Video-Based Interaction Analysis: A Research and Training Method to Understand Workplace Learning and Professional Development

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Chapter 19
Video-Based Interaction Analysis: A Research and Training Method to Understand Workplace Learning and Professional Development

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Abstract This chapter presents video-based interaction analysis and discusses its contributions to research on workplace learning and professional development. Interaction analysis is a multidisciplinary qualitative approach, borrowing principles from the micro-sociology of everyday life, ethnomethodology, conversational analysis and the ethnography of communication. It aims to provide a detailed description of how individuals coordinate their actions when experiencing *social encounters* and engaging in goal-directed actions collectively. Over the past two decades, the use of interaction analysis has expanded significantly into the field of workplace practices in institutional or professional contexts, particularly thanks to the influence of Workplace Studies or applied conversation analysis. More recently, video-based interaction analysis has also been applied to the field of initial and continuing vocational education. The theoretical principles on which interaction analysis is based have been transposed to training activities and are now considered significant contributors to workplace learning and professional development. An increasing number of experiments have attempted to train professionals using a video-based interactive analysis of their work. After presenting the theoretical principles and methodological procedures of video-based interaction analysis, this chapter illustrates how the approach might be implemented in the specific empirical context of early childhood educators reflecting on their interactional competencies when encountering parents as part of their work. Data collected during collective analysis sessions illustrate the sorts of learning experiences made possible by video-based interaction analysis when it is used in continuing education programmes for qualified workers.

Keywords Interaction analysis, Video, Multimodality, Reflexivity, Continuing education, Interactional competences

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19.1 Introduction

In service-oriented economies, characterised by complex problem-solving tasks and constant interdependencies between workers, organisations are making increasing demands on their employees' communication skills and their capacity to engage effectively in verbal and non-verbal interactions with others. Such demands have translated into specific research and training methods that pay particular attention to talking's role in interactions and its place in workplace learning and professional development.

This chapter presents video-based interaction analysis, a research method inspired by the field of video-ethnography that focuses on how language and communication practices take place in work environments. Interaction analysis is a multidisciplinary field, borrowing principles from the micro-sociology of everyday life, ethnomethodology, conversational analysis and the ethnography of communication. Its objective is to describe in detail how individuals coordinate their actions when experiencing *social encounters* and use semiotic resources to accomplish goal-directed actions in a collaborative way.

Over the past two decades, the field of interaction analysis has expanded significantly in the domain of workplace practices and institutional or professional contexts, particularly under the influence of Workplace Studies or applied conversation analysis. More recently, video-based interaction analysis has also been applied in the field of initial and continuing vocational education. It has been used to investigate how novice workers are guided through internships or work placements (Filliettaz, 2014a, b; Koskela & Palukka, 2011), how they are taught in vocational schools (Filliettaz et al., 2010; Johansson et al., 2017; Kilbrink et al., 2021; Melander, 2017) or how they develop competencies in work contexts (Nguyen, 2017). The theoretical principles on which interactional analysis is based have been transposed into training activities and are now considered significant contributors to workplace learning and professional development. There have been an increasing number of experiences proposing to train professionals using video-based interactive analysis of their work (Stokoe, 2014). This chapter reports on these experiences and discusses the potential for this approach in advanced research and intervention methods for adult learning at work.

The chapter is divided into two main sections. The first section highlights the field of video-based interaction analysis from a conceptual perspective. It presents the epistemological, theoretical and methodological principles underlying the approach, as well as some of its contributions to understandings of work and vocational education. It goes on to show how the procedures related to collective data gathering sessions have been exploited as means of sustaining learning processes in continuing education. The chapter's second main section illustrates how such conceptual principles might be implemented in a specific empirical context, i.e. a continuing education programme for early childhood educators. The objectives and procedures related to this continuing education programme are briefly presented, as is its

empirical research design. Data collected during collective analysis sessions illustrate the sorts of learning experiences made possible by video-based interaction analysis when it is implemented in continuing education programmes for qualified workers. Based on this empirical example, the potential of video-based interaction analysis for research and practice in the field of workplace learning and professional development is discussed and further elaborated.

19.2 Methodological Principles of Video-Based Interaction Analysis

19.2.1 Interaction Analysis as a Research Method

19.2.1.1 Origins and Definition

The field of interaction analysis originated in a set of new social sciences disciplines as they developed from the 1960s onwards in a number of approaches referred to as linguistic anthropology, socio-pragmatics, interactional sociolinguistics, ethnography of communication or conversation analysis. Despite the differences and controversies that characterise such frameworks, the promoters of these approaches share a common interest in the linguistic and communicational part of social practices, and they conceptualise language's use in social interactions as a constitutive component of human action in context. From there, verbal and non-verbal interactions are seen not only as subjects worthy of investigation in themselves but also more broadly as research *methods* through which social order and situated human actions can be investigated.

Following Erving Goffman's seminal work, face-to-face interactions can be defined as *social encounters*, specifically as "the reciprocal influence of individuals upon one another's action when in one another's immediate physical presence" (Goffman, 1956, p. 8). More precisely, *social encounters* refer to sequentially ordered processes through which participants accomplish joint actions and perform their reciprocal contributions in a coordinated way by using a range of semiotic resources, such as talk, gaze, gestures, body orientation or material objects. Face-to-face interactions are highly situated mechanisms in the sense that they are contingent on local material and practical arrangements and occur in social and cultural environments. Defined in this way, face-to-face interactions are usually assigned specific theoretical characteristics: (a) their ordered nature, (b) their sequential unfolding, (c) their multimodal accomplishment, and (d) their reliance on specific competencies.

19.2.1.2 Theoretical Principles

Following the principles of ethnomethodology (Garfinkel, 1967), face-to-face inter-actions can be conceptualised as the *methods* that groups of participants develop to address the practical problems they face when sharing the same interactional space. Such (ethno-)methods consist in producing organised ways of behaving that are made visible through observable lines of conducts and can be recognised by other participants as legitimate, relevant contributions. Social order is produced, negoti-ated and established by members of a community through situated, local behaviour and not because of pre-existing normative systems.

Among the various methods available for producing social order in interactions, temporality, progression and sequentiality can be regarded as powerful means of coordination in action. The founders of conversation analysis (Sacks et al., 1978; Schegloff, 2007) developed this idea in line with those of Garfinkel. Social interac-tions are not usually just static forms of reality. They unfold over time, step by step, and are built using principles such as turn-taking, overlapping talk, micro-pauses or the sequential order between recognisable actions (e.g. questions and answers, offers and acceptances). At a more macroscopic level, social encounters are also characterised by *opening* and *closing* procedures that stress the dynamic nature of verbal and non-verbal interactions. By ordering their contributions over time, par-ticipants accomplish coordination in an organised way.

Actions sequentially and collectively constructed by the machinery of situated interaction are not entirely based on speech and therefore do not rely exclusively on linguistic forms. If we accept, as Goffman (1964) stated, that "the natural home of speech is one in which speech is not always present", then we must also acknowl-edge that "many of the properties of talk will have to be seen as alternatives to, or functional equivalents of, extra-linguistic acts" (pp. 135–136). In line with multi-modal approaches to discourse and interaction analysis (Kress et al., 2001; Goodwin, 2000; Mondada, 2016), the field of interaction analysis itself now commonly accepts that the meaning-making processes at work during interactions are based on a wide range of resources (e.g. speech, prosody, gestures, body postures, material objects or scriptural practices). Thus, within the context of these dynamic meaning-making processes, participants in interactions use a variety of resources that constitute multiple semiotic systems, referred to as *modes* (Kress et al., 2001). Hence, the meaning constructed in a context rarely results from the mobilisation of one single mode. On the contrary, it is frequently based on a combination of modes that are used simultaneously and complementarily, according to their own specificities, potentials and opportunities.

To mobilise such multimodal resources for coordination purposes, participants must develop highly contextual skills and abilities that are contingent on the situations in which their encounters take place. In the literature, these abilities have sometimes been referred to as "interactional competences" (Mondada, 2006; Nguyen, 2017; Pekarek Doehler et al., 2017). According to Young and Miller (2004, p. 520), interactional competence can be defined as the set of knowledge and skills

that participants in interactions deploy to collectively configure the resources they need to engage in specific social practices. These competencies include the ways in which participants collectively accomplish actions in society, how they configure and delineate units of actions, and how they manage turn-taking rules, direct their attention, introduce new topics, take on and negotiate social roles, or use specific categories for referring to participants. Interactional competencies should not be thought of as an exhaustive repertoire of skills associated with individuals who are isolated from each other; on the contrary, they should be conceptualised as situated resources distributed among the participants involved in an interaction and made visible through the circumstances in which they are being enacted. With this in mind, one of interaction analysis's objectives is to identify the sorts of interactional competencies mobilised by participants when addressing the practical problems that they face in their social encounters.

19.2.1.3   Methodological Requirements

The theoretical principles mentioned above lead to specific methodological requirements. Analysing face-to-face interactions involves particular types of data, collected in the field, captured through audio-video recordings, and serving as the basis for multimodal transcripts. These methodological requirements are briefly summarised below.

First, interaction analysis methodology is fundamentally ethnographic in that it focuses on situated actions carried out as they are observable in naturally occurring situations. Specific requirements govern this so-called 'naturalistic' research approach (Mondada, 2016), and they concern the roles of space and time, the nature of the data collected, and how the researcher is positioned in relation to the members of the community being observed. Adopting an ethnographic approach to work and learning means going out into the field, visiting workplaces, vocational schools and training institutions, and being present on site. Research is not carried out at a distance from the practices being investigated. On the contrary, it requires direct, close contact with the people and places being observed. Adopting an ethnographic approach means spending time with the participants involved in these fields— sufficient time to develop a deep understanding of the practices at stake. From there, the ethnographic perspective requires more than an ability to look at or observe. As Winkin (2001) mentioned in a particularly appropriate manner, it also requires the researcher to "know how to be with": a willingness to meet others and develop relationships with them. Consequently, interaction analysis does not begin with making recordings, nor can it be simplified to the systematic scrutiny of those recordings. It is part of a more comprehensive procedure involving the progressive construction of relationships within a field of observation and with the individuals who engage in everyday practices within that field.

Interaction analysis's perspective differs from that of general ethnography in that it requires the collection of audio/video data (Grosjean & Matte, 2021; Heath et al., 2010). Informing the analysis of verbal and non-verbal face-to-face interactions

using audio/video recordings of work or training situations has several advantages. Firstly, these recordings provide a broad yet fine-grained description of observable behaviours, as they occur in time and space (Mondada, 2016). Audio/video recordings capture not only the content of verbal exchanges but also their prosodic properties and the non-verbal parts of these interactions. The production of non-verbal gestures and actions, bodily and visual orientations in space, the manipulation of material objects, and movements within the environment all become available to the analyst. Secondly, another significant contribution of audio/video is the fine-grained recording of the dynamic and temporally ordered character of the interactions observed. Video recordings show how the actions accomplished are sequentially linked and mutually synchronised. These are necessary elements of the information required for a detailed study of the coordination processes occurring during social encounters. Finally, another advantage of using audio/video data is that it enables the observer's experience to be replayed infinite times. It also makes it possible to share observations with others across different scales of time and space. Nevertheless, video recordings should not be considered immediate and full access to the data on an activity. On the contrary, recordings focus on specific moments in time, they are framed from a specific perspective, and they are contingent on the technical and environmental conditions in which they are produced.

Collecting audio/video recordings is not an end in itself but merely the starting point for an analytical practice that requires the production and use of multimodal transcripts. Based on a long-standing tradition within conversation analysis, the activity of creating transcripts consists of putting a subset of information available on audio/video data into a written form. The objective of creating a transcript is to make data available for a more detailed analysis of the properties of situated interactions. This relates to the content of speech and to the paraverbal and non-verbal dimensions of the activities observed (e.g. pauses, intonation, overlapping talk, gaze, gestures or non-verbal actions). Producing transcripts allows to allows us to take snapshots of an audio/video recording as situated interactions unfold sequentially. Transcripts make a range of dynamic processes available for analysis that would otherwise remain difficult to apprehend, reflect on and share. In this way, researchers can access the details of the interaction, focus on various properties of verbal and non-verbal behaviour, and share their observations with others. The practice of writing transcripts is not neutral, arbitrary or objective. As many authors have pointed out (Ochs, 1979; Ten Have, 2007), the process appears to be theoretically oriented insofar as it simultaneously selects, organises, interprets and categorises the different properties of interaction. Transcripts do not claim to exhaustively describe all the properties observable in a video recording, but they do so for a subset of them that present a form of relevance consistent with the analytical issues addressed. As such, multimodal transcripts do not reflect the actions recorded in a direct and transparent way. Instead, they should be seen as means through which *some* of the properties of observed interactions are made available for analysis. Video data and multimodal transcripts are two complementary tools that can be used simultaneously to carry out video-based interaction analysis.

19.2.2   Collective Analysis of Interactional Data

19.2.2.1   Data Sessions as a Research Method

Collective forms of video-based interaction analysis began development in the early 1990s, particularly in the field of ethnomethodological conversational analysis (Harris et al., 2012). Known as *data sessions*, these methods have gradually become objects of investigation in their own right, and the different ways in which they have been performed have, in turn, been studied as a product of a professional practice specific to a particular scientific community.

Doing a data session can be defined as a situated, collective analytical exploration of audio/video data focusing on interactional processes and collected by researchers in various original, uncontrived institutional contexts. This analytical exploration covers both the recorded video data and its transcript, often paying particular attention to the verbal components of the interaction. However, data sessions tend to systematically resituate talk-in-interaction into the practical context of the actions in which it takes place, in constant relation to the other multimodal resources used and embodied by the participants (Tutt & Hindmarsh, 2011).

19.2.2.2   Objectives and Principles of Collective Data Sessions

Collective analysis of audio/video data provides a means for researchers to confront their analytical insights with those of other researchers at an early stage of the enquiry process. This is part of a process that Durkheim (2001 [1912]) referred to as "collective effervescence", but it is an effervescence that is itself orderly. Indeed, even if the community of researchers engaged in conversational analysis has not explicitly normalised the use of *data sessions*, there are, in practice, recurrent organisational principles. In their typical form, data sessions unfold as follows. Each member of the group present during a data session can contribute analytical comments about the observed data. The observation generally progresses sequentially. In stage one of the process, the researcher who collected the data briefly introduces and presents them. The group then views the audio/video recordings together, usually several times. In stage two, the group members individually and silently explore the video's transcript for approximately 10 min. At the end of this individual analysis, in stage three, a structured round of discussion takes place in which each member of the group is invited to make one or more analytical comments about the sequence observed. Finally, the session ends with a collective discussion.

As an interactional activity, a data session is made up of tangible actions, recognisable by the members of the group and the process itself can be the subject of an interactional analysis. Recent work in the field of conversational analysis has tried to methodically describe some of the actions that constitute the collective analysis of interaction. One recurrent practical problem faced by the participants in data analysis sessions is how to share an observation and make it "noticeable" to the

other participants (Harris et al., 2012). Regarding this problem of sharing noticeable analytical observations, Tutt and Hindmarsh (2011) emphasised that the actions of noticing were not limited to verbal utterances but could become physical actions—reenactments—embodied by members of the group, particularly through gestures, gaze and bodily movements.

Another feature characterising the collective analysis of video data is participants' preference for non-normative analytical comments. Consistent with the *analytical mentality* dominant within the paradigm of conversational analysis, primacy is given to an 'unmotivated' description of the data (Psathas, 1995), which avoids *taking sides* (Sacks, 1984, p. 27) or producing moral judgements about the practices observed (Antaki et al., 2008).

Highlighting these practices makes it clear that collective data analysis processes are marked by institutional and epistemic expectations. As such, they also act as social spaces for the individuals taking part. Bushnell (2012) described how participants in data sessions involving students and senior researchers in Japan used a specialised vocabulary during their analytic activities. His work showed that participants' tendency to use terminology specific to the field of conversational analysis allowed them to accept and attribute different categories of participation. More generally, an analysis group is constituted as a community of practice in reference to anthropological approaches to learning (Lave & Wenger, 1991).

Following on from this observation, it appears that, depending on the contexts in which they are carried out, collective data analysis sessions also constitute 'pedagogical institutions' in the sense that they allow for a guided, shared experience between participants with different levels of expertise in the analysis process itself. This property was particularly emphasised by Harris et al. (2012) and, more recently, by Stevanovic and Weiste (2017), whose work showed that data sessions often involved pedagogical practices based on recognisable actions rather than on predetermined social roles. As such, they could be seen as alternative ways of teaching and learning research methods, ways that differ from an explicit, formal transmission of knowledge but that take shape through observation and participation in communities of (analytic) practices.

19.2.3   Interaction Analysis as a Training Method

19.2.3.1   Empirical Exploration of Interaction Analysis in Training Settings

In recent years, collective video-based interaction analysis has found numerous extensions and applications in the field of vocational and professional education and training. It has been used outside the field of academic research and applied as a training method. In other words, it has been assumed that the ability to perform analytic moves, based on a methodical observation of video data, is no longer a

privilege restricted to researchers but can also be performed by practitioners as means of expanding the possibilities for learning experiences and professional development related to their work.

For instance, Trébert and Durand (Durand & Trébert, 2018; Trébert & Durand, 2019) applied the principles of collective data sessions to develop mentoring skills among trainers in the field of early childhood education. Working with a small group of educators in charge of guiding students, they used video-based methods to encourage trainers to reflect on their tutoring role when interacting with students in the workplace. In the same context of early childhood education, Zogmal and Durand (2020) organised collective data sessions with professionals to enhance their sense of belonging to a group and to share their experiences within that group. Filliettaz and Zogmal (2021) also used data session methodology to teach educators how to implement a programme for fostering early language acquisition in childcare facilities.

In a different empirical context, that of health, Nguyen recently explored how to implement collective data analysis methods in initial and continuing vocational education and training. Data sessions were used to develop two sorts of competencies during the initial vocational training of student nurses: a clinical competence in the field of therapeutic practice in psychiatry and a methodological competence in the field of observing interactional work with patients (Nguyen et al., 2020). Similar approaches have been applied to continuing education in an institutional setting, with the objective of training qualified nurses in the practice of self-disclosure in psychiatry (Nguyen et al., 2021). During supervision sessions, video data were analysed by groups of health professionals so as to develop interactional competencies for exchanging with patients suffering from schizophrenia.

19.2.3.2   Methodological Principles of Interaction Analysis in Training

Beyond their specificities and the diverse contexts in which they have been implemented, these experiences shared a set of methodological principles related to their epistemic, procedural and analytic aspects.

First, there are the *epistemic conditions* that characterise training methods based on the principles of interaction analysis. It is assumed that the concepts and analytic procedures associated with video-based interaction analysis can be taught, learnt and appropriated by professionals in training sessions. These concepts and procedures constitute an epistemic domain that can be shared between researchers and practitioners. Researchers usually take on mediational training roles towards practitioners, and they guide participants towards discovering a specific way of looking at their actions and interactions at work. However, the sorts of relationships taken on by researchers and practitioners are not firmly asymmetrical and are not conceptualised in a top-down manner. Professionals are also recognised as knowledgeable participants with an epistemic authority based on their occupational expertise. From there, a collaborative-type relationship emerges between the researchers, who share their methodological expertise, and the professionals, who encounter such methods during training sessions.

This collaborative process of mutually sharing expertise unfolds in an organised way and is associated with specific *procedural conditions*. To start with, a data analysis group is set up under the guidance of one or more researchers and composed of a limited number of practitioners willing to participate in training. In a preliminary phase of the training, typical practical problems inherent to specific occupations and related to face-to-face interactions are identified and discussed within the group. Audio/video recordings of a range of typical interactions identified as problematic are collected to provide empirical data and evidence of the problems initially discussed. These recordings are then made available to the group's participants, who can screen them and identify specific sequences that they wish to analyse in detail. In the next phase of training, participants transcribe the selected video clips individually and share them with the group in a collective analysis data session.

Collective data sessions in training programmes unfold sequentially and follow specific *analytic principles*. When analysing audio/video data collectively in training sessions, distinct participant roles are explicitly assigned, such as the *presenter* who has selected the excerpt and prepared the transcript, the *observer* from the analysis group and the other members of the group, who also contribute analytic input. As with the typical format of data sessions in conversational analysis, the analytic procedure begins with a brief introduction by the presenter, who contextualises the selected sequence and the practical problem associated with it. The group then watches the video recording for the first time before letting the presenter share their preliminary observations. The group then takes the time to explore the transcript and watches the video several times before collectively sharing their views on specific moments in the video. At the end of this co-analysis, the floor is given to the observer and the presenter, who summarise the salient outcomes of the collective analysis and comment on the conditions in which it took place. Different sorts of analytic moves can be accomplished during this organised procedure's different steps. Participants can produce descriptive accounts of the behaviours seen in the video and interpret what those behaviours mean to them. In some instances, it is not rare for groups to make judgements about the actions seen (Lussi Borer & Ria, 2015). The role of researchers often consists in guiding participants towards an interactional perspective on the observed data and orienting their attention towards interdependencies and the sequential connections between observable actions. By looking through the lens of this analytic procedure, participants learn to identify the ingredients of their interactional competencies and reconsider the practical problems they encounter at work as tangible coordination issues.

19.3   Implementing Video-Based Interaction Analysis in a Continuing Education Programme for Early Childhood Educators

After presenting the conceptual ingredients of video-based interaction analysis and its application in the field of vocational education and training, this section of the chapter provides an illustration of how such principles and methods can be implemented in empirical contexts and how they can contribute to highlighting and fostering adult learning as it occurs in work environments.

   As our example, we will refer to an ongoing research programme being conducted in the Swiss canton of Geneva[1] and focusing on the interactional competencies required and enacted by early childhood educators when they meet with parents in everyday social encounters. The following subsections present the project's context, objectives and general research design before describing in more detail how collective forms of interaction analysis have been implemented in a continuing education programme for qualified educators. We provide a sample of the data resulting from this training programme and analyse how the participants in collective data sessions used video-based material to identify and comment on the sorts of interactional competencies they mobilise when interacting with parents in naturally occurring work situations.

19.3.1   Objectives and Empirical Research Design

Our example research programme was developed within the framework of our broader interest in the work of early childhood educators and the sorts of professional competencies they require to satisfy the numerous, complex institutional demands associated with this field of education (Filliettaz et al., 2015; Filliettaz & Zogmal, 2020). After several years of using an interactional perspective to investigate the educational activities of students studying to become early childhood educators during their internships, we chose their encounters with parents as a new subject for investigation.

   This new research programme focuses on encounters between parents, early childhood educators and children during pick-ups, drop-offs and yearly parents–educators meetings at early childhood education centres. At an institutional level, the importance of creating a *partnership* with parents is increasingly a stated objective. Indeed, from a policy perspective, building that partnership is now recognised as an integral part of the work of early childhood education, established in an increasing number of rules, norms and expectations for workers in the field (OECD, 2006). The

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concept of partnership refers to collaborative relationships, including shared decision-making, between the roles of parents and educators. However, when looking more closely at the policy documents, they propose assigning educators with a prominent role in establishing relationships with parents: professionals are to "support parenting" (VDG, 2016), "develop" the partnership and "identify" parents' needs (PEC, 2015). Parents are, therefore, positioned symmetrically and involved in a process of "co-education"—a role that has been conferred on them by educational institutions and framed under the responsibility of others.

Establishing a partnership with parents is not easy and can be associated with numerous challenges. The conditions within which such relationships evolve are often complex and characterised by multiple practical contingencies. Encounters between parents and educators occur daily, particularly at morning drop-offs, when parents bring their children to the education centre, and at pick-ups in the afternoon. These encounters are often very brief, although they may involve multiple participants and activities that are not necessarily compatible with the *co-education* project. These encounters may also materialise in formal meetings, but these tend to be rare and usually only occur yearly. Relations with parents are not always necessarily smooth and collaborative. As evidenced in the literature, they may also include power relations and conflictual educational norms or a sense of legitimacy (Bouve, 1999; Cheatham & Ostrosky, 2009). When families come from cultural backgrounds different from the dominant local one, epistemic asymmetries and cultural misunderstandings may occur (Nunez Moscoso & Ogay, 2016; Scalambrin & Ogay, 2014).

Very little is known about how relations between educators and parents are enacted in practice or how a partnership might be created in observable social encounters and interactions. Our programme's objective was to address these issues by investigating two main avenues of research. The first objective was to identify and recognise the sorts of interactional competencies mobilised by early childhood educators when they encounter parents. The research questions developed here were the following: What are the typical interactional patterns and characteristics of parent–educator encounters in early childhood education? What kinds of challenges do educators face when interacting with parents? What interactional competencies are required and mobilised to respond to these challenges? The research programme's second objective was to assist early childhood educators in the development of their interactional competencies for encountering parents. The research questions developed here can be formulated as follows: How can interactional competencies be supported and developed through continuing education and training programmes? What can video-based interaction analysis contribute to such training?

To answer these questions, we used video-based interaction analysis in an empirical research design comprising two consecutive phases. The first phase consisted of a video-ethnographic inquiry focusing on the encounters between parents, early childhood educators and children in early childhood education centres

Table 19.1 Audio/video data available, in hours and minutes

	Video-ethnography phase			Training phase			
	Drop-offs	Pick-ups	Meetings	Input	Selection	Co-analysis	Feed-back
Institution A	38:59	37:03	5:58	3:15	3:54	7:54	5:56
Institution B	41:20	61:09	2:42	3:59	3:33	5:52	5:30
Total (hours)	**80:19**	**98:12**	**8:40**	**7:14**	**7:27**	**13:46**	**11:26**

in Geneva, in French-speaking Switzerland. These interactions were videotaped in standard work situations over two consecutive weeks. Our observations focused on three typical interactions: (a) morning drop-offs when parents bring their children to the educational centre, (b) afternoon pick-ups when parents collect their children again, and (c) formal yearly meetings with parents, when educators provide feedback on children's development and progress. The second phase of the study used an intervention-training design with video-based interaction analysis to assist qualified childhood education professionals reflect on their interactional skills and competencies. Data from the video-ethnographic phase served as training material for small groups of volunteer educators, with the aim of expanding their interactional competencies in relation to parent and family interactions. Educators were introduced to interaction analysis and the methodological principles associated with its *analytical mentality*. They were also trained to select and transcribe video data from their work and to perform a collective analysis of these data with the group. Finally, they prepared and delivered feedback about their training to a larger group of colleagues working in the same institutions.

This empirical research took place in two childcare facilities in the canton of Geneva between Spring 2018 and Spring 2020. Data consisted of video recordings of typical multimodal interactions that took place during the two consecutive phases of the project.

As Table 19.1 indicates, a total of 187 h of video were recorded for the video-ethnographic phase of the project, of which 80 h focused on drop-offs, 98 h looked at pick-ups and 8 h showed yearly meetings. The project's entire training phase was also video-recorded, with almost 40 h of data from the different steps of training design, including 7 h of content-based training on interaction analysis, 7 h of video sequence selection by participants, 13 h of collective video-data analysis by the groups and 11 h about the preparation of dissemination activities within larger institutions. Video recordings were organised in a database, transcribed and coded using Transana Multi-User qualitative analysis software.

Fig. 19.1 Setting for the data analysis session during the training phase

19.3.2 Illustration and Case Study

To illustrate how the methodological principles of video-based interaction analysis can be implemented in training sessions, we now turn to a small sample of data related to the training phase of the project mentioned above. We present this case study as a way of understanding how a group of professionals can experience the methodology of interaction analysis and accomplish specific analytic moves when scrutinising the video data documenting multimodal interactions between educators, parents and their children. We also wish to underline the role of the trainers and researchers involved in the collective analysis of this video data and reflect on the sorts of learning that can arise from such collaborative data analysis experiences.

This sample of empirical data comes from the training programme's co-analysis phase, a sequence of training during which the participants were conducting data analysis sessions featuring typical work situations in which they encountered parents. The data sample presented below comes from the second data session performed by the group. Alison (ALI), one of the educators enrolled in the training programme, selected and transcribed a video sequence related to a pick-up interaction, and she shared it with a group of five colleagues (KAR, LOR, SAR, MEL and DAN) under the guidance of a pair of trainers who were also researchers in the context of this programme (CH1 and CH2) (Fig. 19.1).

The video recording analysed by the group showed a situation in which Alison was interacting with a small boy named Pedro and his mother. Pedro's mother had come to pick him up at the end of the day, but Pedro did not want to leave the centre. He kept running away from his mother and continued playing with children of his

Fig. 19.2 Video sequence of Pedro's pick-up by his mother

age group. Instead of lasting just a couple of minutes, this pick-up encounter took almost 15 min, and it put Alison in an uncomfortable position because the mother refused the educator's help and expected Pedro to come to her of his own free will (Fig. 19.2).

During the data session, the group made several observations about the video clip selected by Alison. Alison emphasised the unusually long duration of this pick-up interaction and the mother's personal characteristics—a lady who often takes too much time when simply picking up her son. The following excerpt comes from the middle of the analysis session—a point when the group was observing how participants in the video were addressing each other. On several occasions during Pedro's pick-up interaction, they addressed each other indirectly. Alison talked to the child to deliver information to his mother. And the mother addressed other children to capture Pedro's attention. The excerpt below reveals the sorts of deliberations made by the groups attending data sessions when expressing their observations:

Excerpt (1): Excerpt of the data session analysing Pedro's pick-up interaction.[2]

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[2]Transcript conventions are presented in the Appendix at this end of the chapter.

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1.  KAR   but from my point of view it's easier to talk to the
          child than to the parent\
2.  DAN   yeah that's right\
3.  KAR   to say 'Yeah, Pedro, I think it's time to go now,
          mummy's waiting for you\'
4.  DAN   yeah well here that's not working at all actually\
5.  ALI   but in the end it always goes through the child . the
          parents talk through the child/ we talk through the
          child and what impact does always being uh always
          being in between have on the child/ ((hand gestures))
6.  KAR   uh-huh
7.  CH1   but it's funny because who do you speak to when you
          catch the child/ ((winds the film back to a few
          moments before))
8.  ALI   well I speak to Pedro so I could've-
9.  CH1   ((nods)) $es but is it just to Pedro/ ((laughter))
10. ALI   well... no... indir- so directly it's to Pedro and
          indirectly I make the mother understand that she
          should come over and get him\
11. DAN   yeah\
12. KAR   yeah\
13. ALI   I think so\
14. CH1   exactly\ so to avoid compromising parental authority
          you can also use the strategy of speaking to the
          child\
```

At the beginning of the excerpt transcribed above, Karina (KAR), one of Alison's colleagues attending the data session, confessed that she found it difficult to address parents directly, particularly when educational problems might emerge from the situation: "But from my point of view, it's easier to talk to the child than to the parent" (l. 1). She gave an example of how to address parents through their children and how this pattern of interaction could be enacted in Pedro's very specific context: "To say, 'Yeah, Pedro, I think it's time to go now. Mummy's waiting for you'" (l. 3). From there, a discussion emerged between the analysis session participants in which they shared their views about the efficacy and legitimacy of such a strategy. Daniela (DAN) observed that this form of indirect communication was inefficient in that context ("Yeah, well, here that's not working at all, actually" l. 4), and Alison wondered how this indirect form of communication affected the children (l. 5). At this point, one of the trainers, who was in control of the computer, brought Alison's attention to the characteristics of her way of talking to Pedro and his mother. By rewinding the video sequence a little bit and replaying it, she asked Alison whom she was really addressing (l. 7). Alison came to the realisation that although she seemed to be speaking to Pedro, she was indirectly addressing the mother and asking her to come over and get her child (l. 10). The trainer had managed to make Alison understand that she had also been deploying specific interactional resources to avoid explicitly compromising the mother's parental authority (l. 14).

This short sequence of data analysis reveals different analytic moves. First, it is noticeable that educators seemed to have the capacity to orient their attention towards the fine-grained characteristics of the sorts of interactions they had with parents and children during pick-ups. Not only did they observe that they talked or

spoke to each other, but they also noted the different strategies used in doing so: just as parents sometimes talked to their children through other participants, educators chose to address the children as a way of intentionally communicating with parents. When commenting on these ongoing interactions, educators also used specific, explicit conceptual constructs, such as the distinction between direct and indirect forms of communication. These categories of communication had been introduced to them earlier in the training programme to serve as analytical tools with which to describe noticeable characteristics in the empirical material that the group was scrutinising.

It is also important to note that the programme trainers were not fully detached from these analytic moves and conceptual explorations. In the present case, it was CH1 who identified an interactional phenomenon worthy of observation and guided Alison towards the understanding that she had addressed Pedro's mother indirectly through him: "Well. . . no. . . indir. . . so directly, it's to Pedro, and indirectly, I make the mother understand that she should come over and get him" (l. 10). Thanks to the trainer's scaffolding questions (l. 7, l. 10) and a replay of the video excerpt, this observation was made and shared collectively within the data session.

Finally, it is also interesting to observe that the fine-grained mechanisms associated with interaction analysis in the present context are not categorised exclusively as mere verbal behaviour but are connected to broader social and professional norms. When referring to the situation under analysis, Alison questioned the potential impact of such indirect communication strategies on children ("But in the end, it always goes through the child. The parents talk through the child. We talk through the child, and what impact does always being, uh, always being in between have on the child?" l. 5). Daniela, for her part, seemed critical of this strategy of indirect communication (l. 4). Finally, the trainer established a connection between this type of indirect interactional pattern and childhood educators' preference for avoiding confrontations with parents over challenging educational situations (l. 14). In other words, analytic moves can be seen as potential connections between observable situated actions and broader professional dilemmas or controversies. It is through these sorts of empirical observations that such dilemmas and controversies can be discussed and negotiated within larger groups of participants who share the same interests and profession.

19.4   Conclusion

Based on the excerpt of empirical data analysed above, what have we learnt about work, and what have we learnt about adult learning in practical terms?

From what we can see in the small sample of data analysed here, interactional competencies play an essential role in contemporary work environments and service-oriented occupations. Early childhood educators are constantly interacting with each other, children, parents or other persons. A large part of their professional skills is mediated by their capacity to engage in interaction processes collaboratively and to

coordinate with others efficiently and legitimately. These capacities are neither natural nor self-evident. In many circumstances, they are not even taught explicitly in their formal training. Instead, they are acquired through practice and are learnt in working environments and settings.

To assist qualified professionals in the development of their interactional competencies in the workplace, video-based interaction analysis could be a promising resource. As evidenced in the empirical section of this chapter, collective data sessions mediated by trainers can lead to a variety of learning outcomes connected with various dimensions of professional practices: praxis, knowledge creation and identity formation. At the praxeological level, engaging in collective forms of interactions analysis at work helps professionals to interpret the different sorts of actions they engage in. Through a descriptive account of the data they discussed, our data session group shared views about their intentions and motives and assigned meaning to something that is often difficult to interpret in work circumstances, namely, what participants *mean* to do or say when they behave how they do. From an epistemic perspective, collective data sessions also contribute to establishing, sharing and disseminating specific sorts of knowledge associated with professional practices. In our example, trainers introduced concepts associated with direct and indirect forms of communication, and participants subsequently reused and recycled those concepts during their analytic experiences. These epistemic categories can be introduced by researchers or other professionals. However, in most cases, they are collectively elaborated within a group during their successive data sessions (Garcia & Filliettaz, 2020; Garcia, 2020). Lastly, video-based interaction analysis seems to provide productive outcomes for participants in terms of their professional development and identity formation. As indicated in the brief case study analysed in this chapter, observing how interactions unfold can lead to participants discussing broader professional dilemmas and the social norms shared within their communities of practice. This may contribute to establishing or renegotiating those norms within groups and communities.

From our own practical experience and based on several other experiments mentioned in this chapter, it seems that the concepts and methods that define the principles of video-based interaction analysis can be applied fruitfully to the fields of vocational and continuing education. Not only is it a method through which researchers can investigate how interactions unfold in work situations and settings but it can also be used by professionals as a way to reflect on their own work practices. From what we have observed in the small sample of data extracted from our training sessions in the field of early childhood education, professionals seem to have the capacity not only to enact and mobilise interactional competencies but also to recognise and identify these competencies when describing and commenting on what they did in video recordings of their work. The opportunities for reflection provided by video-based interaction analysis can be seen as a promising avenue for the recognition and development of adult learning at work.

Appendix

Transcription Conventions

/ \	rising and falling intonation
(.)	micro-pause
(2.1)	pauses in seconds
XXX	inaudible segment
exTRA	accentuated segment
((pointing))	non-verbal behaviour

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