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Instructional touch: The organisation of a close and closed interaction space for individualised instruction in ‘open classrooms’

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ABSTRACT

The article focuses on the use of touch, in concert with body and talk, as a resource for the organisation of teacher instruction in the context of individualised learning in ‘open classrooms’ in German primary schools. Drawing on video observations of naturally occurring interactions between teachers and students in one such school, we analyse what is specific to teachers’ instructional practices in open classrooms, a setting where each student is typically occupied with his or her individual task. The analysis reveals two aspects of using touch that play an important role in the instructional practices of teachers as they control, guide, and support students working individually on their learning tasks: the use of touch as a resource for establishing and closing a local interaction space and the use of touch as an instructional resource. The embodied characteristics of this kind of individualised instruction presuppose and commit the participants to rather close bodily contact and ‘nested formations’ that are different from the teacher-fronted activities of the cohort teaching format.

1. Introduction

Until recently, large parts of classroom research have been concerned with verbal resources for the organisation of classroom interaction (cf., [Gardner, 2019](#)). Language practices are a central medium of teaching, and it is well known that the three-part instructional sequence comprised of the teacher’s question, the student’s answer, and the teacher’s evaluation (often referred to as Initiation – Response – Evaluation) constitutes one of the basic structures of classroom interaction ([Mehan, 1979](#)). However, more recent studies on instructional actions in educational settings have highlighted the constitutive role of additional interactional resources, including not just talk but also embodied conduct, spatial and temporal arrangements, and different material objects. It has been shown, for example, how teachers and students employ embodied resources to vocalise the meanings of words through clapping and speaking in primary school lessons ([Kern, 2018](#)); how teachers use address terms alongside gaze directions, head nods, and pointing gestures to allocate response turns to students ([Kääntä, 2012](#)); or how students display their ‘availability to respond’ or signal their ‘unwillingness to speak’ through the use of gaze direction and body posture ([Fasel Lauzon & Berger, 2015](#)). A growing area of research is directed to haptic resources, in particular different functions of touch during pedagogical activities (cf., [Bergnehr & Cekaite,](#)

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2018). Nevertheless, in the context of formal education, there is still a need for further research on embodied instructional activities to understand how teaching and learning are organised within interaction.

In this article, we focus on the use of touch, in concert with the body and talk, as a resource for organising instructional activities in ‘open classrooms’ in German primary schools. In these ‘open’ learning arrangements, the students are not working on the same tasks as a group, but each student is occupied with his or her individual task. This way of organising classroom activities is supported by the pedagogical idea that teaching needs to be much more differentiated and individualised in order to accommodate a heterogeneity of students. However, there is an apparent lack of empirical research on how individualised instructional activities are practically accomplished in open classrooms (Breidenstein, 2023).

Drawing on video observations of naturally occurring interactions between teachers and students in one German primary school, we show how teachers systematically mobilise not only verbal resources but also *touch* to instruct, control, and encourage students in their individually performed learning tasks. While, on a general level, the use of touch, in concert with the body and talk, to accomplish pedagogical goals is not unique to open classrooms, the way in which this resource contributes to establishing a “local education order” (Hester & Francis, 2000) is still closely tied to specific features of the teacher's instruction in this setting. As we will show, the teachers' touch and the establishment of a local interaction space in which their body and hands are visibly involved in instructional actions serve to singularise and individualise the interaction with a particular student, producing both the *closeness* and *closedness* of the interaction.

2. Embodied instruction and touch as a pedagogical resource

Although giving and following instruction is, as Markee (2015, p. 117) argues, “fundamentally a multimodal phenomenon”, aspects of the multimodal constitution of teachers' and students' activities in the context of formal education have become the subject of more detailed analysis only in recent years. A number of the studies in the tradition of conversation analysis that have focused on the embodied character of classroom instruction have shown how participants jointly orient to artefacts, gestures, and embodiment alongside talk and spatial and temporal circumstances to collaboratively organise “instruction-in-interaction” (Lindwall & Ekström, 2012) and establish knowledge and objects to be learned (e.g., Jakonen, 2015; Kääntä, 2012; Majlesi, 2018; Tyagunova & Raggl, 2023). As demonstrated by Majlesi (2018), embodied practices are integral parts of teaching grammar. Majlesi explicates that, in their instructional activities, teachers rely on multiple resources, such as annotating and illustrating on a whiteboard, using verbal accounts (e.g., explaining, correcting, reformulating), together with nonverbal actions (such as gesturing). This combination enables them to make abstract grammatical constructs visible and noticeable for the students.

Of particular interest to the present analysis are the studies on teachers' embodied instructional practices during student individual or small-group tasks—that is, in learning situations similar to the organisation of students' activities in the open classrooms that this study focuses on. Jakonen (2020) for example has shown that the teacher's movement and ways of positioning the body during students' independent taskwork serve as central resources for re-engaging in one-to-one interactions and providing task-related guidance to students who, in turn, display bodily whether they need teacher assistance. Tanner and Sahlström (2018) describe how participants establish relations of cohesion and change between spatially and temporally separated instructional occasions (here: within and between phases of students' individual seatwork) by using “epistemic topicalizations”, which include the coordinated use of linguistic, bodily, and material resources. Similarly, Tanner (2017) describes how participants in “desk interactions” use bodily positions, gestures, and material artefacts (such as texts) together with talk to establish a shared focus of attention that enables task-relevant actions.¹

When it comes to teaching and learning manual and physical skills, touch and direct manipulation of the body appear to be significant pedagogical resources (Okada, 2013; Răman, 2019; Schindler, 2017). However, as Bergnehr and Cekaite (2018) indicate, touching during pedagogical activities is also used for various other purposes, such as controlling students' activities, gaining their attention, and encouraging or comforting them. In this regard, Bergnehr and Cekaite (2018) differentiate between controlling, affectionate, and assisting touch and what they call ‘educative touch’—that is, touch that is used to instruct students about learning objects or concepts and to guide them in a learning task. Similarly, Heinonen et al. (2020) speak of ‘pedagogical touch’. They also point out that, like other teachers' activities, which are typically interpreted by students as being performed in the teacher's institutional role (in other words, as “category-bound activities”, cf., Freebody & Freiberg, 2000), teacher-to-student touch is also almost unavoidably considered pedagogically motivated touch, or touch used to achieve pedagogical goals in the classroom interaction. Heinonen, Karvonen, and Tainio (2020, p. 3) distinguish between two types of pedagogical touch: that which is “practically-oriented” and aims at helping students to perform the instructed tasks, and that which is “oriented to social-relational work” and aims to help students to concentrate on ongoing activities and focus their attention on the learnable. It is this latter type of touch that has attracted the most attention from researchers so far.² Studies that have primarily focused on ‘instructional touch,’ or touch aimed at facilitating the performance of learning tasks or manual skills in a school context, are rare. Kääntä and Piirainen-Marsh (2013) for example show how the “manual guiding” of learning objects by a group of school students when working on physics tasks served as a key resource for correcting and thus for “maintaining and restoring the progressivity of the task” (ibid., p. 341). Although touch is not the central focus of the study of Lindwall and Ekström (2012), they also demonstrate how teachers use touching gestures in one-on-one instruction as a

¹ See also Niemi and Katila (2022), who consider how students organise their “spatial and epistemic group territories” to constitute local social and moral orders in open learning environments.

² In addition to the studies mentioned, see also Cekaite (2016).

resource for correcting and guiding the acquiring of manual skills by the students in the context of craft education. Thus, there is still a need for further research on teachers' embodied instructional practices and, in particular, on the use of touch as an instructional resource. This fact is especially true for open classrooms, a setting that is under-researched in the literature on classroom interaction.

Building on the studies mentioned above, in the present article, we focus on how touch, together with other resources, especially the body and talk, is used to establish an interactional space for instruction and to guide students' work in open classrooms in German primary schools.

3. 'Open classrooms' in German primary schools

In the German discourse on primary school teaching, ideas of progressive education are traditionally rather influential, and they have been even strengthened by the constructivist move in didactical theory. While there is some debate (Rabenstein & Wischer, 2016), mainstream German pedagogical discourse is characterised by a prominent belief that schooling must move away from teacher-centred lessons and toward an 'open education' and the 'individualisation' of learning. This shift is considered the best way of acknowledging the heterogeneity of learners: each student should be able to learn at his or her own pace and follow his or her own way of learning (Klieme & Warwas, 2011; Rabenstein et al., 2018).³

The idea of 'individualising' teaching and learning is additionally supported by the current discussion around 'inclusive' schooling and the integration of children with special needs, which is very prevalent in Germany today. Germany has a strong tradition of separate schools for children with special needs, a tradition which is now heavily debated. In inclusive schools, didactical thinking and practices are challenged: it seems obvious that it is no longer possible to teach all members of a school class in a whole group manner. Instead, it is considered necessary to teach in a much more differentiated or even individualised way (Huf & Schnell, 2018). In accordance with this discussion, some schools in Germany provide mixed-age classes, which seem suitable to welcoming a heterogeneity of learners by, for example, enabling children of different ages to learn from each other. In Berlin, where the video observations we focus on in this paper took place, all primary schools were required, at the time, to mix (at least) grades one and two.⁴

Contemporary German primary school classrooms often look like workshops, as students work independently on workbooks and are offered an assortment of other materials and learning devices (Reh & Berdelmann, 2012). The students are not working on the same tasks, but they are occupied individually with different activities. These classrooms rely upon the idea of "self-directed learning" (Wagener, 2010) based on the self-management of the learners. The teacher's role is to assist and supervise students as they work individually on their tasks. Although these concepts are rather popular in German pedagogical literature, empirical research is rare. The lack of detailed empirical analysis of individualised teaching practices may be, at least partly, traced back to the methodological challenges of this kind of research: the complexity and diversity of the ongoing activities within open classrooms require methods of observation that get close to these activities (Breidenstein & Rademacher, 2017).

To be clear: there are obviously some similarities between the open classrooms we focus on in this study and the organisation of students' seatwork during individual or small-group tasks described in the literature cited above (Jakonen, 2020; Koole, 2012; Tanner, 2017; Tanner & Sahlström, 2018). Like teachers in our setting, those in such learning situations are "circulating in the class" (Jakonen, 2020), engaging in brief "desk interactions" (Tanner, 2017) with students, and guiding them as they work for themselves on their assignments. However, in settings where all the members of the class are dealing with the same task, the teacher's instruction can refer to common problems and can address one or more students at the same time. This structure is fundamentally different in an individualised setting, such as open classrooms: here, the instruction has to address diverse problems of individual students, one after another. The aim of this article is to shed light on some aspects that are constitutive of the organisation of this kind of individualised instruction and thus to contribute to a deepened understanding of teaching and learning in open classrooms.

4. Setting and methodological approach

In our study, we draw on video observations of naturally occurring interactions between teachers and students in German open classrooms to explore how instruction is practically organised and managed in this setting. The investigated scenes show an organisation of classroom order closely tied to the specific arrangement of desks and bodies in the room. Student desks are distributed into pairs or groups, such that four or six students sit around two or three desks placed together. While sitting in such small groups in front of and beside their peers, each student has his or her own material to work on individually. The investigated video sequences show the room filled with buzzing bodies and various materials deposited in different places (at separate tables, in cabinets and shelves), which students make use of when they begin a new task or move from one learning activity to another. There is no central place, such as the blackboard or the teacher's desk, that can "mobilize lines of attention and action to a single field" (Macbeth, 2000, p. 30), nor are there learning objects that are brought into view for all to see and hear at once. Instead, the teachers can be seen as continually moving around the classroom, from one student to the other, only staying for a very short time with a particular student and mostly standing, or sometimes squatting, behind him or her. In these short instructional moments, student activities are structured in ways that enable the teachers to both control and guide the students' work. Regarding this organisation, we are interested in what characterises the mode of instruction in this setting without a collective focus of attention and a privileged place for speaking.

As we will show, teachers' instructional activities are designed to establish *separated* and *individualised instructional spaces*, where

³ In the Scandinavian countries, there have been similar pedagogic ideas but a more critical discourse (see Carlgren et al., 2006).

⁴ However, this requirement has since been withdrawn for Berlin.

the teacher's body and touch play a crucial role. These spaces are built up for rather short interactions, lasting less than a minute, that seem nonetheless to constitute a basic structure of this kind of teaching and learning environment. Here, we draw on the work of Goffman (1964, 1971) and Kendon (1990) on the organisation of interactional space in social encounters (cf. also Mondada, 2013). For our analysis, Goffman's notion of the "ecological huddle" (1964) as a temporary social arrangement fostering a shared focus of attention and involvement in a joint activity and Kendon's idea that "there is a systematic relationship between spatial arrangement and mode of interaction" (1990, p. 251) are of particular relevance. As Goffman and Kendon have shown, such temporary interactional spaces are essentially shaped and constrained by body positions, postures, gaze directions, and addressed gestures. Of specific interest to us is how teachers use these resources, alongside talk and touch, to create a local space for individualised instruction. Like Jakonen (2020), we use the term 'instruction' to describe the work of teachers as they move around the classroom and provide support, guidance, or feedback to students who are working individually on their learning tasks.

The video data originate from the camera-based ethnographic study "Workplaces in Primary School" ("Arbeitswelten in der Grundschule") focussing on practices of individualised teaching and learning (Mohn & Breidenstein, 2013). The study compares the instructional and pedagogical practices of two different teachers, both working in mixed-age classes (first/second and first to third) at the same German primary school. The camera work was conducted with the idea of an 'ethnographic' use of the camera in mind (Mohn, 2022), which means that the camera is understood as a medium of *observing* rather than recording ongoing events. The camera is not installed in a fixed position but moves around the classroom. It focuses on situations and phenomena according to the research interest and tries to get as close as possible to specific scenes. Afterwards, the first step of the analysis consists of searching for phenomena within the video material and focusing these phenomena by sampling, cutting, and assembling relevant scenes. The (first) product of this kind of video-based research consists of small video studies (from two to eight minutes). These miniatures are meant to show certain moments of the teachers' and the students' work in an open classroom or, better, to make their work observable and analysable. The video study our contribution refers to is named "Temporary Body Space" ("Temporärer Körperraum"); it lasts 4.5 min and assembles various scenes in which the teachers' bodies create an instructional space at the students' workplace. In most of these scenes, which show different forms of establishing an instructional space, the teachers use different types of touch practices. For the analysis, we selected four examples that demonstrate how touch practices serve to 1) open and close an interaction space for instruction and 2) provide bodily support to students within the established interaction space.

The participants gave their consent for the publication of the video observations, and the teachers, children, and their parents were the first to be shown the video miniatures before they were released on DVD (Mohn & Breidenstein, 2013).

Methodologically, the analysis is rooted in the ethnomethodological "studies of work" (Garfinkel, 1986) and micro-ethnographic and conversation analytic approach to analysis of embodied interaction (Goodwin, 2000, 2018; Streeck, 2009, 2010), aiming at a detailed description of social practices as routinely organised and situated activities. To represent specific aspects of the analysed activities, we use a combination of stills from the videos and transcriptions of verbal and embodied interaction (following Mondada's [2016] conventions). These renderings can, of course, only provide a rough idea of what is happening. Although a still image may depict some important features of the activities, it remains a static representation of a particular moment of the event and does not show how the participants, for instance, move their bodies, hands, and the objects they communicate with. However, that is precisely what is of particular importance for understanding the investigated scenes. In part, this problem can be solved through the representation of a series of the still images that, being related to each other and presented in conjunction with written commentaries and transcribed talk, can illustrate the small changes and transformations in the configurations of bodies and trajectories of movements.

5. Analysis

One specific feature of the setting examined here is the use of touch, in concert with the body, for creating a separate, bodily framed "interaction space" (Ciolek & Kendon, 1980) established and maintained for a very short period of time and only for one particular student. As will be shown, this space aims to enable a *singularised* and *individualised* mode of instruction—that is, an instruction that addresses only one student, is closed to others, and is constituted through the systematic use of embodied actions. In the following analysis, we look more closely at two aspects of the use of touch in the instructional practices of teachers: the use of touch as a resource for establishing and closing an interaction space (5.1) and the use of touch as an instructional resource (5.2). In the concluding section, we discuss how both aspects serve to singularise and individualise instruction in the investigated setting (6).

5.1. Touch as a resource for establishing and closing an interactional space

In this section, we concentrate on the use of touch for establishing and closing a local interaction space in which the teacher's hands are visibly involved in the instructional actions as a structuring principle.

- s1 -->>sits slightly facing his neighbour on the right
t comes to s1
- 01 T: +*Is das so schwierig?*+•#
Is it too difficult?
t +takes the wrists of s1 in her hands & turns
the upper body of s1 to his workbook
s1 •looks in his workbook-->>
fig #fig. 1.1
- 02 S1: +*Ich möchte das nicht tun.*
I don't want to do this.
t +while holding the left wrist of s1 in her left hand,
shifts the workbook to the right with her right hand-->
fig #fig. 1.2
- 03 T: *Mach so weiter.*+
Keep it as it is.
t -->+
- 04 S2: •*Is das# so schön hier unten?*
Is it good so below here?
s2 •holds his workbook in his hands & pushes it towards t-->
fig #fig. 1.3
- 05 T: +*Ich*+ *guck jetzt grade das mit Jonas.*
Right now, I'm having a look at this together with Jonas.
t +pushes the workbook of s2 away with her hand+
s2 -->•
fig #fig. 1.4
- 06 +*(2.0)*+
t +moves her right hand with a pen from top to bottom &
along the lines in the workbook+
fig #fig. 1.5
- 07 T: +*Is doch alles# gut.*
Everything is alright.
t +puts her hands on the shoulders of s1-->>
fig #fig. 1.6



Fig. 1.1



Fig. 1.2



Fig. 1.3



Fig. 1.4

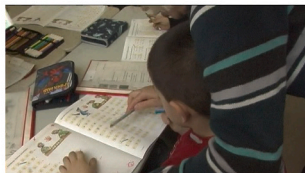


Fig. 1.5



Fig. 1.6

Excerpt 1. Establishing and sustaining a local interaction space.

In this excerpt, the teacher comes to the student to quickly control the results of his work. However, before she begins checking the student's results in his workbook, she takes some preparatory steps to adjust the student's posture and the position of his workbook on the table so that a shared focus on the workbook can be established. The central resource for this adjustment is touch: the teacher takes the student's wrists in her hands and thereby turns the student's upper body slightly to the left (line 1, Fig. 1.1). While still holding the student's left wrist, she slides the workbook slightly to the right with her right hand (line 2, Fig. 1.2) so that she can have a better look at the page past the student's head and thus better perform her pointing gestures, as can be seen later in the transcript (line 6, Fig. 1.5). With her body posture (standing bent over the student), her arms framing the student on both sides, and touch gestures, the teacher creates a local interaction space that addresses only this one student and is relatively closed to others. The work of controlling is lodged within this interaction space that is corporeally framed—that is, visibly delineated by the teacher's body and arms, which function as “boundary markers” (Goffman, 1971, p. 42). This type of corporeal arrangement can also be referred to as being “nested”, a participation framework in which the participants are “oriented outward, facing in the same direction” (Ochs et al., 2005, p. 556). In the scenes analysed here, the nested formation enables the same perspective on the workbook for both the teacher and the student: not only a joint attention framework, but a very individualised and close focus, built on the synchronisation of bodies and gaze. With both their bodies and their gazes, the teacher and the student orient themselves in the same way toward the object of their joint attention, which is marked by the teacher's pointing gestures directed just to that single student. In this regard, the teacher's position is owed not only to the specific desk arrangement (the teacher actually has no ‘better’ place to stand than behind a particular student) but also to the functionality of this bodily framing.

The established space is public and, at the same time, very exclusive, as it enables the physically close interaction with one student, separated but not completely excluded from the gazes and ears of others in the room.⁵ Indeed, for those in close proximity, it is almost impossible not to hear (and sometimes not to see) what is happening next to them. However, others are expected not to orient themselves to what takes place between the teacher and a particular student, as they must work on different tasks. This exclusion does not mean that the established interaction space cannot be challenged. Rather, the interaction must be continually adjusted to the contingencies of the actual situation, such that the sustaining of the local interaction space is also part of the teacher's instructional practice. This adjustment is especially evident when other students are actively trying to solicit the teacher's attention, as this excerpt shows.

While the teacher is standing behind the student and is about to control the results of his work, another student tries to get her attention by showing his workbook to her (line 4, Fig. 1.3). The action of student 2 pushing his workbook in front of the teacher makes relevant a responsive action and breaks up, for a moment, the established interaction space within which the teacher is interacting with student 1. With her verbal response (line 5) and her hand motion pushing away the student's workbook (Fig. 1.4), the teacher puts the action of student 2 ‘on hold’. Here, the teacher is doing two things at a time: instructing one student and simultaneously managing an incoming request from another student.⁶ Both activities are deeply intertwined. Notice, for example, how the teacher's verbal response and her hand gesture operate concertedly to manage the incoming request and the current activity: while her hand gesture refers to the embodied action of student 2 (and functions as a refusal of what student 2 wants her to do), her verbal response refers to both the student's action—by providing an account for refusing to deal with his request—and to her own current activity—by describing what she is doing with student 1 right now. However, the teacher's reaction is not simply a refusal of the student's request: it also serves to maintain the established interaction space.

Finally, we can see, how, at the end of the interaction sequence with student 1, touch is used as a resource for appreciating the student's work when the teacher places her hands on the student's shoulders and gives him positive feedback (line 7, Fig. 1.6). Heinoonon, Karvonen, and Tainio (2020, p. 9) point out that hand-on-shoulder touch often serves not only as an “appreciation of the students' preceding activities” but also as “comforting and encouraging” the students. In such cases, it also frequently functions, as the next excerpt demonstrates, as a sequence-closing action:

⁵ Wakke and Heller (2022), in their study of student helping activities, describe a similar form of closed interaction: “the closed formation of the shared space of helping”; see also Ciolek and Kendon (1980).

⁶ Cf., in this regard, the extensive work on multiactivity, such as Haddington et al. (2014).

01 T: -->>+ ϕ und dann ist es hier auch (.) guck mal
 and then it is here too (.) look
 t +points with her finger at a line in the
 workbook & writes something there-->
 s ϕ looks in her workbook-->

02 (2.0)

03 T: damit du richtig+
 so that you can properly
 t -->+

04 T: +und pass auf dass die Buchstaben richtig# stehen
 und nicht irgendwo+ in der Luft hängen
 and make sure that the letters are correct
 and do not hang somewhere in the air
 t +points with her finger at a line in the workbook+
 fig #fig. 2.1

05 +(.)+ + ϕ (.)+ ϕ #
 t +starts to straighten up+
 t +puts her hand on the shoulder of s & pats it+
 s ϕ smiles ϕ
 fig #fig. 2.2

06 + ϕ #(.) ϕ (.)
 t +leaves-->>
 s --> ϕ ϕ looks towards t-->>
 fig #fig. 2.3



Fig. 2.1



Fig. 2.2



Fig. 2.3

Excerpt 2. Disbanding the interaction.

In [Excerpt 2](#), after a short instructional sequence (lines 1–4, Fig. 2.1), the teacher places her hand on the student's shoulder (line 5, Fig. 2.2), pats it a few times, and then leaves the student (line 6, Fig. 2.3). In contrast to the previous excerpt, in which touch accompanies the teacher's verbal praise of the student's work, here touching is not used in conjunction with talk, as the teacher leaves the student without saying anything. Rather, it could be seen as something to which the verbal closure of the dyadic interaction is completely delegated, as well as an encouragement of the student to continue her work on the task.

5.2. Touch as an instructional resource

As the previous sequences have shown, touch can be actively used to establish and close a local interactional space for instruction. This space has to be produced, and it rests upon the intertwining of body posture, touching gestures, and hand motions with talk, gaze direction, and material objects (i.e., student workbooks). The next [Excerpt \(3\)](#) shows a more complex relationship between the teacher's talk, body, and hands, as here the participation of the body in instruction becomes more intensive as the teacher readily uses *touch as an instructional resource*. Specifically, the teacher is holding and moving the student's hand while demonstrating to her proper body and hand posture when learning to write letters (here the letter 'i').

s -->>writes in her workbook#
t -->>squats behind| s & looks at what s writes
fig #fig.3.1

01 T: *Das is wieder zu groß. +#Guck mal, ~du musst immer- +*
This is again too big. Look, you always need to-
t +tries to clasp the little finger
of the left hand of s with her fingers+
s ~directs her gaze from
the workbook to her finger, which t tries to clasp-->
fig #fig. 3.2

02 T: *Gib mir mal~ deinen~+# kleinen. Gib mir. Das~ deckst du zu.+*
Give me your little one. Give me. You cover that up.
s -->~lifts her hand slightly from the table~
t +takes the little finger of s in her hand+
fig #fig. 3.3

03 T: *+Leg dich nicht~# so auf. Nicht auflegen! Gerade hinsetzen!+*
Don't lay yourself down! Sit up straight!
t +moves the left arm & the upper body of s upwards and backwards+
s ~leans back
fig #fig. 3.4

04 T: *+Und dann deckst du das~ zu.+#*
And then you cover that like this.
t +moves the little finger of s to a specific spot
in the workbook & places it there+
s ~looks at the spot where t places her finger-->>
fig #fig. 3.5

05 T: *+~Und dann weißt du- so, jetzt weißt du wo# das+ nächste ,i' kommt.*
And then you know- so, now you know where the next 'i' belongs.
t +points with her finger to a specific spot in the workbook+
s ~holds her little finger on the spot which t points at-->>
fig #fig. 3.6



Fig. 3.1



Fig. 3.2



Fig. 3.3



Fig. 3.4



Fig. 3.5



Fig. 3.6

Excerpt 3. Bodily assistance.

In this sequence, the teacher produces a series of instructional actions. First, there is a correction of the student's posture, which is achieved not only through the verbal instruction (line 3) but also through “tactile steering” (Cekaite, 2012, p. 655)—simultaneously moving the student's arm and her upper torso upwards and backwards (Fig. 3.4). Second, the teacher is directing where the student has to place her finger (line 4), again by simultaneously holding and moving the student's finger toward the line in her workbook (Fig. 3.5). Thus, the teacher uses both verbal and touch instructions, and the verbalisation clarifies the meaning of her bodily instructional actions. Finally, the teacher explicates why the student needs to put her finger right there—namely, to mark the place where she should start writing the next letter, once again by pointing and speaking at the same time (line 5, Fig. 3.6). The teacher's talk and her hands are equally involved in the production of these instructional actions, and it is the specific position of the teacher squatting behind the student that enables her to produce this kind of bodily assistance. Notice also how the student's actions are aligned with and follow the teacher's instructional actions. The student does not only allow the teacher to correct her posture (by leaning back, line 3, Fig. 3.4) and to place her finger on a specific spot in the workbook (by lifting her hand from the table, lines 2–4, Figs. 3.2–3.5); she also continues to hold her finger on the spot marked by the teacher (Fig. 3.6). The workbook plays the crucial role too, as a shared focus of cognitive attention and as a material object that actively structures the process of writing (cf., Goodwin, 2000). A slightly different relationship between talk and touch can be seen in Excerpt 4.

01 T: +∞#Pass auf. #(.) #
 Be careful.
 t -->>+holds the right hand of s & moves it several times
 back and forth & to a line in the workbook-->
 s -->>∞looks in her workbook-->>
 fig #fig. 4.1 #fig.4.2 #fig.4.3

02 (.)+ +#(2.0) #
 t -->+ +places the hands of s on the table & writes the 'd' by
 holding the right hand of s & moving it up and down-->
 fig #fig.4.4 #fig. 4.5

03 T: +So. +(.) Du hast schon zwei gemacht. (.)+
 So. You already managed two more.
 t -->+ +turns a page & looks at it & turns it back+

04 S: (unverständlich)
 (inaudible)

05 T: +Sehr schön! Ja!
 Very nice! Yeah!
 t +writes the next 'd' by holding the hand of s &
 moving it up and down -->

06 T: Und jetzt bleibst du immer- +
 And now you stay-
 t -->+

07 T: +Guck mal! #Hier ist die Linie zu Ende. Siehst du die?+
 Look! Here the line ends. Can you see it?
 t +holds the hand of s in her right hand & points
 with the finger of her left hand to a line in the workbook+
 fig #fig. 4.6

08 T: +Jetzt hoch und wieder runter.+
 Now up and down again.
 t +writes the next 'd' by holding the hand of s &
 moving it up and down+

09 T: +Probier noch einmal. (.)∞
 Try it again.
 t +releases the hand of s
 s ∞starts to write-->>



Fig. 4.1



Fig. 4.2



Fig. 4.3



Fig. 4.4

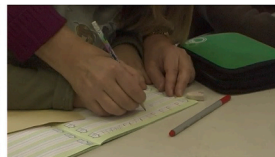


Fig. 4.5



Fig. 4.6

Excerpt 4. Manual guiding.

Here, the embracing arms and holding hands of the teacher are embodied instructions accompanied by talk. Like the previous sequence, the teacher's hands do more than simply direct and frame the student's attention: they manually guide the hand movements of the student, showing her how to write a letter (here the letter 'd') properly. Although the "manual guiding" (Kääntä & Piirainen-Marsh, 2013) addresses the problematic task performance of the student, it is not just a corrective. This type of instructional touch can be understood as teaching "somatic knowledge" (Shusterman, 2012, p. 26)—that is, it acts as a form of communication of knowledge that takes place through bodily contact, here guiding a student's hand when learning to write. It requires fine motor coordination and the synchronisation of the movements of both hands. Notice, for example, how the teacher moves the student's hand several times back and forth to a line in the workbook, adjusting the movements until the student's and teacher's hands reach a proper position (line 1, Figs. 4.1–4.4). Further, it makes relevant the hand movements in alignment with a certain trajectory that the letter 'implies'—with the specific up-and-down movements that are constitutive of 'd' and that the teacher tries to render salient through her touching gestures in concert with talk (lines 2 and 5–8, Fig. 4.5). Finally, it builds on "embodied deictic reference" (cf., Hindmarsh &

Heath, 2000), or pointing at a certain place in the workbook and localising the hand movements there (“Look! Here the line ends. Can you see it?”, line 7, Fig. 4.6).

As in the previous sequence, the “communicative work of the hands” (Streeck, 2017)⁷ is also not restricted to supporting verbal references. The teacher’s moving hand comes along with “And now you stay- Look! Here the line ends. Can you see it? Now up and down again” (lines 5–7). But here the relationship between the teacher’s talk and her hands is not quite equivalent. In this *manual modus of instruction*, the talk is rather subordinated to the hands and touch. Indeed, on its own, the talk reveals very little about what the student is instructed here. Neither verbal directives nor pointing gestures alone seem sufficient for the instructional purpose. Rather, what the instructional actions mean is to be found in the intercorporeal relationship between the moving hand and the hand being moved. By framing the student’s hand with her own, the teacher can also ‘diagnostically’ feel how the action is being performed and, if necessary, correct it. At the same time, the student can feel the movement of the ‘professional’ hand. The teacher’s manual guiding is aimed at helping the student to create the embodied experience of writing, one could also say: to develop writing-skilled hands.⁸ For the communication of this kind of knowledge, the bodies in close proximity, the shared visual perspective, and the physical contact seem to be essential.

6. Conclusion

In this article, we have investigated some aspects of the organisation of teachers’ instructional practices in the context of open classrooms in one German primary school. On the basis of very focused video observations, the analysis has shown the essential role of touch as an instructional resource and as a means of establishing a local “interaction space” (Ciolek & Kendon, 1980) that serves to singularise and individualise instruction to one student within a crowded and busy setting. Our central argument is that the embodied characteristics of this kind of individualised teaching and the specific spatial arrangements of the classroom presuppose and commit the participants to rather close bodily contact and “nested participation frameworks” (Ochs et al., 2005), which are different from the teacher-fronted activities and spatial arrangements of the classrooms in cohort teaching.

In particular, we have revealed how the use of touch, such as the teacher simultaneously holding the student’s wrists and turning the student’s upper body toward the workbook in Excerpt 1, contributes to establishing an interaction space that is visibly marked by bodily boundaries, including synchronised body positions, arms, and gaze directions. This corporeally framed interaction space is produced so that the mutual orientation, a very individualised and close focus of attention on a learning object, and a series of instructional and instructed actions can be constituted. In the investigated sequences, touch is also used as a resource for closing the established interaction space (Excerpt 2). In this case, it typically takes the form of hand-on-shoulder touch that can also function as encouraging or appreciating the students’ work (cf., Heinonen et al., 2020). The teacher’s work of opening and closing an interaction space involving the teacher and one student can be seen as constitutive of instructional activities in open classrooms. Although this probably happens similarly in other classrooms, the particularities of the open classroom make such practices common and indeed crucial to the instructional work.

Within the established interaction space—an “ecological huddle” (Goffman, 1964) of bodies, material artefacts, and talk—touch plays a further central role, as it is involved in the instructional actions of guiding, correcting, and assisting the students’ individual progress. Here, teacher’s touch may have various relationships to the verbal directions. For example, the teacher’s touch may merely support the verbal references, or, more essentially, it may contribute to clarifying the meaning of instructional actions as much as the teacher’s talk (Excerpt 3). Of particular interest is the use of touch for setting up a manual mode of instruction, in which the talk is rather subordinated to the hands and touch. This kind of instructional touch is central for the communication of “somatic knowledge” (Shusterman, 2012) when, for example, learning to write letters (Excerpt 4). Of course, the practices of manual guiding a child’s hand while learning to write are not unique to open classrooms. Since this is more related to the age group and subject matter (young children learning basic motor skills in writing), such practices can probably be observed in other classrooms as well. However, we suppose that the conditions for this kind of supporting the students’ individual progress are arguably different in open classrooms than in other educational settings. As *each* student in open classrooms is offered the teacher’s exclusive individual support, the risk of being exposed in what one cannot yet do decreases.

The instructional practice in the open classrooms investigated here is marked by both the *closeness* and *closedness* of interaction. The established interaction space is public and, at the same time, highly exclusive, as it addresses only one particular student and is maintained as closed to others. We have seen (Excerpt 1) how this space is immediately defended against demands coming from the ‘outside’. This exclusiveness—this closedness—distinguishes this type of individualised instruction provided to one individual student working on his or her individual task from the organisation of instructional practices in similar learning situations, such as individual or small-group tasks (Jakonen, 2020; Tanner, 2017) wherein the teacher not only supports individual students at their desks but can also make individual students’ difficulties the subject of instruction for the whole class, as all students work on the same task.

The analysis has also illustrated the interplay among the temporal constraints and spatial arrangements of the teacher’s instruction:

⁷ Streeck (2010) also speaks of “ecologies of gestures” to conceptualise the distinct modes in which the motions and configurations of the hands embody meaning, participate in communication, and couple the communicating body with components of the interaction situation (see also Goodwin, 2003 on environmentally coupled gestures and Hindmarsh & Heath, 2003 on “the ways in which talk and gesture combine over, around and with objects to produce meaningful discourse”).

⁸ This example could also be seen as an illustration of Ingold’s notion of “enskillment”, a process “in which learning is inseparable from doing, and in which both are embedded in the context of a practical engagement in the world” (Ingold, 2000, p. 416).

the duration of the teacher's instruction is formally embodied in her body posture. Spatial and temporal aspects go hand in hand within the observed body constellations. It is hard to imagine that the teaching moment framed in this way would last longer than 1 min (and in fact, in the sample of our scenes, none is longer than 33 s). Indeed, the posture of the teacher is not convenient to hold for more than a short time: bowing the back or bending one's knees is not an exercise comfortable for a longer duration. Both the teacher's posture and the bodies in close proximity seem to indicate that this constellation is only temporary and, moreover, only of short duration. The indication that the time for this interaction space is very limited is constitutive of both its closeness, because the nearness between teacher and student cannot be extended too much, and its closedness, because the exclusivity of the interaction space exists at the expense of all the other students in the room.

The touching and the very small distance between the bodies might be described, in the terms of Goffman (1971), as intrusion into the "personal space" of the student. This intrusion is made possible and legitimised by its institutional framing, by the jobs both the teacher and the student are doing. In that regard, the closeness of their bodies must not be interpreted as a sign of an intimate relation, as it serves the purposes of teaching and learning. Nevertheless, this closeness cannot be maintained for long: it has to be restricted to the task, and it should not favour one student over the others. The bodily and social aspects of the building of such an instructional space have to be balanced carefully.

Declaration of competing interest

None.

Data availability

Data will be made available on request.

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