The Interactive Construction of Heterogeneity in the Classroom

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INTRODUCTION

In this paper I will be concerned with differences between students in classrooms. The research I report on is part of a larger project in which linguists, psychologists, anthropologists, and educationalists collaborate to study processes of inclusion and exclusion at the level of interaction in the classroom. We have gone into the classroom and have recorded the interactions that occur there between teacher and students and between students, in order to get a grip on the interactive processes of inclusion and exclusion that occur in the classroom and on the aspects that play a role in these processes.

The project focuses on multi-ethnic classes in The Netherlands and aims to study students’ differences in participation in classroom interaction and to see whether these differences are related to linguistic, ethnic, cultural, and gender differences. Figures on educational achievement in The Netherlands show that in the Dutch educational system, students from the immigrant population do not perform as well as native Dutch students. Lowest achievers are the Moroccan students, in particular Moroccan boys (Fase & Kleijer, 1996; Leeman & Phalet, 1998).^1^ This paper reports on the first phase of this research. It presents an analysis of the ways in which diversity in the classroom is brought about. I will analyze interactional classroom data to demonstrate different interactional processes of constructing heterogeneity in the classroom and argue how the diversity constructed at the local level of interaction can be related to diversity at the more global level of linguistic, ethnic, cultural, and gender diversity. I will analyze interactions between the teacher and individual students, and between the teacher and the class in terms of students’ participation in different activities, and their opportunities

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for participation in interaction with the teacher. It is clear that students bring differences to the classroom in terms of linguistic and cultural competencies, and in terms of ethnic and gender identities. In this paper, however, I will take the social-constructionist perspective, that relevant differences between students are constructed in the interaction. I want to present a method for studying differences in educational achievement in terms of micro turn-by-turn interaction processes. I will argue that this approach does not render linguistic, cultural, ethnic or gender differences irrelevant, rather it looks at whether and how participants in interaction make these or other differences relevant.

PARTICIPATION AND IDENTITY

Different Identities in Interaction

In this section, I want to elaborate on the interactional construction of differences in terms of participation in classroom activities and students’ different social identities that are constructed in this process. I will illustrate my argument with data from a mathematics class. The students in this class are 12–13 years of age and in their first year of secondary education. In this fragment, the teacher starts with the correction of the homework:

Transcript 1 (KL/WI/091199/45-113) (These data were translated from Dutch into English. The original Dutch transcript appears below the translation. See Appendix A for transcription conventions).

45 Teacher: "I NOW WANT YOU TO TAKE IN FRONT OF YOU ( . ) YOUR HOMEWORK, †
46 [waits to front of the middle row
47 [1.7]
48 some one to five [ sheets] †
49 Mynke: [I don’t understand sum fi:ve and I go one la:st ]
50 Teacher: [vissc. That’s
51 danny: [I throw gum at Edwin
52 Teacher: [Alright. That’s not a disaster,
53 karl: [flexes muscles for Benno and camera
54 edwin: [wipes gum out of his hair

Teacher: [TIK WIL NU DAT JE VOOR JE HUI:MT ( . ) JE HUI:SWEREF ]
[looks naar voor de middelste rij
[1.7]
[sommetjes één tot en met vijf vellen].
Mynke: [I snap som vijf if niet en ik (ga één laatste )
Teacher: [Ja] [De e
Danny: [I gooit gum naar Edwi
Teacher: [goed. Dat is niet zo’n rang;
karl: [rolt spierballen voor Benno en camera
Edwin: [veegt gum uit z’n haar
In this fragment we see that a maths teacher instructs the students to get out their homework (45–48). Then Nynke interrupts him and says she does not understand sum five (49). The teacher responds to this statement: “That’s alright. That’s not a disaster” (50, 52), and while he produces this response, at least two students initiate parallel activities: Danny throws something at Edwin (51), and Karl flexes his muscles (59).

In order to analyze this piece of interaction in terms of participation and identity I will refer to a proposal made by Zimmerman (1998) who distinguishes three types of social identity in relation to interactional processes.

“Discourse Identity”
In the first place, the actors mentioned in the transcript can be characterized in terms of their engagement in some activity. There is an actor (the teacher) who gives an instruction and thereby assumes the identity of instructor and ascribes the reciprocal identity of instructed to the addressees.

Then there is a problem teller (Nynke) who tells her problem and thereby ascribes the identity of problem recipient to the addressed teacher. The teacher’s response in turn is evidence of the reciprocal and interactional character of identity construction. He reassures Nynke but does not solve her problem. He thus reciprocally turns Nynke’s utterance into a form of “troubles talk” (Jefferson & Lee, 1981): talk about a problem aimed at receiving empathy or in this case reassurance, rather than at a solution to the problem. Had the teacher responded by discussing sum 5 (as he will, later on in the lesson), then Nynke would have been constructed as help seeker.

We also saw that others engage in other activities. Danny acts as gum-thrower. And Karl acts as muscle-flexer in front of his neighbor and in front of one of the cameras, thus, ascribing to his neighbor and to us who watch the video the identities of viewers or audience.

Zimmerman calls this level of identity “Discourse Identity.” Of course, this type of identity might also be coined “activity identity” to capture also the non-verbal activities such as gum throwing. The point is that a person’s identity resides in the way he or she is engaged in some activity, discursively or otherwise.

“Situated Identity”
Zimmerman’s second identity type is the “Situated Identity.” The interaction in the transcript takes place in a situation where the identities of teacher and student may be relevant “situated identities.” In the social constructionist perspective we take in this study such identities which are not given, but must be shown to be relevant in the orientation of the participants. Thus, it can be argued that when Nynke addresses a particular person with the problem “I don’t understand sum 5,” this shows her orientation to this person as the teacher and to herself as a student. Also it can be argued that Danny orients to these identities in a very different
manner when he throws gum at Edwin (a type of action that is hardly ever observed outside classrooms), while his actions can also be shown to be performed in close coordination with what the teacher is doing.

Specific kinds of “situated identities” that play an important role in the classroom context are teacher and student categories such as “stern” or “permissive” teacher, or “intelligent,” “eager,” “silent,” or “insolent” student.

“Transportable Identities”
The third identity type is what Zimmerman calls “Transportable Identities”: identities that are not related to a specific interaction situation but potentially relevant in any situation and any interaction. This includes identities that are particularly relevant in our study such as gender and ethnic identity. Perhaps, the reassuring response that Nynke receives from the teacher is oriented to her gender or ethnic identity; and it seems that Karl flexing his muscles in front of the camera is orienting to his male identity. An interesting question with respect to transportable identities, which however goes beyond the aim of this paper, is to what extent these identities actually are transported to other situations. In other words, the question is whether social actors’ perceptions of self-identity have a relatively stable basis (cf. Giddens, 1991).

The usefulness of Zimmerman’s proposal does not lie in its potential for categorization. I am not interested here in a discussion of which aspects of identity fit where in the three-part scheme. The division is meant to make clear how identities such as ethnic and gender identities, that are often treated as macro-social categories, have their basis in the construction of discourse identities such as “muscle flexer” or “troubles recipient,” and situated identities such as “teacher” and “student.” This relation between these types of identity is not a temporal one. The construction of identity on all three levels is a simultaneous process. In the piece of interaction we looked at, the teacher and Nynke, Danny and Edwin, and Karl are all participants in different, though not unrelated, activities. In participating in these activities, they assume particular identities and ascribe particular reciprocal identities to the others engaged in the activities.

Participation
As part of his frame analysis, Goffman (1975, 1981) has proposed a conceptual apparatus that allows us to describe the differences in participation in Transcript 1. Goffman proposed a differentiation of the concepts of speaker and hearer to take into account the different footings of speakers and hearers in the interaction situation. Thus, by responding to Nynke in the way he does, the teacher not only accepts his identity of problem recipient, but ascribes to Nynke the identity of addressee of his words and to other students the identity of overhearers (Goffman, 1981). All three types of identities are constructed through participation in reciprocal interaction. From this it follows naturally that also
differences between students (differences in identities) are constructed through participation in interaction. In other words: different footings in classroom interaction (either as speaker, or as addressee, as overhearer, or as participant in a parallel activity, etc.) establish different participant identities, while these different discourse-identities are the building blocks of different situated and transportable identities.

**Differences Brought Along and Brought About**

An analysis of the construction of diversity in multi-ethnic classes has to deal with the apparent tension between differences “brought along” and “brought about.” If differences are brought about in interaction as I argued just now, what then of the differences that students bring along to this class? After all, the students in this class are boys and girls, and Dutch, Moroccan, Turkish, Greek, Surinamese, Chinese and Iraqi, and they further probably differ in many respects that we have no information about. In an introduction to John Gumperz’ contextualization approach, Auer (1992) referred to this apparent tension in terms of “context brought along” and “context brought about.” It is indeed Gumperz (1982) who fundamentally addressed this issue (see also Duranti & Goodwin, 1992). He put forward the proposition that the practices and information that interactors treat as a context for interpreting the utterances they produce, have to be interactively constructed in order to be treated as shared context. Context is not out-there, waiting for the interaction to take place. An interpretative context is the set of practices and information that interactors actively construct and treat as shared.

A comparable view is held by Schegloff (1991, 1992) who, in a discussion of institutional discourse, argued that the truthfulness of a trait of the interaction situation does not imply that this trait is oriented to as interpretative context by the interlocutors: The fact that a room faces the north does not imply that this trait is interpretatively relevant for the interlocutors in that room. The fact that it is a classroom does not even imply that all talk within its walls is educational. In order for educational discourse to occur, the interlocutors must interactively establish (aspects of) the educational system as a relevant context. This argument also holds for students’ sex, ethnic backgrounds and other traits. The simple fact that Nynke is a girl does not imply that she, and those interacting with her do so always with an orientation to her female identity. And the fact that a student belongs to the Moroccan ethnic group does not imply an interactional orientation to his ethnic identity. Such identities have to be constructed by the interlocutors as an interpretative context of their interaction. Moreover, as I argued above, also their situated identities as teacher and students have to be actively established as relevant interpretative context, even when the physical surroundings are those of a classroom.
On the other hand, I also want to point out the limits of the constructionist potential of interactants. As I argued before in a discussion of institutional discourse (Koole, 1997), actors’ potential to construct an interpretative context must not be mistaken for an unlimited potential to construct just any context. For example, it takes a person with a specific competence to act as a maths teacher, and thus the identity of “maths teacher” could not easily be constructed for one of the students. Experiences and competencies brought along, can set limits to, and supply resources for what can be brought about. Even though the Dutchness of the teacher has to be interactively established as a relevant identity, this does not mean that his ethnic identity can just as well be constructed as Moroccan.

And yet also these experiences and competencies must be made subject to social construction in order to become social objects. In an interview, the teacher, Mr. Mus, for example showed his belief that Aziz was a Moroccan boy, whereas Aziz in fact came from an Iraqi family. Thus, if the category of “Moroccan boy” were relevant for the teacher’s behavior towards his students, this behavior could apply to Aziz as well, simply because his Iraqi background has not become a social object in his interaction with the teacher. Thus, a student need not per se “be” Moroccan in order to be treated as such. It is not simply because the teacher’s Dutchness is turned into social object that his ethnic identity can be constructed as Dutch. This can only occur when he is mutually regarded as Dutch, that is, when his Dutchness is turned into a social object or phenomenon. A well known example is Jerzy Kozinsky’s novel Being There, in which a gardener is treated as a financial expert, and then becomes such an expert. His “being” a gardener was not turned into a social object. Instead, he was treated as a financial expert, an expertise he did not bring along, but which was entirely brought about.

Although this latter example is taken from fiction, it does show us how experience or expertise brought along can be treated as irrelevant for the construction of a person’s identity. Experiences and competencies can only play a role in interaction if they are made into social objects, that is if they are made available for reciprocal action. And any social object is subject to a process of social construction. “Possessing” knowledge or experience is not a guarantee that you will be acknowledged as knowledgeable or experienced. For such knowledge or experience to be meaningful in interaction, it has to be constructed as a social object.

The roles of the “brought along,” and the “brought about” in the construction of identities remain little investigated. For example, persons carry with them both more, and less easily observable traits such as color of skin on the one hand, and skills on the other. Both types of features can be used as resources for the construction of those persons’ identities. Only the way in which they are available as resources differs. Thus, for his observable features, it is easier to mistake an Iraqi boy for Moroccan than a Dutch one. Another aspect is the authority
vested in institutional actors. If only one of the participants is authorized to give a medical prescription, or to pass a sentence, or to mark a test, this places serious restrictions to whose situated identity can be constructed as doctor, judge, or teacher, respectively. If we now look again at Zimmerman’s (1998) concept of “transportable identity,” and relate it to our discussion of the “brought along,” we can say that what is “transported” is not social identity itself, but rather features such as ethnic background or sex that can be used as resources for the construction of identity.

The educational process of producing differences between students can thus be investigated as an interactive process of identity construction through participation in face-to-face interaction. This analysis proceeds from a detailed analysis of the construction of different discourse-identities, to an analysis of situated identities which involves the identification of recurrent “patterns” in the construction of these discourse identities. This includes questions such as: who takes initiatives like Nynke’s and what responses do they get; who is more often amongst the ones who, like Danny, opt out of the “overhearer” identity? As I said above, “situated identities” in this sense are not restricted to categories such as “teacher” and “student,” but include identities such as intelligent or insolent student. In the end, the interaction-analytical findings can be interpreted in the light of the ethnographic observations, field-notes, and interviews with both teachers and students. This can result in re-interpretations of situated identities in terms of teacher’s didactic strategies, or of situated identities in terms of gender or ethnicity. The students and their teacher, as participants in the interaction, make the class heterogeneous in an interactional process. It is up to the investigator of inclusion and exclusion processes to reconstruct this process.

PARTICIPATION IN MATHS CLASS INTERACTION: TWO METHODS OF CONSTRUCTING DIFFERENCE

In this paper, I will focus on discourse identities and situated identities in order to illustrate two major mechanisms of constructing differences. The first is the interactional mechanism where the teacher approaches different students in different ways, for which Cazden (1988) coined the term “differential treatment.” The second concerns the practice where the teacher approaches all students alike, but students respond in different ways.

Teacher’s Approach and the Construction of Difference

The data that will illustrate my argument come from the same maths lesson as Fragment 1. The next fragment is taken from the phase in the lesson where the teacher walks around the classroom and attends to individual questions while the
students are working on their assignments. All assignments are concerned with interpreting graphs. The fragment starts after Nirmala has indicated to the teacher that she does not understand parts c and d of this assignment:

**Assignment 5** (These data were translated from Dutch into English).

"On a summer day the temperature is measured from 8 o'clock in the morning. In the graph below you can see until 22 hours (10 in the evening) how many degrees Celsius it was each hour."

![Graph of temperature over the day]

a.

b.

c. Look on which axis it says 20 hours. Look in the graph for the corresponding point. How high was the temperature at 20 hours?

d.

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**Transcript 2: Explanation Nirmala**

(These data were translated from Dutch into English. The original Dutch transcript appears below the translation).

202 **teacher:** *Halve in front of Nirmala's table*
203 **Teacher:**  
204  
205  
206 **Teacher:** *LOOK on which axis it says twenty hours*
207 **Teacher:** *here are the hours,*
208  
209  
210 **Teacher:** *here are the degrees*
211  
212 **Teacher:** *do you see it?*
213  
214 **Teacher:** *Somewhere it says twenty hours. Do you see there*
215  
216 **Teacher:** *(1.2)*
The teacher halts in front of Nirmala’s table, repeats “c and d” (203) and then reads the first part of the c-assignment: “LOOK on which axis it says twenty hours” (205). Then he indicates: “here are the hours” (206) (on the horizontal axis) and “here are the degrees” (208) (on the vertical axis) and then asks: “do you see it?” (210). Then he proceeds: “Somewhere it says twenty hours” and he immediately goes on: “o:h there” (212). He pauses 1.2 seconds, asks “yes?” After another 1.4 seconds the teacher reads the second part of the assignment: “look in the graph for the corresponding point” (216). And just as with the former part he also supplies the answer: “That’s that point” (218). He pauses, looks at Nirmala, asks “yes?” and she responds: “o:h yes.”
One thing is clear now, the teacher has successfully solved the assignment. But what has Nirmala done? She was twice invited to confirm her understanding and the second time she uses this opportunity. However, her “o:h yes” is not a display of understanding but rather a claim (Sacks, 1992: 252ff.) to have understood: she says she understands, but she does not show it. And as you can notice in the transcript: it is only produced after several opportunities to do so have passed. She does not respond to the “yes?” question in 214; following the teacher’s conclusion “That’s that point” she leaves a 1.4 second pause instead of producing an acknowledgement or token of understanding; she does not respond to the teacher gaze towards her in line 220; even the “o:h yes” she produces does not immediately follow the teacher’s “yes?” question.

In terms of Sacks’ principle of “preference for contiguity” (1987), which states that preferred responses (here: Nirmala’s confirmations of understanding) tend to follow immediately on the initiating utterance (the teacher’s requests for confirmation), these are all reasons to doubt whether she actually understood. Moreover, Erickson and Shultz (1982) have found lack of interactional synchrony (in this fragment: the regular occurrence of long pauses) to be an indication of lack of shared meaning.

Let us now look at a comparable fragment, same teacher, same lesson, a few minutes later. This time it is Benno who has a question on a different assignment in which two graphs represent the growth of two children, Niels and Diane:

**Assignment 8** (These data were translated from Dutch into English).
Transcript 3: Explanation Benno (These data were translated from Dutch into English. The original Dutch transcript appears below the translation).

499 Teacher: [Benno?]
500 Teacher: [Walks towards Benno]
501 (2.2)
502 Benno: [Kith and they say 'who grows fastest between six]
503 Teacher: [Kneels in front of Benno's table]
504 Benno: (...) and eight years*.
505 (0.4)
506 but here it doesn't say u:h how you { }
507 Teacher: [Between six and eight years.]
508 ( Points in Benno's book]
509 Where are we going to look for that
510 six and eight years.
511 (2.7)
512 Benno: [Here?]
513 Teacher: (.) Yes, (.) age (.) age in years.
514 (.) - Between six and eight years.]
515 So between six and eight years, '
516 hhh so we must look in between here.
517 Yes?
518 benno: [No... yes]
519 (0.9)
520 70 Teacher: [Well who grew fastest then?]
521 .
522 .
523 .
524 82 Benno: [U:h Diane.]
525 (1.5)
526 84 Teacher: [How do you see that?]
527 (1.6)
528 85 When you: From here u:h (1.2) it is
529 (1.6)
530 88 Benno: [A rather big lappe?]
531 ( Yes]
532 89 Teacher: [
533 90 Benno: [Yes.]
534 91 Benno: [In this is only u:h ( . )].
535 ( Yes. - Is only a few centime/ hh
536 92 Teacher: []
537 ( Yes. - Is only a few centime/ hh
538 93 Benno: [He was: He was: (1.0) a bit more than u:h ( . )]
539 94 A bit? Less than thirty
535 Benno: [No... yes]
536 96 Teacher: [and has ended a bit over thirty after those two years.]
537 Benno: [No... yes]
538 98 Teacher: [And Diane has gone (.) from two to: (.) fifteen.]
539 (0.4)
540 99 [Wh she has grown twice as fat.]
541 (0.3)
542 Benno: [Yes]
Teacher: [Benno]
  [Loopt naar Benno]
  (2.2)
Benno: [<Bij e: b > staat er 'wie groeit er tussen zes (,) en acht
   teacher: [Knieyt voor Benno's tafel
Benno: jaar het 'smelst'.
   (0.4)
waar hier staat niet e:i hoe je ( )
Teacher: [Tussen zes en acht jaar. Waar gaan we dat zoeken
   [ Wijst in Benno's boek
zes en acht jaar.
   (2.7)
Benno: [Hij?
Teacher: (.) [Is, (.) leeftijd (,) leeftijd in jaren. (.)
   'Tussen zes en acht jaar. '
   Dus tussen zes en acht jaar,'
   bhh dus we moeten hier tussenin kijken. Ja?
Benno: [Kniikt ja
   (0.9)
Teacher: [Nou wie groeide toen het smelst?
   .
   .
   .
Benno: [Hij Diane.
   (1.0)
Teacher: [Hoe (,) zie je dat?
   (1.6)
Teacher: [Als je (,) Van hier e:i(1.2) is het
   (1.6)
Benno: [een vrij groot stuk?-
Teacher: [ ja
Teacher: [Ja.
Benno: [In dit is maar eeh ( )
   Ja
Teacher: [ ja; is maar een paar centime/ hh
Teacher: [hij was (, ) iets meer dan e:i ( )
   [iets l:inder dan dertig
Benno: [Kniikt ja
Teacher: [En Diane is e:i ( ) van twee: naar (, ) vijf gegaan.
   (0.4)
   'Hh die is twee keer zo dik geworden.'
   (0.3)
Benno: [Ja.
Here we see an interaction that is very different from that in the Nirmala fragment. In the first place, Benno makes an attempt to make the nature of his problem clear to the teacher (452–456): he has a problem with the part where you have to make out which of the two children grew fastest between 6 and 8 years. The teacher does not give him the opportunity to finish his problem presentation but, and perhaps in response to Benno’s initiative, the teacher does give Benno opportunities to display his understanding and the possible lack of it. In contrast to his interaction with Nirmala, the teacher does not show where the solution to the assignment can be found, but he asks Benno to show it, “Where are we going to look for that?” (459) and “Well who grew fastest then?” (470). And in response to Benno’s correct answer he says, “How do you see that?” (484) and Benno responds to these questions. In an interaction structured this way, the teacher is not dependent on claims of understanding, but has Benno actually display his understanding.

In this interaction, we see the teacher and Benno construct shared meaning. At first, Benno does not understand the assignment, but in answer to the questions of the teacher he provides the correct answers, whereupon the teacher explains to him (463–466), or has him explain why these answers are correct. Benno participates in the interaction as a co-constructor of meaning. In two cases, the teacher and Benno even co-construct utterances (cf. Lerner, 1996):

486 When you:-- From here u:h (1.2) it is
487 (1.6)
488 Benno: [a rather big lapse? =
489 Teacher: [ yes

Here the teacher produces the first part of the utterance: “from here u:h (1.2) it is” and then pauses 1.6 seconds. Benno interprets this as an invitation to complete the utterance (Lerner, 1995): “a rather big lapse?” and receives a positive assessment from the teacher (489).

In the other instance, the teacher’s positive assessment takes the form of a completion of Benno’s utterance:

491 Benno: [in this is only uuh ( Yes
492 Teacher: [ Ye:s, >is only a few centime/ hh

In terms of the identities with which I started this paper, Benno assumes the discourse-identity of “problem presenter,” and is ascribed the identity of “answerer,” while the teacher assumes the identities of “questioner” and “explainer.” In terms of situated identities, Benno assumes and is ascribed the identity of what we can call an “active learner”: he participates in constructing the solution to the assignment. Nirmala, in contrast is ascribed and assumes the identity of a “passive learner.” We see a contrast here between two models of learning, one in which the
learner is conceptualized as a container into which the teacher pours pre-established meanings, and another in which the learner actively participates in constructing and thus sharing these meanings (cf. Bruner, 1996).

The different discourse- and situated identities of Nirmala (knowledge container or passive learner) and Benno (knowledge constructor or active learner) are constructed interactionally, in a cooperation between themselves and the teacher. It can be observed, however, that the teacher plays a major role in this construction process through the discourse-identities he assumes. In the Nirmala case, he provides all the answers and is satisfied with no more than a claim of understanding; in the Benno case, he provides opportunities for Benno to participate and co-construct the outcome of the assignment. It is through the construction of these different identities that also different gender identities (Benno—boy, and Nirmala—girl) or ethnic identities (Benno—Dutch, and Nirmala—Surinamese) may be brought about. Whether this is the case here, is a question that can only be answered after we have looked at more instances of these explanation types.

It is important to be reminded here that I am speaking, as elsewhere in this paper, of identities as social phenomena. When we study classroom interaction we do not know whether the teacher’s behavior towards a student results from identifying a student as “girl” or as “Surinamese,” and, what is more important, also the students do not know. In other words, teachers’ motivations are not social objects, they have not been made available for reciprocal action. Teachers’ identifications of students in terms of transportable identities can only become social objects, when the teacher behaves in systematic manners towards those students. And this is why I argued, following Zimmerman, that the construction of transportable identities as social objects starts with constructing discourse and situated identities.

The finding that the teacher plays a major role in the construction of difference in the class will not come as a big surprise to those acquainted with the past three decades of research on selection in the school. Indeed, the host of research that has followed Rosenthal and Jacobson’s (1968) discovery of the Pygmalion effect focuses entirely on the teacher as the agent of differentiating between students. My analyses above at the same time support and dispute this view of the teacher’s differentiating role. On the one hand, the analyses are an illustration of the teacher’s central role, while on the other hand, they also show that it is never the teacher alone who is responsible for the interactional process. Both with Nirmala and with Benno, the teacher initiates a format for doing the explanation, and both Nirmala and Benno comply with that format even when it means that the explanation is probably unsuccessful (Nirmala), or that the problem formulation cannot be completed (Benno). While the Pygmalion research tradition implies a predominantly monological view of classroom activity in which the teacher is the sole actor, our analyses show that classroom activity is interactional.
Participation, identities, and the resulting differences are constructed by both teacher and students.

**Student Responses and the Construction of Difference**

This latter observation can be supported when we have a look at an extended version of Transcript 1 discussed above.

**Transcript 4 (KL/WI/091199/45-113)** (These data were translated from Dutch into English. The original Dutch transcript appears below the translation).

45 Teacher: ↑I NOW WANT YOU TO TAKE IN FRONT OF YOU ( . ) YOUR HOMEWORK,↑
46     Walks to front of the middle row
47     (1.7)
48     sums one to five ( sheets),-
49 Nynke: ↑I don’t understand sum five and I (go one last )
50 Teacher: |     >Yes<     That’s
51 Danny: |     throws gum at Edwin
52 Teacher: ↑alright. That’s not a disaster,
53 Karl:     |     flexes muscles for Benno and camera
54 Edwin:     |     wipes gum out of his hair
55 Teacher: ↑.h that is always allowed,
56 Student: |     (yes:s)
57 Teacher: ↑I know from Patricia that she found five difficult as ↑well,
58 Noucha: |     turns around to Patricia
59 Petra: |     raises finger
60 Pat: ↑Yes I already said that.
61 Patricia: |     big smile
62 Karl:     |     ‘
63 Karl:     |     looks at back-neighbours, Benno and camera
64 Students: |     ((talk))
65 Teacher |     A:N D
66 Wakoob: ↑‘ajatafakap’
       |     ((into microphone))
67 Danny: |     throws at Edwin
68 (1.0)
69 Teacher: ↑WE ARE GOING TO SEE TOGETHER
70 Noy/Pat: |     ((talk to each other))
71 Teacher: ↑WHAT THE CORRECT ANSWERS ARE <OF THE> FIRST SUMS,
72 Nou/Pat: ((talk together))
73 Maktoub: | 'Shutahellabitcha'
74 danny: | throws again at Edwin
75 edwin: | wipes hairs clean
76 Teacher: ((1.2))
77 Karl: | |
78 Teacher: ((at camera))
79 Nou/Pat: ((talk together))
80 Karl: |
81 Karl: | looks at camera
82 Nou/Pat: ((talk together))
83 edwin: | wipes hairs clean
84 Teacher: | Looks around the class
85 Maktoub: | Toni, Toni
86 Benno: |
87 Karl: | Yes
88 Maktoub: | 'Keep your mouth shut.'
89 Student: |
90 Nou/Pat: (((talk together)))
91 danny: | stands up
92 Teacher | I really don't understand this.
93 Nou/Pat: (talk together)
94 Karl: | turns around to Hillary and Claudia
95 Students: | (((talk)))

Teacher: “IK WIL NU DAT JE VOOR JE NER:MT (...) JE HUI:SWERK,”
Kool:
| Looks naar voor de middelste rij
| sommetjes één tot en met vijf { vellen },-
Rynke: “-Ik snap soms vijf niet en ik ga één las:s’
Teacher: |
| Ja< Da’s
Danny: |
| gooit gum naar Edwin
Teacher: | goed. Dat is niet zo ‘n ramp,
Karl: | rolt spierballen voor Benno en camera
edwin: voegt gom uit z'n haart
Teacher: hhh dat mag altijd,
Student: [nja:]
Teacher: ik weet van patricia dat ze vijf [ook normaal vond,
nousha: draait zich om naar patricia
petra: steekt vinger op
Patricia: ja, dat heb ik al gezegd.
patricia: brede glimlach.
karl: (* "")
karl: kijkt naar achterburen, Benno en camera
Students: [[praten]]
Teacher: [E.N]
Maktoub: 'sjatafakap'
[[[in microfoon]]]
danny: gooit naar edwin
1.0
Teacher: WE GAAN SAMEN KIJKEN
Nou/Pat: [[praten met elkaar]]
Teacher: wat de juiste antwoorden zijn <van de> eerste schermen,
Nou/Pat: [[praten met elkaar]]
Maktoub: 'shitahellabitcha'
danny: gooit weer naar edwin
edwin: veegt haren schoon
Teacher: (1.2)
karl: ()
[Naar de camera]
Nou/Pat: [[praten met elkaar]]
Teacher: IK GA SOM VIJF UITLEGGEN,
karl: ()
[Naar de camera]
Nou/Pat: [[praten met elkaar]]
edwin: veegt haren schoon
teacher: kijkt de klas rond
Maktoub: tomi, tomi
Benno: [{]}
karl: ja
Maktoub: 'houdt je mond.'
Student: [{lacht}]
Nou/Pat: [[praten met elkaar]]
danny: staat op
Teacher: ik begrijp dit niet hoor.
Nou/Pat: [[praten met elkaar]]
karl: draait zich om naar hillary en claudia
Students: [[praten]]
A relevant first observation to be made about this piece of interaction is that it does not look very orderly. Several activities are going on at the same time. Nouzha and Patricia are talking amongst themselves for most of the time, Danny makes Edwin a victim of his gum throwing, Maktoub is whispering into the microphone nearby, or urging Toni to be silent, while Karl is making a show before one of the cameras and turns to address the girls behind him. In the meantime, the teacher is reassuring Nynke and telling her that he plans to explain the assignment she didn’t understand. This makes the transcript look rather different from most other transcribed classroom interaction data.

The reason for this is not just that this is a noisier class or fragment than others. The reason is that most transcribed classroom interaction data present a selection of the activity that goes on. This can be a selection made in transcribing, as I did in the transcripts of Nirmala’s and Benno’s interactions with the teacher. There, the activities of other students that were going on during these interactions were not included in the transcript because I wanted to focus the analysis on the presented data. In many cases, moreover, the selection is made while recording the data, for instance by using equipment, which allows only for recording the activities the teacher is involved in.

This selection results in (or from) an attention for activities in which the teacher plays a role, and as a consequence, a focus on those students who participate in these activities with the analytic exclusion of the other students. For an analysis of inclusion and exclusion of students this is an unwanted consequence. The class where the above data were gathered is composed of 26 students and an analysis of inclusion and exclusion processes should be concerned not just with the interactional configurations that bring some students to interact with the teacher, but just as much with the configurations that bring others to engage in other activities. The class is often approached by both teachers and researchers as a collectivity (Lerner, 1993), or cohort, but it rarely behaves as one.

This shows in Fragment 4 in which I did include other activities than those in which the teacher is the central actor. This enables me to show that the teacher’s activity and the parallel activities of some students are related in an interactional manner. There are a number of interaction traits that pave the way for some students to engage in interaction with the teacher, and for other students to engage in other activities.

We see that Nynke interrupts the teacher, and he lets himself be interrupted. He stops the instruction he was engaged in and responds to Nynke’s remark (“Yes. That’s all right. That’s not a disaster”; 50, 52), and thereby changes the participation framework (Goffman, 1981) from one in which the whole class was addressed as a collectivity, to one in which Nynke is the “addressee” and the others “overhearers” of the teacher’s speech to her. At the very moment this change of “footing” is produced, Danny and Karl start to engage in separate and parallel activities: gum throwing and muscle showing.
When the teacher goes on with his response to Nynke: “.hh that’s always al-
lowed, I know from Patricia that she found 5 difficult as well.” (55, 57) and Pa-
tricia confirms this (60), some students show they participate in the same activity
as the teacher: Patricia responds and Nouzha turns towards Patricia when she is
mentioned. Other students, however are involved in parallel activities: some are
talking (64), Karl is looking around him, Maktoub is whispering into a microphone
near him, and Danny is again throwing pieces of gum at Edwin.

Moreover, the teacher repetitively uses clause-final rising intonation, indicating
“more to come” (indicated by commas in the transcript: “That’s not a disaster,”;
“that’s always allowed,”; “I know from Patricia that she found five difficult as
↑ well,”) (Selting, 1996). In other words, the teacher’s utterance which starts as
addressed to Nynke, is not brought to a completion and is therefore hearable as
continuously directed at Nynke.

As the teacher continues and raises his volume (65) in an attempt to impose
himself once more as central actor for the whole class, several students continue
to be engaged in parallel activities. He looks around the classroom and says, “I
really don’t understand this” (92) and even then, in what follows, he has to address
several students directly in order to get them to be silent and pay attention to him
again.

Thus, the teacher actively engages in the activity Nynke initiates by her inter-
ruption. By directly addressing her he cooperates in establishing an interactional
activity in which he and Nynke are the primary participants and the others over-
hearers. At the same time he withdraws from the instructional activity in which he
was engaged with the rest of the class and in which the class was addressed as a
‘cohort’. In this way he establishes room for them to ‘do their own things’. Perhaps
he expects the rest of the class to be attentive (to participate as overhearers), but
he is no longer overtly addressing them. Even when he raises his volume in lines
78–86 as a possible cue of a change of footing, a transition to an activity with the
whole class again, this is not picked up as such; the students who were engaged in
parallel activities remain so.

Two aspects about this piece of interaction are interesting in terms of processes
of inclusion and exclusion. In the first place, the nonparticipation of several students
appears to be interactionally occasioned. The points where they engage in parallel
activities are not incidental. The initiation of these parallel activities is sequentially
attuned to the teacher’s activity. In the second place, the interactional character of
these processes of in- and exclusion renders them “not-imposed.” The teacher is
not actively imposing exclusion on the Danny’s, Maktoub’s, or Karl’s as he would
if he sent them out of the classroom. These students are themselves agents of
their exclusion from the teacher’s interaction with Nynke. While other students
participate as overhearers in this interaction, they do not, and thereby they establish
their discourse-identities as different from those students as well as from each
other.
I would like to offer the suggestion here that one way in which a teacher contributes to differences between students, is by approaching a diverse group in a uniform manner. Teachers in the Dutch educational context, for example, contribute to differences between students by addressing them in Dutch, both native speakers of Dutch, and second language speakers with different levels of proficiency. In this vein, it can easily be shown that some students more easily adjust to an overhearer role than others, or that some students more easily respond to a particular teacher invitation than others. The paradoxical issue is then that by not differentiating between students, teachers may very well contribute to differences in participation.

Studies of diverse responses from collectivities suggest that this phenomenon is extremely frequent. Students will construct different discourse-identities in response to being approached as a collectivity. Tuyay, Jennings, and Dixon (1995) show how two teams of students in one classroom respond very differently to the same assignment given by the teacher. And in a study, not of classroom interaction, but of story telling amongst friends, Goodwin (1986) has shown how the audience of a story is rendered heterogeneous, for instance, as a result of the different relations the audience has to the “domain of discourse.” Some are more acquainted with the topic, others have more interest in it, and this shows in different responses and different interpretations of the story. Also in the classroom different relations to the domain of the teacher’s discourse are a likely basis for the construction of different discourse-, situated-, and transportable identities such as ethnic and gender identity. Moreover, several papers in this volume make clear (for example the papers by Van den Hauwe & Mets, and Vine), that differences in command of the language spoken in the classroom establish an important potentially differentiating factor when teacher approaches a class as a homogeneous collectivity.

CONCLUSION

In this paper I have been concerned with heterogeneity in the classroom. I have argued that it is necessary to investigate the interactional process in which differences are brought about, even when students obviously bring differences along into the classroom as well. This process can be studied in terms of differences in participation in classroom interaction.

A study of heterogeneity in the classroom cannot be conducted as an investigation in terms of differences between students that can be established independently of the interactional process in the class, such as cultural, ethnic, language, or sex differences. The differences that are relevant for the interactional process, are those that are established as relevant in that process. The primary focus of an investigation of heterogeneity in the classroom is therefore on the differences brought about, and not on those brought along.
This does not mean that differences such as cultural, ethnic, language, or sex differences remain out of focus. I have argued for a procedure that looks at participation in interaction to analyze the construction of identities at different levels. Participation in interaction results in discourse identities such as “answerer,” resulting in turn in situated identities such as “eager student,” which is the material from which, at the level of transportable identities, “ethnic” or “gender” identities are constructed. In this process, the differences that students bring along may play a major role. As I argued, these differences can, in different ways and with varying impact, set limits to and supply resources for the identities that can be brought about.

The process of the construction of students’ interactional identities displays two major mechanisms. The first mechanism is one in which teachers are the primary agents of differentiation by approaching students in different ways. In their approach to students, the teachers’ perceptions of students’ competencies, attitudes and the like, in short, teachers’ perceptions of students’ identities, may play a major role in, but can never be the exclusive explanation for, students’ behavior. The process to which teachers bring their perceptions is interactional and the resulting participation and identities are thus the work of all participants, although, of course, contributions to identity construction can be unevenly distributed over participants. The second mechanism is one in which students respond differently to teachers who address the class as a collectivity. I also observed that a mixture of these two mechanisms may occur, creating the apparent paradox that a uniform approach to a diverse class may contribute to differences in participation.

The observations in terms of “differentiating agent” are not intended to lay blame, or to take away the responsibility from any of the actors involved. The observations are made in terms of observable interaction processes. In terms of educational responsibility one could argue that teachers are responsible also for including students who are liable to exclude themselves. This is even more so when we consider the observation above that students’ self-exclusion may well have a basis in their language proficiency or in their relation to the topics of the teacher’s discourse.

From an interaction-analytic, social constructionist perspective then, inclusion in, and exclusion from participation in classroom interaction and classroom learning is not imposed by teachers as selecting agents and does not result directly from teachers’ perceptions of their students. In the first place, the interactive process of participation is brought about by all interlocutors, and not imposed by one party to the interaction. In the second place, students relatively often establish heterogeneity by responding to the teacher in different ways. Differences between students are brought about in interaction and can thus be studied in an analysis of the interaction process.
Finally, let us reflect on the relation between the type of study on which this paper reports, and the figures on educational achievement that were reported in the introduction. It can never be the aim of a descriptive analytical study such as the one reported here to produce statements on “the” role of ethnicity. A descriptive method allows us to analyze students’ and teachers’ behavior in classroom activities. It allows us to explore how gender, ethnicity, or language difference can play a role in processes of participation. For those working in education, the macro figures reported in the introduction are particularly valuable in order to frame an educational policy, also at the level of the school. For teachers who do their work inside classrooms, however, it is of little value to know for example that the average Moroccan girl achieves better than the Moroccan boy. These teachers are better served by insights into the practices in which they participate on a daily basis and of which they can only observe limited portions. This study has provided some such insights.

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NOTES
1. The Moroccan population is one of the three larger immigrant groups in The Netherlands, together with the Turks and Surinamese.
2. Nor, by the way, is Zimmerman from what I know of his work.
3. I thank Petrelle Tomassen for making the first versions of Transcripts 2 and 3.
4. This refers to the image-come-alive (Pygmalion) phenomenon that the teacher’s image of a student is a solid predictor of that student’s school success, even when that image is based on manipulated information as in the Rosenthal & Jacobson experiment.

APPENDIX A
A.1. TRANSCRIPTION CONVENTIONS
The transcription conventions are in principal those proposed by Jefferson. Since my transcripts sometimes require the notation of several overlapping verbal and nonverbal activities of different participants, I indicate overlap by square brackets at the start of the overlapping lines: the order of events within these brackets is from left to right, not from top to bottom.
REFERENCES


