what it is that is learned ?* In fact, the results showed that the students' mode of collaboration did not result in an equitable distribution of the cognitive work, since the tutor took charge of the major part of it. We can therefore ask whether “ what is learned ” includes cognitive dimensions and appropriation, or whether it is only limited to the learning of a series of social routines. The question is certainly still open and prevents us from concluding that teaching the students how to collaborate and talk together would be a way of increasing appropriation. In fact, in the light of our results, we can wonder whether teaching certain modes of collaboration would not make us run the risk of isolating the taught forms collaboration and talk from more general social and institutional practices, and hence of treating them as if they only consisted of applying a series of social routines. Teaching given modes of collaboration and talk is not an end in itself and, from the student's side, learning social routines cannot be fully equated with appropriating a given body of knowledge and making sense of it.

#### Footnotes

(1) To be a tutor, the student was actually required to have a mark of 5 (out of a scale varying from 1 to 6) in the taught discipline.

(2) Let us note that in the major part of peer-tutoring pedagogical experiment, it is generally the tutor who is the “ poor ” student.

(3) 6 Swiss Francs = 4 \$ or 2.5£

(4) See appendix 1 for the norms of transcript and appendix 2 for the original French transcripts.

## References

- Allen, L. A. (1976). Children as teachers. Theory and research on tutoring. New-York : Academic Press.
- Barnier, G. (1994). L'effet-tuteur dans une tâche spatiale chez des enfants d'âge scolaire. Doctoral dissertation, University of Provence, Aix-En-Provence.
- Bergmann, J. (1992). Veiled morality : Notes on discretion in psychiatry. In P. Drew, & J. Heritage (Eds.), Talk at work: Social interaction in institutional settings (pp. 137-162). Cambridge : Cambridge University Press.
- Elbers, E. (1986). Interaction and instruction in the conservation experiment. European Journal of Psychology of Education, 1, (1), 77-89.
- Golay Schilter, D., Perret, J.-F., Perret-Clermont, A.-N., & de Guglielmo, F. (1999). Sociocognitive interactions in a computerised industrial task. In K. Littleton & P. Light (Eds.), Learning with computers (pp. 118-143). London, New York : Routledge.
- Goodlad, S. (1995). Students as tutors and mentors. London: Kogan Page.
- Goodwin, C., & Duranti, A. (1992). Rethinking context : An introduction. In A. Duranti, & C. Goodwin (Eds.), *Rethinking context* (pp. 1-42). Cambridge : Cambridge University Press.
- Grossen, M., & Perret-Clermont, A.-N. (1994). Psycho-social perspective on cognitive development : Construction of adult-child intersubjectivity in logic tasks. In W. de Graaf, & R. Maier (Eds.). Sociogenesis reexamined (pp. 243-260). New York : Springer.
- Grossen, M., Iannaccone, A., Liengme, M.-J., & Perret-Clermont, A.-N. (1996). Actual and perceived expertise: The role of social comparison in the mastery of right and left recognition in novice-expert dyads. Swiss Journal of Psychology, 55 (2-3), 176-187.
- Grossen, M., Perret-Clermont, A.-N., & Liengme Bessire, M.J. (1997). Construction de l'interaction et dynamique socio-cognitives. In M. Grossen, & B. Py (Eds.). *Pratiques sociales et médiations symboliques* (pp. 221- 247). Berne : Peter Lang.
- Grossen, M., & Pochon, L.-O. (1997). Interactional perspective on the use of the computer and on the technological development of a new tool : The case of word processing. In L. Resnick, R. Säljö, C. Pontecorvo, & B. Burge (Eds.), Discourse, tools, and reasoning : Essays on situated cognition (pp. 265-287). New York : Springer.
- Grossen, M., & Py. B. (Eds.). Pratiques sociales et médiations symboliques. Bern : Peter Lang.

- King, A., Staffieri, A., & Adelgais, A. (1998). Mutual peer-tutoring: Effects of structuring tutorial interaction to scaffold peer learning. Journal of Educational Psychology, *90* (1), 134-152.
- Lave, J., & Wenger, E. (1991). Situated learning. Legitimate peripheral participation. Cambridge : Cambridge University Press.
- Linell, P. (1998). Approaching dialogue. Talk, interaction and contexts in dialogical perspectives. Amsterdam : John Benjamins.
- Littleton, K., & Light, P. (1999). Learning with computers. London, New York : Routledge.
- Marková, I., Graumann, C., & Foppa, K. (Eds.). (1995). *Mutualities in dialogue*. Cambridge : Cambridge University Press.
- Mercer, N. (1995). The guided construction of knowledge. Talk amongst teachers and learners. London : Multilingual Matters.
- Mercer, N. (1998). Development through dialogue: A socio-cultural perspective on the process of being educated. In A. C. Quelhas, A.C., & F. Pereira (Eds.), Cognition and context. Special issue of *Análise psicológica*. Lisboa : Instituto superior de psicologia aplicada.
- Perret-Clermont, A.-N., Perret, J.-F., & Bell, N. (1991). The social construction of meaning and cognitive activity in elementary school children. In L. B. Resnick, J. M. Levine & S. D. Teasley (Eds.), Socially shared cognition (pp. 41-62). Washington, DC : American Psychological Association.
- Pontecorvo, C., Ajello, A.M., & Zucchermaglio, C. (1991). Discutendo si impara. Interazione sociale e conoscenza a scuola. Roma : La Nuova Italia Scientifica.
- Rommetveit, R. (1976). On the architecture of intersubjectivity. In L.H. Strickland, K.J. Gergen, & F.J. Aboud (Eds.), Social psychology in transition (pp. 163-175). New York : Plenum Press.
- Schubauer-Leoni, M. L., & Grossen, M. (1993). Negotiating the meaning of questions in didactic and experimental contracts. European Journal of Psychology of Education, *8* (4), 451-471.
- Teasley, S. D. (1995). The role of talk in children's peer collaborations. Developmental Psychology, *31* (2), 207-220.
- Teasley, S. D. (1997). Talking about reasoning: How important is the peer in peer collaboration? In C. B. Resnick, R. Säljö, C. Pontecorvo, & B. Burge (Eds.), Discourse, tools, and reasoning. Essays on situated cognition (pp. 361-384). Heidelberg : Springer Verlag.
- Vion, R. (1992). La communication verbale. Analyse des interactions. Paris : Hachette.

- Wegerif, R., & Mercer, N. (1997). A dialogical framework for researching peer talk. In R. Wegerif & P. Scrimshaw (Eds.), Computers and talk in the primary classroom (pp. 49-61). Clevedon : Multilingual Matters.
- Wegerif, R., Mercer, N., & Rojas-Drummond, S. (1999). Language for the social construction of knowledge: Comparing classroom talk in Mexican preschools. Language and Education, 13(2), 133-150.

Appendix 1: Norms of Transcription

*Underlined:* The words or sentences on which students are working.

*Overlaps* [ ]

[ ]

and [[.....]]

[[ ]] when two overlaps or more are next one to the other

*Intonation markers*

': rising intonation (not necessarily a question)

, : falling intonation

*Pauses*

a dot = 1 sec two dots = 2 sec

*Unintelligible syllables*

x: one syllable unintelligible

xx: approximately two syllables unintelligible

*Latches between two turns*

end of turn 1: =

beginning of turn 2: =

*Interruption by the speaker him/herself or by the hearer: -*

## Appendix 2 : Original French transcripts

*Excerpt 1 (Lesson 3)*

- E 250 c'est le prétérit trouva le-l'argent gesX ah je sais pas X . ça j'ai jamais vu alors gestoe-  
 M 251 gesto-gestohlen ça t'as jamais vu'  
 E 252 ouais

*Excerpt 2 (Lesson 4)*

- M 303 apparemment tu n'as pas appris le verbe ou bien tu l'as appris je pense  
 E 304 quel verbe'  
 M 305 abreisen tu l'as sûrement appris  
 E 306 abreisen' non  
 M 307 abreisen c'est partir en voyage non tu sais pas non plus (sourire) désolée je sais pas je sais pas le vocabulaire que tu sais alors euh

*Excerpt 3 (Lesson 5)*

- M 618 il a trouvé (Eric a écrit la réponse correcte) ah ça je crois que tu as bien compris . faut faut juste, ce qu'il faut c'est qu'il faut apprendre euh il faudra apprendre les temps forts hein

*Excerpt 4 (Lesson 3)*

- M 692 voilà ... en fait le problème c'est- c'est plutôt le- dès que t'as un adjectif après tu sais plus ce qu'il faut mettre  
 E 693 ouais ouais des fois je confonds [alors en=  
 M 694 [xx]  
 E 695 =fait les déclinaisons d'adjectif  
 M 696 ouais  
 E 697 et puis de déterminant  
 M 698 euh (propose un autre exercice)

*Excerpt 5 (Lesson 4)*

- M 652 pis alors là ça c'est les les mots que tu te rappelles jamais.faudra que tu les apprennes  
 E 653 mm (approbation)  
 M 654 plus le. le. premier vocabulaire heu qu'on a fait dans. dans le livre tu sais où on a fait un TE là-dessus mais. apparemment tu ne t'en rappelles pas tellement.

*Excerpt 6 (Lesson 4)*

- M 335 alors demander c'est quoi'  
 E 336 wiederhol- non ça c'est questionner (9 sec avec un soupir)  
 M 337 ça je suis sûre que tu le sais aussi, je suis sûre que vous l'avez appris parce que-  
 E 338 ouais ouais non ça je le sais . alors heu (11 sec) je je vois pas. xx demander (6 sec) ver- non  
 M 339 je suis sûre que tu le sais, on l'a déjà vu tu avais eu de la peine il y a deux semaines avec ce mot  
 E 340 ouais ouais (...)

*Excerpt 7 (Lesson 5)*

- T 218 tu ne sais plus, bien écoute je t'aide pour celle-là parce qu'apparemment tu as de la peine . alors . XXXXXX ouais c'est juste ob . non là après ça devient faux, tu dis comment comment vas-tu'  
 E 219 wie geht euh geht es dir  
 M 220 ouais puis comment tu dis elle va bien'  
 E 221 euh ah sie geht  
 M 222 non dat- c'était quoi le sujet avant'  
 E 223 es geht sich sir non ihn quoi  
 M 224 tu as appris les pronoms (rires)'  
 E 225 oui oui j'ai appris ih  
 M 226 voilà

- E 227 ah ouais c'est au datif  
M 228 es geht ihr gut  
E 229 ah es geht ihr gut  
M 230 ça c'est elle va bien . alors là si elle va bien tu dis comment parce que ça c'est quoi' c'est une'  
E 231 c'est une euh con- euh ach  
M 232 ouais  
E 233 conjonction ouais  
M 234 ouais c'est une conjonction  
E 235 alors si elle va bien c'est'  
M 236 ob sie gut ob es  
E 237 ah ouais ouais ça ouais ouais donc es donc je mets le pronom après, i- euh ihr  
M 238 ouais  
E 239 et gut après quand même'  
M 240 ouais  
E 241 gut . geht  
M 242 ouais

*Excerpt 8 (Lesson 3)*

- E 447 alors die- die . xx . le très vieil enfant [ah non]  
M 448 [non non]  
E 449 der alte . alors die-die . ah älter das xx älteres  
M 450 c'est quel euh . c'est quoi comme nombre, y' en a qu'un d'enfant ou bien'  
E 451 Kinder euh ouais' (...)

*Excerpt 9 (Lesson 4)*

- E 116 Platten (21 sec) der heu billig c'est bon marché puis cher . c'est. (4 sec)  
M 117 le contraire (3 sec)  
E 118 le contraire (rire) ouais ça je sais  
M 119 c'est quoi' je suis sûre que tu l'as appris aussi  
E 120 ouais ouais xx il y a un U dedans  
M 121 mm, (approbation) (3 sec)  
E 122 non .  
M 123 ça commence par T ça te dit toujours rien'  
E 124 xx . ah je vais trouver . T trtr . tr (4 sec) non non je ne vois pas,  
M 125 teuer