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The Linguistic Demands of Learning at Work: Interactional Competences and Miscommunication in Vocational Training



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Abstract

Becoming a professional worker involves a wide range of cognitive, social, and cultural processes that have received extensive attention over the past decades amongst various disciplines. It is also not external to language use and communication. Novices in any occupation have to learn technical terms and are expected to master specific discourse and communication genres. They also face explicit or implicit demands regarding how to deal with interactional tasks. This paper discusses the theoretical conditions under which connections between work, language use and learning can be investigated both conceptually and empirically. It illustrates some of these ideas by using empirical data, focusing on a specific educational context, that of the apprenticeship system as it exists in Switzerland. A fine-grained analysis of this material highlights some of the characteristics of verbal and non-verbal interactions between apprentices and trainers as they occur in workplaces. To finish, the paper elaborates on some practical implications and applications of these analyses for the field of teachers' training and language teaching and learning.

Keywords: language, work, vocational education, apprenticeship, discourse analysis

Becoming a Professional Worker Through Language Use and Communication

Becoming a professional worker involves a wide range of cognitive, social, and cultural processes that have received extensive attention over the past decades amongst various disciplines. Anthropologists like Lave and Wenger (1991) have for instance long stressed the idea that learning an occupation “implies becoming a different person with respect to the possibilities enabled by these systems of relations” (p. 52). Identity issues are a key component of transitions from school to work. Newcomers do

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not only have to master new knowledge and skills. They are also expected to become members of new communities of practice and to position themselves in a complex network of relations involving other participants, teachers, trainers and co-workers (Wenger, 1998).

We know also from learning sciences that becoming a professional should not be regarded as an individual mechanism, but rather as a highly collective and guided experience (Tynjälä, 2008). When engaging in apprenticeship programs, students face for instance new conditions regarding the sorts of knowledge they are expected to acquire. In addition to the codified and disciplinary knowledge that are central to school institutions, apprentices have to engage with complex forms of work-based knowledge that include conceptual, procedural and dispositional dimensions. The distinction between conceptual, procedural and dispositional knowledge refers to categories identified by Ryle (1949), and used more recently by Billett (2001). Conceptual knowledge can be defined as “knowing that,” procedural knowledge as “knowing how” and dispositional knowledge as “knowing for.” This affects not only knowledge acquisition but also the ways apprentices position themselves in the social practices they engage in. These material and social conditions may afford opportunities for learning. They may also, as pointed out by Billett (2001, p. 87), limit the learning potentialities associated with specific work environments. Amongst the learning potentialities afforded by workplace environments, the existence of expertise and the willingness of experts to provide direct or indirect guidance to newcomers appear as important conditions for workplace learning. As mentioned again by Billett (2001), “the quality of direct interaction accessible in a workplace is a key determinant in the quality of learning outcomes” (p. 35). Learning then is best conceptualized as a guided and collective elaboration rather than as an individual process.

Becoming a professional worker may also turn out to be an uncertain and unpredictable journey. As shown by Fuller & Unwin (2004), not all work experiences are supportive and benefic in terms of learning opportunities and identity formation; there might be « expansive » or « restrictive » work environments, that create contrasted conditions for individuals to experience transitions in terms of participation and membership within communities of practices. For instance, in Switzerland, where learning through practice is often acknowledged positively and where, after completion of compulsory education at lower secondary level, 65% of the students enrol in Vocational Education and Training (VET), it is not the large majority of apprentices who complete their apprenticeship program. Depending on the areas and occupation, 30% of apprentices do not complete and in some cases, more than half of them do not succeed in their intermediary exams (Stalder & Nägele, 2011). Of these, 9% change occupation, 11% have to repeat a year or change to another occupation, 7% change the training company, and 7% drop out from the apprenticeship system without having any immediate alternative pathway. Qualitative research conducted in this area by Lamamra and Masdonati (2009) have investigated the reasons mentioned by apprentices who had interrupted their apprenticeship before completion. Based on semi-structured interviews conducted with apprentices, this study concludes that poor working conditions, low support by trainers and workplace relations emerge as the main causes of dropout. Half of the apprentices interviewed reported conflict in their relations with their colleagues or supervisors and complained about insufficient training opportunities in the workplace.

Interestingly, becoming a professional worker is not unrelated to language skills and communication. Novices in any occupation have to learn technical terms and are expected to master specific discourse and communication genres (Laforest, 1999). They also face explicit or implicit demands regarding how to deal with interactional tasks (Marra, Holmes & Vine, 2019; Filliettaz, 2010a, 2010b, 2010c, 2011a, 2011b; Horlacher, 2019; Melander, 2017). These demands are not limited to workplace practices but also extend to the ways these workplace practices may be taught or learnt when they are made visible in production contexts (Nguyen, 2008, 2017; Mondada, 2014; Pekarek Doehler *et al.*, 2017).

Given this particular context, this paper aims to reflect on the linguistic demands associated with vocational training experiences and the sorts of learning that may occur in such contexts. It argues that language learning and language use plays an important role in the process of becoming a professional worker and the sort of learning that arises in the conditions of practice. More precisely, the paper wishes to gain a better understanding of the difficulties encountered by apprentices when they move out of the school system and face the contingencies of the workplace: what sorts of challenges are apprentices facing when engaging in productive tasks at the beginning of their training programs? How do experienced workers guide them in such productive tasks? And how is such guidance related to language use and discourse practices?

To answer these questions, the paper first discusses the theoretical conditions under which connections between work, language use and learning can be investigated both conceptually and empirically. To continue, it illustrates some of these ideas by using empirical data, focusing on a specific educational context, that of the apprenticeship system as it exists in Switzerland. A fine-grained analysis of this material will highlight some of the characteristics of verbal and non-verbal interactions between apprentices and trainers as they occur in workplaces. To finish, the paper elaborates on some practical implications and applications of these analyses for the field of teachers' training and language teaching and learning.

Conceptualizing the Relations Between Language, Work and Learning

Language as Work

Paradoxically, the articulation between work activities and language use can be regarded as a relatively recent topic of investigation. If workers have not waited for linguists or ergonomists to reflect on the oral and written resources observable in workplace contexts, the topic of language and work has not drawn substantial attention until recently. In the Francophone context, the relations between language and work have initially been conceptualised through the expression coined by Boutet (2001a)—“the linguistic part of work” (*la part langagière du travail*). This expression refers to the idea that language use should be regarded as an important ingredient of professional activity, and not only as a peripheral contribution or as an empirical reality limited to a specific subset of professions. As Boutet (2001b) points out, “the language skills of ‘reading-writing-communicating’ are now both a condition for the academic success of young people in school [...] and a condition for access to all occupations: all occupations, even low-skilled ones, and all occupational sectors, now require, to varying degrees and in various ways, the ability to read and write French and to have communication skills” (*our transl.*, p. 38).

The recognition of language use as a constitutive part of work is closely related with changes that have arisen in modern times within the organisation of work. As mentioned by Boutet (2008), language use was not acknowledged as a productive resource in Taylorian production systems. At the beginning of the 20th century, it was seen as a mere distraction and prohibited from the large manufactures and factories that developed after the industrial revolution in the nineteenth century. The labour had to “do the work” and not “talk.” The situation rapidly changed after the oil and energy crisis in the early 1970s, when a service-oriented economy progressively took over in Western societies and when a “new work order” was established. It was then commonly expected that workers should be able to cooperate with colleagues, have literacy skills, adapt to norms and procedures that may take written or oral forms and be able to cope with unpredicted “events.” Being a competent worker in such a work context also required the ability to mobilise and to develop “communicative competences” (Zarifian, 2001). These requirements and expectations have increased considerably in recent times, known as the “globalised new economy.” Influenced by the rise of new technologies, a growing number of work-production tasks have quickly become “dematerialised” and now take the shape of symbolic actions in which

workers produce and interpret “signs” and engage in a constant meaning-making process. In many respects, the contemporary workplace no longer sees language use as a peripheral ingredient but as a production resource and as a mediating tool through which productivity occurs. These changes have significant consequences in terms of vocational and professional education, which has to prepare and adapt the workforce not only to specific technical and work-related skills but also, more widely, to multilingual, globalised and language-mediated professional practices (Mourlhon-Dallies, 2008).

In recognising the configuring role of language in contemporary workplaces, specialists in language and work have also highlighted the multiple functions of linguistic resources in workplaces. These functions include practical, social as well as cognitive dimensions of work practices (Lacoste, 2001) and can be seen as being manifold. First, language use at work has often been reported as serving practical or *operative functions*. Through engaging in discourse and interactions, workers “get things done,” and they plan and anticipate future actions, perform them and provide accounts and evaluations about past events. Second, linguistic resources are used by workers as resources for accomplishing the *social dimensions* of professional practices. They are means through which workers position themselves in groups, endorse specific identities, produce or reproduce cultural communities or establish power relations. Linguistic resources as they are used in workplace discourse and interactions also serve *cognitive processes* related to memory, problem solving and learning. It is by engaging in discourses and interactions that workers share and negotiate a joint understanding of the world (i.e. intersubjectivity), that they take decisions and reflect on their experiences and that they may learn from more experienced workers.

These multiple functions associated with language use in workplace contexts underline the richness, the complexity and the diverse ways through which language use may be related to work activities. Building upon early distinctions introduced by ergonomists, language can be seen as being used “at,” “as” and “about” work (Lacoste, 2001). Language may be used “at” work, when it interrelates with practical actions and physical interventions in the material world. Language may be used “as” work in situations where professional practice is primarily accomplished through communicative events. Language can also be used “about” work when it produces anticipatory, contemporary or retrospective accounts about work activities.

In the past two decades, and beyond the Francophone area, substantial contributions proposing a “linguistic turn” to workplace practices have emerged from different disciplinary backgrounds, including conversation analysis, sociopragmatics, interactional sociolinguistics or critical discourse analysis (Vine, 2018). Empirical investigations in a variety of workplace settings have been conducted, such as service encounters, manufactures, call centres, counselling, healthcare, legal settings, etc. From there, a wide range of topics have been researched, such as cooperation and coordination in the accomplishment of multiple tasks alternatively or simultaneously (Grosjean & Lacoste, 1999; Haddington *et al.*, 2014), the construction of interpersonal relations and social relationships (Filliettaz, 2006; Holmes, Marra & Vine, 2011; Holmes & Stubbe, 2003), reasoning, decision-making and negotiation (Grusenmeyer & Trognon, 1995; Grosjean & Mondada, 2004), or writing at work (Fraenkel, 2001).

Language as Interactional Competence

The concept of *interactional competence* has emerged in the field of applied linguistics, based in particular on the principles of ethnomethodology and conversation analysis (Mondada, 2006; Pekarek Doehler, 2005, 2006). This concept emanates from a critical discussion of “linguistic competence” as it is frequently conveyed in a grammatical or communicative tradition. Young and Miller (2004, p. 520) thus define interactional competence as “the set of knowledge and skills that participants in interaction deploy to collectively configure the resources to engage in social practices”. These competences include the ways in which participants collectively accomplish action in society, how they configure

and delimit units of actions, how they manage turn-taking rules, direct their attention, introduce new topics, endorse and negotiate social roles, use specific categories for referring to participants, etc.

From its origins, the notion of interactional competence has been applied to a diverse range of educational contexts. It has, for example, been used to describe certain features of child development (Gardner & Forester, 2010; Hutchby & Moran-Ellis, 1998) or second language acquisition processes (Hall, Hellermann, & Pekarek Doehler, 2011). Recently, the concept of interactional competence has also been mobilized to study vocational training interactions, and more generally transitions between school education and the world of work (Marra, Holmes, & Kidner, 2017; Pekarek Doehler *et al.*, 2017). Nguyen (2006, 2008, 2017) shows, for example, through a longitudinal study conducted in the field of pharmacy salesperson training, how, progressively, interaction formats between customers and pharmacists are transformed and interactional competences are acquired. In the context of health education, Melander (2017) also shows how teachers and students in nursing orient themselves towards moral values of the nursing profession and how competences connected to interpersonal relations with patients are implemented in interactions.

One of the objectives pursued by interaction analysis is precisely to identify the sorts of interactional competences required and mobilized by participants when addressing the practical problems they are faced with in the circumstances of their social encounters. Interactional competences are not to be considered here as an exhaustive repertoire of skills attributable to individuals isolated from each other; on the contrary, they should be conceptualised as situated resources distributed amongst participants in interaction and are made visible through the circumstances in which they are being enacted. Consequently, interactional competences are not always explicitly taught, but often give rise to situated forms of evaluations and repair by experienced participants. In other words, it is by participating in interactions that competences can be mobilised and acquired. From there, interaction should not be regarded only as an *object* of teaching and learning, but also the *means* by which this learning can occur.

Identifying the Interactional Competences of Learning Through Work

To illustrate the conceptual connections between language use, work production tasks and how they might be experienced and learnt by newcomers in specific occupations, we now turn to an empirical analysis of naturally occurring talk-in-interaction to investigate how apprentices are exposed to numerous and often hidden institutional demands regarding the ways they engage in interactions at work. The questions we address in the data are the following: What are the typical interactional competences learning workers engage with when entering the world of the workplace? What sorts of challenges or difficulties may arise during these learning experiences? How are they guided through these interactional competencies and challenges by more experienced workers?

In what follows, we briefly present the methodological conditions of this empirical research design and contours of the data set under scrutiny. We then focus on two distinct and complementary ways of using linguistic resources in the context of apprenticeship training.

A Video-Ethnography of the Swiss Apprenticeship System

The empirical data used below were collected between 2006 and 2011 in the so-called “dual” apprenticeship training system applied in Switzerland in the field of initiation vocation education and training (Filliettaz, 2012a, 2014; Filliettaz, de Saint-Georges & Duc, 2008, 2010). The research consisted in an extensive video-ethnography of a group of approximately 40 apprentices engaged in three different technical trades: car mechanics, automation and electricity. Observation took place in naturally occurring training conditions in the Geneva area. Apprentices were observed in the various settings in which

their training took place, namely vocational schools, private training centres governed by professional associations, and training companies. Data collection took place at the beginning (1st year) and at the end (4th year) of the training program, in order to observe change over time and to describe how apprentices engaged in learning at various steps of their learning trajectory. With the explicit consent of participants, observations were video recorded by researchers. The complete data set comprises 150 hours of audio-video recordings collected in one vocational school, two training centres and seven different training companies. These recordings document sequences of ordinary training and work activities in which apprentices interact with a variety of experts, ranging from vocational teachers, dedicated trainers or experienced co-workers. Field notes, written documents and research interviews were also used in order to bring complementary elements to the set of observational data.

The recordings were integrated in a data base run by a qualitative analysis software called Transana, which allowed a hierarchical ordering of the video files as well as a detailed transcript of episodes. Time codes were used to produce clips, related to specific keywords, belonging to analytic categories.

In what follows, we focus on a case study limited to one specific occupational domain and featuring one of the apprentices observed in the context of work-production tasks within a private company. The case study relates to an apprentice named Rodney¹ (ROD), whom we visited and observed at various times and in different training sites during his apprenticeship program. ROD commenced as an automation apprentice in September 2005. At that time, he was already 18 years old. ROD had emigrated from Cape Verde to Switzerland when he was a young boy. His native language is Portuguese and not French. ROD had encountered significant difficulties during his schooling and ended his compulsory education with poor achievements in both literacy and numeracy. The company that hired ROD as an apprentice is a small business specialised in the construction of electric boards for the building industry. Within the company, ROD is supervised by Fernando (FER), his vocational trainer. As is usually the case in companies, Fernando is not dedicated exclusively to the instruction of apprentices. He is also manager of one of the workshops and contributes to productive work tasks. Other colleagues are also working in the same environment as ROD, but they have no official training responsibility for apprentices. As observed in most companies hiring apprentices in technical trades, the training model followed by this company is strongly oriented to productive concerns and considers that apprentices should learn by being assigned productive tasks from the very beginning of their apprenticeship program. This means that ROD is immediately put to work and is not given any period of observation during which he can become familiar with the context of production.

In the following sections, we aim at understanding what challenged ROD's integration into professional life when he entered the workplace at the beginning of his training period and in what respect these difficulties were related to language use and participation in interaction. These issues will be addressed by analysing two sequences of data collected during the first month of ROD's training period within this company. The excerpts of data transcribed and analysed below refer to various tasks conducted by the apprentice when assembling one of his first electric boards. They illustrate how difficult it was for ROD at that time to make reference to the material environment and to understand jokes and humour in the workplace.

Referring to the Technical Environment

One of the issues apprentices are often faced with when joining the workplace concerns reference to technical concepts. When engaging in material environments they are not familiar with, apprentices sometimes lack resources to refer adequately to objects or tools belonging to the work

¹ Names given in this empirical section are pseudonyms.

context. This is because they often do not know how to name objects. But more substantially, this is also because the conceptual, procedural and dispositional knowledge underlying workplace practices are at an early stage of elaboration. These issues may cause local infelicities in interactions with expert workers, particularly when participants fail to identify discrepancies in the ways they establish reference in discourse. In such circumstances, the sharing of reference engages substantial interactional work.

In this first sequence, ROD and FER are engaged in testing the electrical board produced by the apprentice. To do this, they have to power up the board and check that the different modules (terminals, circuit breakers, contactors) are correctly wired. As the transcript below begins, FER and ROD are preparing to test a contactor by switching it on:

(1) it's a contactor (227, 45'06 – 45'59)²

- 45'06 1. ROD: ((ROD plugs in the testing cable)) [#1]
 46'17 2. FER: you: have to switch on these devices\ ((points to the devices included in the electric board))
 3. ROD: ((ROD switches on the circuit breakers included in the electric board))
 45'24 4. **also the EFI/**
 5. FER: **this isn't an EFI**
 6. ROD: **it's a: mmm: . a relay/**
 7. FER: ((looks at ROD without speaking))
 8. ROD: **it's a Multi-9/**
 9. FER: ((continues to look at ROD in silence))
 45'35 10. ROD: **it's-** ((picks up his notebook and reads)) [#2]
 45'42 11. **it's a contactor**
 12. FER: OK\ ((hands on the testing device to ROD))
 45'46 13. ROD: a contactor\ . OK\ ((takes the testing device))
 14. FER: how shall we do the testing\
 15. ROD: I put one on the neutral and the other on a phase\
 16. FER: correct\ . so\ . you start at the beginning right/
 45'57 17. ROD: mmm/
 18. FER: you should start at the beginning not at the end\



#1: ROD plugs in the testing cable



#2: picks up his notebook and reads

² Conventions used in the transcripts below are explained in the Appendix.

In line 2, FER addresses a direct instruction to the apprentice and asks him to switch on the devices included inside the electric board. When reaching one specific module, ROD asks a clarification question to make sure all devices are concerned by FER's instruction ("also the EFI?", l. 4). In saying so, ROD refers to the object as an EFI circuit breaker, namely a protection device that switches off power when it goes over a certain voltage (see image #3). But the object pointed to by ROD is not a circuit breaker, but a "contactor" (see image #4). Contactors and breakers have quite opposite technical properties. If breakers are related to security and switch off the electric board when submitted to excessive intensity, "contactors" are electromagnetic switches that enable to control electric devices such as boilers or heating systems. Having identified the confusion, FER negates ROD's clarification question ("this isn't an EFI", l. 5). ROD then engages in a trial and errors strategy in which he attempts to identify the correct term for referring to contactors. His first attempt is to designate it as a "relay" (l. 6), and the second to a "Multi-9" (l. 8). Both these proposals are incorrect, as displayed by Fernando's non-verbal responses, which are silent gazes at the apprentice (l. 7, l. 9). It is only when the apprentice uses the correct term "contactor" in line 11 after checking in his notebook (see image #2) that Fernando produces a validation ("OK", l. 12) and that the testing procedure can progress again.



#3: *Picture of a Multi-9 breaker*



#4: *Picture of a contactor*

This short excerpt illustrates significant properties of the contexts in which interactions take place in vocational education. The first is that, from the perspective of a newcomer in the electricity and automation business, the material environment is not a transparent and easily accessible reality. Material objects are visually accessible and available to different sorts of manual manipulations, but their technical properties may not be immediately accessible to all participants. When such conceptual difficulties emerge in context, it is also interesting to observe that specific interactional routines and methods are enacted to address such conceptual and linguistic imprecisions. In the present case, a sequential pattern is accomplished collaboratively by the apprentice and his trainer, guiding ROD progressively to the correct information. And finally, it is also worth noting that Fernando's contributions to the machinery of interaction at this particular moment are subjectively oriented from an information and argumentative perspective. When "responding" to ROD's questions or successive attempts to provide a linguistic account of the "contactor," FER displays negative attitudes towards the apprentice and his interactional competences. FER's verbal and non-verbal responses signal a negative uptake of ROD's utterances. In other words, FER makes visible that he would expect the apprentice to know what he is currently not in a position to name properly.

Humor and Jokes

In the first example analysed above, access to conceptual knowledge appears as a key ingredient for participation in workplace practices. But this cognitive dimension of vocational learning is not the only challenge apprentices face when they undergo practical training. Becoming a member of a

professional community requires the apprentice to manage the affective and social aspects of workplace interactions, namely to participate adequately in relational work and to engage with specific discourse genres such as small talk or humour. There have been numerous studies devoted to these social dimensions of workplace interactions, conducted for instance in the Language in the Workplace Project (LWP) in Wellington (Holmes and Stubbe, 2003). Data analyses conducted in various professional fields have established that jokes and humour are inherent components of working lives and are proper to the workplace culture of each professional community. Holmes and Stubbe (2003) have also shown that participating adequately in such discourse practices is not an easy task for newcomers. Nevertheless, it is a task that may determine the quality of their integration within communities of practice.

In workplaces, it is expected that apprentices align with the specific social norms required by the communities they will progressively belong to. As new members of work teams, they have to learn how to cope with humour, how to interpret jokes and how to respond to them. These social dimensions of workplace practices are far from easy to cope with and bring new challenges to the transition process.

In what follows, we give an illustration of this by observing how ROD encountered difficulties in sharing jokes with his colleagues. In our second transcript, ROD had to use specific software in the computer room to edit and engrave plastic tags for the front of his electric board. ROD encountered problems in running the software and had to ask one of his colleagues, JUL, for assistance.

(2) *Justin Bridou (227, 04'15 – 06'56)*

- 04'15 1. ROD: ((enters commands on the computer)) [#5]
 2. one two three/ .. OK\ ((enters commands on the computer))
- 04'35 3. ROD: ((goes back to the workshop))
 4. ROD: the computer has a problem\ ..
 5. I went through all the procedure but it doesn't work\
- 04'46 6. JUL: ((JUL leaves his workspace and joins ROD in the computer room))
- 04'52 7. ((JUL and ROD stand in front of the computer)) [#6]
 8. ROD: it says this\
 9. JUL: ((handles the mouse and inserts commands))
 10. did you go here/ ((inserts commands))
 11. ROD: yeah/
 12. JUL: ((inserts commands))
 13. ROD: no no less less less/
 14. JUL: wait a minute/
 15. ROD: no it's just one/ .. it's just one/
 16. JUL: **just one/ [Justin]**
 17. ROD: yep\
 05'16 18. JUL: **Bridou/**
 19. ROD: you have to delete that\
 20. JUL: **Justin Bridou or:**
 21. ROD: just a layer\ . you have to set it with one layer\
 ((points to the screen))
 22. JUL: **not Bridou**
 23. ROD: **what is Bridou**
 05'25 24. JUL: **a sausage** ((continues to enter commands))
 25. two three four five that's it/

26. ROD: yeah\
 27. JUL: OK two three four five OK\ .. now .. that' all right\
 28. did you set it vertically/
 ((the printer starts to engrave the stickers))



#5: ROD enters commands on the computer



#6: JUL and ROD stand in front of the computer

At the beginning of this sequence of work, ROD is engaging in an individual form of action in the computer room (#5). He enters commands on the computer and counts the number of positions he has to include in the sticker he is about to print (l. 1). But then he has difficulties with the computer, and he is unable to complete the editing procedure on his own. He leaves the computer room, walks back to the workshop and asks his colleagues for assistance (“the computer has a problem”, l. 4; “I went through all the procedure but it doesn’t work”, l. 5). FER, his official trainer, is not available at that moment. It is then JUL, a colleague sharing the same workspace, who immediately responds to ROD’s request and joins him in the computer room (see #6).

Once JUL and ROD are together in front of the computer, a sequence of so-called close guidance (Billett, 2001) commences, in which JUL very quickly takes control of the task. JUL stands in front of the computer and handles the mouse (#6). It is JUL again who inserts commands into the computer (l. 9, 10, 12), questioning the apprentice about the kind of procedure he has conducted so far (“did you go here?”, l. 10). Interestingly, ROD busily tries to keep an active role in the editing process, for instance by giving instructions to JUL: “no no less less” (l. 13), “no it’s just one it’s just one” (l. 15). But JUL begins to tease the apprentice by playing on the word ROD used. The conditions in which this joke is progressively produced by JUL and misunderstood by ROD can be described in more detail.

In line 16, JUL echoes the terms used in ROD’s instruction (“just one”), but is actually making a play on the word and refers to the French name “Justin.” ROD does not identify this turn as a joke and answers literally by saying “yep” (l. 17) to what he interprets as a request for confirmation. JUL then elaborates on the joke by coupling the first name “Justin” with the surname “Bridou” (l. 18). Justin Bridou is familiar to anyone sharing a French cultural background, referring to a popular brand of French sausage and which acquired a high level of visibility in television media in the 1980s. But ROD obviously does not share this cultural background and hence still cannot interpret JUL’s comments as humorous. Again, he answers literally to what he understands as a question, and produces an explicit form of instruction (“you have to delete that”, l. 19). This time, JUL provides the names ‘Justin’ and ‘Bridou’ in sequential order, to make his reference to “Justin Bridou” clearer (l. 20), but the same misunderstanding goes on and ROD still fails to identify the joke (“just a layer you have to set it with one layer”, l. 21). It is only

after JUL's fifth mention of Justin Bridou ("not Bridou?", l. 22) that ROD asks for clarification ("what is Bridou?", l. 23) and that the misunderstanding is resolved. The reference to the sausage trademark is then revealed by JUL ("a sausage", l. 24), but its humorous meaning in the context fails to be shared. The two participants then move back to the task and complete the engraving procedure.

What is particularly striking in this example is that in spite of a growing number of contextual cues, ROD is not in a position to understand the non-literal meaning associated with JUL's talk. Coming from a distinct cultural environment, he does not share the same knowledge JUL is familiar with and cannot associate 'Justin Bridou' either with a 'sausage' or with a joke. Consequently, he does not even notice that he is being teased by JUL and that his misunderstanding reinforces the teasing. As mentioned by Holmes and Stubbe (2003), "being teased and made the butt of jokes is normal workplace experience for all workers" (p. 170). It is also through these discourse practices that membership to communities of practice is established. But these jokes also challenge newcomers who have to learn to recognize when a remark is intended as humorous or sarcastic. The fact that ROD fails to recognize JUL's talk as humorous places him outside the professional community he is supposed to become a member of. Hence, a complex marginalization process seems to be going on here, in which ROD fails to participate adequately in the interaction both on an operational level and on a social one. On an operational level, ROD clearly loses control over the task and becomes a mere observer of the engraving procedure carried out by JUL. And on a social level, he fails to understand the non-literal nature of JUL's talk and does not respond as expected to the joke.

Training Mentors and Workplace Supervisors

What can be the practical implications derived from the empirical observations presented above? In what follows, we explore two different and complementary applications for a sociolinguistic approach to vocational education and professionalisation. The first direction is oriented towards teachers' and trainers' training and aims at building an increased awareness of the "linguistic part of work" in training contexts. The second is oriented towards students or trainees and aims at reconciling language teaching and learning practices in a professional context with the realities of work.

Over the last ten years, our research on vocational training interactions has been regularly extended so as to develop training programs addressed to vocational teachers and trainers, and provide these with tangible resources for implementing expansive learning environments at work (Filliettaz, 2012b; Durand & Trébert, 2018).

Below, we present in more detail the contours of a university-based continuing education program for adult educators that has been offered for over 20 years at the University of Geneva. Participants enrolled in this program come from different professional fields (healthcare or social work institutions, early childhood education, watch industry, crafts, language teaching to adults, initial vocational training, etc.). They assume various professional roles, ranging from pedagogical counselling to strategic development, also including mentoring, human resources management or head of training departments within private companies or public services.

Within this program, a specific module dedicated to verbal interactions has been developed and implemented since 2009. This module aims at building amongst participants an increased attention to the qualitative properties of verbal and non-verbal interactions in professional training contexts. During five consecutive days, several activities are successively proposed.

A first kind of activity consists in making participants aware of the role of talk-in-interaction in training practices and familiarizing them with the analytical principles related to discourse and interaction

analysis. Based on the examination of empirical material consisting of audio-video data and transcripts documenting different work and training activities, various dimensions of language in interaction are identified and described. These dimensions relate to pragmatic, socio-relational and cognitive aspects of language use in context. To develop an analytic competence on these different aspects, concepts from various subdomains of sociolinguistics are defined, illustrated and discussed. Participants are introduced to the problems of speech acts, role taking and participation in interaction. They learn about framing in interaction and contextualization cues. Finally, they become familiar with the concept of multimodality and learn to identify a variety of semiotic resources that can be used and articulated in training interactions.

In a second step, the module focuses on the relationship between talk-in-interaction and learning processes in the specific context of vocational education. Participants become familiar with different theoretical frameworks developed in cultural psychology, anthropology and vocational didactics. These theoretical frameworks and their analytic concepts enable participants to discriminate between work environments that are supportive to learners' participation and access to learning opportunities, and those that can be seen as poor in terms of learning opportunities. From these ingredients, a diagnostic tool is proposed, allowing participants to identify, in concrete work and training interactions, resources or obstacles to learning opportunities.

In the third stage of the module, participants become familiar with the diagnostic tool and apply its categories to empirical material with which they are familiar. To do so, they produce audio-video recordings of naturally occurring interactions taking place in their work environment, identify relevant sequences of these recordings and produce fine-grained transcripts based on a simplified list of conventions. Each participant then shares the data with the group and engages in a collective analysis of the recorded empirical material. In accordance with the typical format of data sessions in conversational analysis (Antaki *et al.*, 2008; Stevanovic & Weiste, 2017), 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 preliminary observations with co-participants. The group then takes time to explore the transcript and watches the video several times, before collectively sharing views on specific moments of the video. At the end of the co-analysis, the floor is given to the group and the presenter, who summarise the salient outcomes of the collective analysis and also comment on the conditions under which it took place. Based on these observations, the group also discusses the contributions and limitations of interaction to the construction of learning at work.

Finally, the fourth and last step of the module aims to establish a transfer between training activities and work environments. Based on their data collection and collective analysis, participants transpose the diagnostic tool into their work and training context and identify possible adaptation and improvements about the qualities of interactions performed in the workplace. They elaborate on these considerations in a reflexive written text, as an assignment for validation.

What sorts of outcomes or benefits can arise from such training programs based on reflexivity and shared data analysis of interactional material? From our own experience, various learning outcomes may arise from collective data sessions mediated by trainers, in connection with various dimensions of professional practices: praxis, knowledge creation and identify formation. At praxeological level, engaging in collective forms of analysis of interactions at work helps professionals to make interpretations about the sorts of actions they accomplish. Through a descriptive account of data discussed within the group, they share views about their intentions and motives, and assign meaning to what is often difficult to interpret in the circumstances of work, namely what participants mean to do or to say when they behave the way they do. From an epistemic perspective, collective data sessions

also contribute to establish, share and disseminate specific sorts of knowledge associated with professional practices and language use. These epistemic categories may be introduced by researchers or by professionals. But in most of the cases, they are collectively elaborated within the group during the successive data sessions (Garcia & Filliettaz, 2020; Filliettaz, Garcia & Zogmal, forthcoming). And finally, video-based interaction analysis seems to have productive outcomes for practitioners in terms of professional development and identity formation. Observing how interactions unfold may lead participants to discuss broader professional dilemmas and social norms shared within communities of practice. It may contribute to establish or to renegotiate these norms within groups and communities.

Language Teaching and Learning

Another possible avenue to implement a better recognition of “the linguistic part of work” in vocational education contexts is to focus on the learners’ roles and to rethink how language teaching and learning can be implemented in workplace contexts. We have an illustration of such innovative approaches in the work conducted in New Zealand around the Language in the Workplace Project at Victoria University. For more than twenty years, sociolinguists interested in workplace discourse have collected naturally occurring data in a very wide range of professional settings, including government agencies, commercial organisations and industrial manufacturing sites (Holmes *et al.*, 2011). A socio-pragmatic analysis of this corpus has emphasized various facets of the interactional competences required by workers to engage in ordinary workplace communication practices, such as conducting conversations (small talk), producing directive acts, making decisions in meetings, using humour, etc.

In recent years, this sociopragmatic approach to workplace discourse has been connected to a University language course addressed to non-native English speakers seeking to enter the workforce in New Zealand (Holmes & Riddiford, 2010). This programme, entitled “The skilled migrant course,” is based on the idea that interactional and sociopragmatic competences can be a barrier to integration into the labour market and are particularly important components of professional socialisation. From there, the “skilled migrant course” offered by Victoria University aims at teaching non-native English speakers how to identify the cultural challenges and sociopragmatic requirements of communication practices in the workplace.

The course lasts twelve weeks and is divided into three main phases. In the first phase, which lasts five weeks, students are in class and follow language lessons based on authentic empirical data from the oral corpus. They learn to identify implicit social and institutional norms that shape the conditions under which discourse is produced in the work context. In the second phase of the course, learners undertake a work placement in a company, where they experiment the sorts of competences acquired in class, while conducting data collection in the workplace. In the third and final week of the course, they bring back the empirical material collected in the workplace and reflect about their work experience. According to Holmes & Riddiford (2010), the program shows positive outcomes. Students attending the course become more active in their interactions and develop a sense of empowerment in their relations with native English-speakers.

Conclusion

In this paper, we have attempted to address the sorts of connections and interdependences that characterize the language we use, the professional environment in which we use it and the conditions in which this use may contribute to learning experiences and processes related to “professionalization.” We have addressed this at theoretical level, by investigating possible conceptual and disciplinary contributions to that topic. And we have provided some empirical illustrations of the role and place of interactional competences in vocational training practices.

As evidenced in the corpus extracts analysed in the empirical section of the paper, the linguistic dimension of work activities can be regarded simultaneously as a potential *obstacle*, *resource* and *learning content* in the dynamics of training through practice. It acts as an obstacle insofar as encounters with new, and often unknown technical or cultural objects may cause linguistic opacity for newcomers in an occupation. Encounters with new objects require linguistic as well as conceptual learning. The linguistic dimension of work also constitutes a resource since, as shown in the data, the sequential organisation of interaction, combining verbal and multimodal resources, acts as a method through which linguistic opacity may be addressed and revealed. And finally, the linguistic dimension of work activities can also be regarded as a learning opportunity, in particular when linguistic opacity and imprecision are brought to the attention of apprentices and become learnable objects (Zemel & Koschmann, 2014).

However, the acquisition of interactional competences does not take place through direct and explicit instruction. As illustrated in the excerpts from our data, linguistic opacity can sometimes be accomplished in a non-literal manner and framed by specific relational actions such as teasing. In other words, the development of interactional competences demands specific arrangements and needs to be fostered in order to expand adequately. These arrangements can only be secured when participants themselves recognize the relevance and importance of language use in workplace contexts and when they are in a position to reflect on its role in production and learning.

Significant and diverse pedagogical implications derive from such empirical observations. The “continuing education program for adult educators” or the “skilled migrant course” are some examples among others that are undoubtedly available in different cultural and professional contexts. However, they highlight the importance of thinking about the linguistic, communicational, interactional and professional ingredients of competences in an integrated rather than a segmented way. As shown in this paper, language use and talk-in-interaction shape the conditions in which novice workers or newcomers in an occupation take actions, make sense of their work experience and become professionals. Conversely, local workplace cultures and professional practices are inherent to the ways discourses and interactions shall be regarded as acceptable and legitimate contributions to actions. These interdependencies between semiotic resources and situated actions are key ingredients to the dynamics of becoming a professional worker. Recognising such linguistic demands of learning at work is crucial. Only then will we be able to understand why so many young people enrolled in apprenticeship programs encounter non-linear transitions into the workforce, and guide them effectively through the journey from school to the workplace.

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Appendix

Transcription Conventions

| | |
|--------------------|--|
| / \ | rising or falling intonation |
| (.) (..) | micro-pauses |
| XXX | inaudible segment |
| exTRA | accentuated segment |
| <u>underlining</u> | overlapping talk |
| ((pointing)) | non-verbal behavior |
| [#1] | reference to the numbered illustration in the transcript |