

# Dropping out of apprenticeship programs: Evidence from the Swiss vocational education system and methodological perspectives for research

**LAURENT FILLIETTAZ**

Professor, Faculty of Psychology and Educational Sciences, Department of Adult Education, University of Geneva, Switzerland

## ABSTRACT

*This paper discusses the issue of attrition in apprenticeship programs, a topic that has attracted growing attention by VET researchers and policy-makers in many developed countries. It commences with a brief overview of the key issues challenging initial vocational education in Switzerland, and links these issues to similar concerns in Australia. It then demonstrates how concerns about the workplace environments can be understood through the particular lens of linguistic methods. These methods assist by providing a fine-grained analysis of the interactional processes that can lead to attrition and change in apprenticeship pathways. A case study based on empirical material collected in Swiss workplaces and documenting interactions between a first-year apprentice, his supervisor and his colleagues provides an illustration of this linguistic perspective and illuminates the challenges faced by apprentices in the early days of work.*

**Keywords:** attrition, apprenticeship, discourse, interaction, workplace learning, power, identity

This paper focuses on specific aspects of training research and addresses issues related with a particular category of learners and workers<sup>1</sup>. It reflects on the challenges and difficulties met by apprentices when engaging into work at the beginning of their training program. These challenges include: How apprentices access vocational knowledge and build up skills and competencies in the workplace? How do they

become members of professional communities and cope with identity transformations? How are they guided through this experience and supported by expert workers? Why do they often drop out from training programs or at least do not complete their apprenticeship within the stated terms of their contracts?

In many countries, these issues have become of interest for practitioners and policy makers,

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particularly in turbulent times, where economic contingencies tend to have a direct and sometimes negative impact on VET systems, and where transitions from schooling to employment are increasingly seen as contested arenas of education. The paper argues that if we want to understand how new generations of workers are coping with the complexities of productive environments, the conditions in which newcomers in the trades experience learning in the workplace deserve close attention.

These issues are not only challenging for apprentices, practitioners and policy-makers. They also prompt crucial methodological questions for researchers in the field of VET: How can research illuminate the conditions in which apprentices move from school to vocational education? What constitutes a smooth transition and a successful pathway through apprenticeship programs? What sorts of research methods are suitable for gaining a better understanding of the complexities related with vocational learning?

In a recently initiated research program conducted in Switzerland,<sup>2</sup> these various issues have been addressed by developing and using methodologies borrowed from applied linguistics. Analysing discourse and verbal interaction among apprentices, trainers and workers, it is proposed, can contribute to a better understanding of the complex learning processes associated with transitions from school to work and illuminate the multiple challenges faced by apprentices at the beginning of their training programs.

In this paper, the main objectives, methodological orientations and preliminary findings of this research program are discussed and the potential and limitations of practice-based models of training in VET are critically appraised. The paper commences with a brief overview of the main issues challenging initial vocational education in Switzerland, linking these challenges with similar sorts of concerns, as they exist

in Australia. It then shows how these various challenges can be researched from the particular lens of situated theories of learning and linguistic methods. The next section consists in a case study and brings empirical evidence to the addressed issues by examining some of the difficulties experienced by a first-year apprentice when interacting with his colleagues in the workplace at the very beginning of his training program. Finally, the paper elaborates on the case study and explores theoretical, methodological as well as practical implications resulting from the approach proposed.

## APPRENTICESHIP IN THE SWISS CONTEXT

Switzerland is often acknowledged positively in comparative surveys for its long-standing and widely encompassing apprenticeship programs. According to the most recent figures available (Federal Office for Professional Education and Technology, 2009), more than 60% of the students completing compulsory education at lower secondary level go on to enrol in the VET system and only one-third go on to specialise in general education at upper-secondary and tertiary levels. Amongst the 78,000 students who commenced vocational training in 2007, 80% elected to commence apprenticeship programs, and only 20% opted for school-based vocational training. This means that apprenticeship training, in what is often called the 'dual system', still remains the predominant form of upper secondary education in Switzerland.

The dominant training model is called 'dual' because it comprises a combination of multiple training sites, associated with a plurality of partners. Apprentices are trained in productive conditions by working in paid jobs in a company for about 3–4 days a week. They undergo complementary teaching sessions in vocational colleges for about 1–2 days a week. And finally, they

<sup>2</sup> This research program is sponsored by the Swiss National Science Foundation (SNF) under references PP001-106603 and PP00P1-124650. It has benefited from the contributions of two other researchers: Prof. Ingrid de Saint-Georges and Ms. Barbara Duc.

attend so-called cross-company courses hosted by professional associations at various steps of their training programs with the aim to learn complementary knowledge that is difficult to secure in the productive conditions of everyday work.

Such a dual training model is rooted in a close and long-standing cooperation between representatives of the economic system (professional associations, employers) and government at both federal and state levels. Government policies are responsible for monitoring the qualification framework and for developing the overall quality of the training system at national level and within cantons. And stakeholders from various industries also make a significant contribution to the implemented training programs. For instance, economic demand as represented by need for particular kinds of employees strongly influences the recruitment and selection of apprentices. Moreover, professional associations define the relevant content of the programs, contribute to the preparation of pedagogical resources, and support the provision of practical training in cross-company courses as well as in ordinary workplaces. Finally, vocational trainers who are acting as supervisors for apprentices in the workplace context are expected to go through short time training sessions in which they are given some basic information about apprenticeship programs and training methods in the workplace.

Although apprenticeship programs following the scheme of the dual system have often been reported as efficient strategies for securing employment and supporting smooth transitions from school to work, recurrent problems have emerged in these programs during the last few years (Dubs, 2006; Gonon, 2005).

According to a recent longitudinal survey conducted between 2000 and 2007 (cf. Stalder and Nägele, 2010; Stalder, 2008), the first problem often experienced by young people in a market-driven VET system is the delayed access to upper secondary education. More than 20% of all young people completing compulsory school do not manage to find apprenticeship

positions and therefore cannot enter upper secondary education immediately. Candidates with migrant background are also significantly more often enrolled in 'bridging courses' before moving into apprenticeship programs. The reasons for this lie in a tendency for the economic conditions to provide insufficient apprenticeship positions, or at least to offer limited training opportunities in the occupations in which young people want to work. Despite a strong apprenticeship tradition, only 30% of Swiss firms hire apprentices, and emerging occupational sectors such as services or technologies are often unfamiliar with the requirements and specificities of apprenticeship programs, and do not participate strongly (Sager, 2008).

The second problem that has attracted increasing attention in recent years is the high level of non-completion, dropout and change in apprenticeship pathways. Depending on the occupations and the geographical areas, from 20–40% of apprentices who enter the dual VET system do not complete their apprenticeship within the stated terms of their contracts (Stalder and Nägele, 2010). Of these: 9% change occupation, 11% have to repeat a year, 7% change the employer, and 7% drop out from the apprenticeship system without having any immediate alternative pathway. Given these circumstances, it has become crucial to gain a better understanding of the causes leading to young people dropping out or making changes in apprenticeship programs. Recent research conducted in this area by Lamamra and Masdonati (2009) has, for instance, investigated the reasons given by apprentices who had interrupted their apprenticeship. Conducted from a qualitative perspective and based on semi-structured interviews, this study concludes that poor working conditions, low support by trainers and workplace relations emerge as the main causes leading to dropout. Half of the apprentices interviewed reported conflict in their relations with their colleagues or supervisors and also complained about insufficient training opportunities in the workplace.

Interestingly, similar sorts of concerns seem to have emerged in Australia regarding non-completion and change in apprenticeship and traineeship pathways. Many surveys adopting a variety of methodologies have for instance been devoted to understanding attrition and dropout at national and state levels (Grey, Beswick, O'Brien and Ray, 1999; Ray, Beswick, Lawson, O'Brien and Madigan, 2000; Callan, 2000; Cully and Curtain, 2001; Snell and Hart, 2008). These surveys have found that completion rates for apprentices and trainees differ across occupations, among states and geographical areas. According to Snell and Hart (2008), national rates ranging from 24% to over 60% have been cited by various researchers over the previous two decades regarding attrition in apprenticeship.

Various reasons for non-completion and dissatisfaction have been proposed over time. For instance, the national level survey conducted by Cully and Curtain (2001) establishes that *personal and work-related factors* seem to play an important role in attrition rates. Over half of the almost 800 non-completing apprentices and trainees survey respondents reported that they withdrew for job-related reasons. They variously reported no longer wanting to work in that job, were dismissed by the employer, were made redundant or transferred to another apprenticeship. Other research also points to the high level of dissatisfaction with *training conditions* amongst non-completers. Snell and Hart (2008) establish, in the State of Victoria, that unpleasant working conditions, poor quality training, and a lack of support were contributing to both non-completion and a high degree of dissatisfaction among apprentices and trainees. Finally, *relational problems* in workplaces are often mentioned as contributing factors leading to apprentice attrition. Cully and Curtain (2001) show that half of the apprentices included in their survey claimed to be being treated as cheap labour and 23% reported that they had been bullied at work and that this had motivated them to withdraw from their apprenticeship.

As mentioned by these authors, the reasons leading to attrition, dropout and change in apprenticeship remain contested issues and are often associated with complex combinations of factors. But this brief comparison shows that unsatisfactory working relations and bad work experiences are perceived as inimical to apprenticeship completion both in Switzerland and Australia.

### RESEARCHING TRAINING AND LEARNING IN PRACTICE: A SITUATED AND LINGUISTIC PERSPECTIVE

This section focuses on methodological considerations regarding how we can come to understand more fully the issues and impacts of unsatisfactory workplace environments. The point I wish to make here is that it is not sufficient to identify 'causes', 'reasons' and 'factors' leading to incomplete training pathways. Instead, there is a need for understanding the *processes* by which these causes and factors are being enacted in practice, how attrition is constructed in action, and how apprentices, trainers and workers are experiencing relational and practical issues when engaging into work. This requires a comprehensive explanation of the complex mechanisms by which apprentices learn through work as well as a better empirical knowledge about the actual conditions they face in the various contexts in which they are trained.

It is this later qualitative perspective that has been investigated in a recent research program initiated in 2005 together with two colleagues at University of Geneva (Filliettaz, de Saint-Georges and Duc, 2008). This ongoing research program is sponsored by the Swiss National Science Foundation (SNF) and aims to understand teaching and learning processes as they are enacted in practice within the Swiss dual VET system. The theoretical and methodological principles orienting this research program can be summarised as follows.

First, the study conducted aims to contribute to a better understanding of the complexities and specificities associated with workplace learning.

Following anthropologists or researchers in adult and vocational education, we take vocational learning not only as a cognitive process, but also as a social one, involving transitions and identity transformations (Lave and Wenger, 1991; Billett, 2001; Eraut, 2007). Moreover, according to Billett's modelling and terminology, we see learning through work as a reciprocal process in which workplace affordances constantly interact with personal and individual factors (Billett, 2009). Amongst the various learning opportunities afforded by workplace environments, we see direct and indirect forms of guidance provided by experts as particularly important resources for newcomers in the workplace<sup>3</sup>.

These complex processes that shape learning through practice are very much premised on language use and communication. Training and learning occur in ordinary activities, in which individuals provide or receive instructions, share views, solve problems, display interpretations of ongoing actions, etc. Learning to work and becoming a member of professional communities very much relies on discourse and interactions. Consequently, it is through the lens of verbal and non-verbal interactions between apprentices and trainers that issues of vocational training are being investigated in our research program. The methodology we selected draws upon concepts and analytic categories from various fields of linguistics, such as conversation analysis (Sacks, Schegloff and Jefferson, 1978; Schegloff, 2007), interactional sociolinguistics (Gumperz, 1982) and discourse analysis (Levine and Scollon, 2004; Kress, Jewitt, Ogborn and Tsatsarelis, 2001; Sarangi and Roberts, 1999; Filliettaz and Roulet, 2002). These fields have explored multiple avenues of linguistics and are often seen as offering competing or contradictory approaches for analysing discourse and interaction. Nevertheless, these frameworks also share common assumptions about language and social life. In particular,

they view language not only as way of transferring information from speakers to recipients, but as a historical and culturally shaped medium through which individuals take actions, achieve cooperation, align identities, and participate in social events.

Consistent with this broad discursive and interactional perspective, specific kinds of data were collected for this research program. Data collection was conducted in the form of ethnographic observations of a cohort of 40 apprentices engaged in three different technical trades: i) car mechanics, ii) automation and iii) electric assembly. Observation took place in naturally occurring training conditions in the Geneva area and in the various sorts of settings involved in the dual training system: i) vocational colleges, ii) private training centres and iii) workplaces. With the consent of participants, observations were video recorded by the researchers. These recordings took place after a period of preparation during which participants got used to the presence of the researcher and a relation of mutual confidence was established between partners. Both apprentices and trainers gave their consent for being filmed and for having the data used for research purposes. As indicated in Table 1, the complete data set comprises approximately 160 hours of audio-video recordings collected in one vocational college, two private training centres and nine different workplaces.

These recordings document sequences of everyday training and work activities in which apprentices interact with a variety of experts, ranging from vocational teachers working in vocational colleges, dedicated trainers hired by training centres or experienced employees available on the workplace. Apprentices were mainly male adolescents, aged 15–18 years. They were observed both during their 1<sup>st</sup> year and 4<sup>th</sup> year apprenticeship, namely at the beginning and at the end of their training program.

<sup>3</sup> As stated by Billett (2001), 'the quality of direct interaction accessible in a workplace is a key determinant in the quality of learning outcomes. This extends to the availability of this guidance, the willingness of individuals to assist others and the skill experienced coworkers have in sharing this knowledge' (p. 35).

**TABLE 1: SOURCES AND AMOUNT OF EMPIRICAL DATA COLLECTED**

Professional trades	Training settings	Video recordings
Car mechanics	One vocational college	37 hours
	Four garages	39 hours
Automation specialists	One private training centre	19 hours
	Three companies of the machine industry	20 hours
Electric assemblers	One private training centre	17 hours
	Two public companies	25 hours

These data and methodological perspectives have been used so far to investigate various issues and topics within broader domains of interest in vocational training research.

One first domain of interest has focused on knowledge transmission and transformation. In this area, our research team has been analysing the ways vocational knowledge and skills are explained, experienced and acquired in different interactional contexts. A range of issues related to interactions has been explored so far. One issue refers to the ways experts and apprentices use the material environment in order to share vocational knowledge, and how they do so by exploiting various sensory perception and the semiotic resources available to them (Filliettaz, 2007; de Saint-Georges, 2008a). Another area of interest has focused on analogical discourse in vocational training interactions (Filliettaz, de Saint-Georges and Duc, 2010). A third domain of interest has consisted of analysing instructional discourse and its tight links with the unfolding of production tasks in the context of the workplace (Filliettaz, 2009; Filliettaz, forthcoming a). Contrasts between explanations by teachers in vocational colleges and the progressive construction of expertise by apprentices have also been studied, with the intent of providing a fine-grained understanding of 'situated trajectories of learning' (de Saint-Georges, 2008b; de Saint-Georges and Filliettaz, 2008). Finally, special attention has been given to time and its relations with vocational knowledge, by analysing how experts teach sequential and rhythmic properties of occupational skills (Filliettaz and de Saint-Georges, 2006; de Saint-Georges and Duc, 2007).

The second broad area of investigation is directly related to the notions of transition and identity construction. Here, the research conducted by our team has been interested in exploring the relations between participation in interaction and professional socialisation. In particular, we have described how experts shape the nature and degree by which apprentices engage in productive tasks and how such forms of participation create opportunities for developing professional identities (Duc, 2008). Consistent with these investigations, contrasted forms of guidance have been identified in the various workplaces observed (Filliettaz, de Saint-Georges and Duc, 2009; Filliettaz, 2010).

In the following paragraphs, I illustrate how these data and methodological approaches drawn from a discursive and interactional perspective may inform our understanding of the conditions in which apprentices encounter problematic experiences when joining the workplace. This case study refers to a tiny portion of the data available, but it should help to discuss possible continuities between issues in initial vocational education and linguistics methods.

## TRAINING IN THE WORKPLACE: A CASE STUDY

The case study relates to one of the apprentices we followed at various times and in different training sites during his apprenticeship program. Rodney (a pseudonym we gave to this young man) commenced as an automation apprentice in September 2005. At that time, he was already 18 years old. Rodney exemplifies a rather typical profile of the population that enrolls in 'dual'

apprenticeship programs in Geneva. He has a migrant background and emigrated from Cape Verde to Switzerland when he was a young boy. Rodney encountered significant difficulties during his schooling and ended compulsory education with poor achievement in both literacy and numeracy. The company that hired Rodney as an apprentice is a small business that specialises in the construction of electric boards for the building industry. Within the company, Rodney was under the supervision of Fernando, his vocational trainer. As is usually the case, Fernando was not dedicated exclusively to the instruction of apprentices. He was also manager of one of the workshops and contributed to productive work tasks. Other colleagues were also working in the same environment as Rodney, but they had no official training responsibility for apprentices. The training model followed by this company was strongly oriented by production concerns and considered that apprentices should learn by being assigned productive tasks from the very beginning of their apprenticeship program. This means that Rodney had not been given any period of observation during which he could become familiar with the context of production. Instead, he was immediately put to work and was expected to take full responsibility of entire production tasks very quickly.

These conditions did not fit Rodney's needs for more guided training. After the end of his second year apprenticeship, in June 2007, the company decided to end Rodney's contract when he failed at his intermediary exams. His trainer considered that Rodney was not motivated enough and required too much assistance to be a helpful resource for the team. As an alternative, Rodney could continue his apprenticeship through a full-time school program in the same trade. These conditions seemed to be more suitable and enabled Rodney to succeed in his intermediary exams in June 2008.

To consider this specific and rather problematic pathway through the 'dual' apprenticeship pro-

gram, it is necessary to understand what challenged Rodney's integration into professional life when he entered the workplace at the beginning of his training period. What sorts of difficulties did he experience when interacting with his trainer and colleagues? In what respect were these difficulties related to language use and participation in interaction? Addressing these issues may help us reflect about the processes leading to non-completion and change in apprenticeship programs.

To address these questions, a short sequence of interaction recorded during our observations will be used. This video excerpt was recorded in March 2006, six months after commencement of Rodney's apprenticeship, and at the very beginning of his training period in this company. At that time, Rodney learnt how to produce small-sized electric boards by assembling various electric devices including circuit breakers, contactors and electric terminals. In the following sequence, Rodney is desperately trying to engrave plastic tags that have to be attached to the front of an electric board. To engrave these tags, Rodney has to run specific software on a computer located in a room adjacent to the workshop. It is the second time he has gone through this engraving procedure and he is doing this task on his own for the first time. Rodney is facing difficulties in running the software properly and, repeatedly, requests assistance from his colleagues. In the following sequence, Rodney (ROD) steps out of the computer room and asks Fernando (FER), his official trainer, for help. But it is finally Julian (JUL), another colleague, who will assist Rodney in this engraving procedure.

(1) *I have a problem it doesn't work (227, 11'20 – 12'30)*<sup>4</sup>

1. ROD: *(ROD leaves the computer room and goes back to the workshop)*
2. ROD: I have a problem. It doesn't work.
3. FER: Of course it doesn't work! It can only function!

<sup>4</sup> The recorded data are in French, and the transcript provided here is a translation.

4. FER: You go JUL, I've had enough!
5. JUL: What's the problem now?
6. ROD: Are those the T-shirts?
7. JUL: Yes these are the T-shirts.  
(*moves towards the computer room*)
8. JUL: And what's your problem then?
9. ROD: It doesn't work.
10. JUL: What's the problem? What doesn't work? What's-
11. ROD: I don't know it says this all the time.
12. (*ROD and JUL stand in front of the screen*)
13. JUL: But- (*starts typing on the keyboard*)
14. It's like last time. You have too many layers. You have to delete them, you see?
15. ROD: Oh I always forget that.
16. JUL: Yes oh yes I know er because this is the second time I've had to come here.
17. And why didn't you do it all at the same time?
18. ROD: Because there are some EFI breakers here and I don't know how to deal with that.
19. JUL: Right but 8 – 9 – 10 what's that?
20. ROD: 8 – 9 – 10 come before the EFI breakers.
21. JUL: Right I'll explain this to you another time. (*JUL leaves the computer room*)

Given this short transcript of interaction involving ROD, his trainer and his colleague JUL, the following paragraphs point out some of the challenges faced by the apprentice in this work environment and these illustrate the mediating role of language and discourse in vocational learning.

### **Reshaping participation and asking for assistance**

The first difficulty relates to the conditions in which the apprentice asks for assistance and the impact of this request on the enactment of the work activities. To do so, it is interesting to observe in detail how ROD displays help-seeking

behaviours at the beginning of this excerpt and how his trainer responds to these behaviours.

Being unable to complete the editing procedure on his own, ROD has to reshape how he participates to workplace activities. He does so by changing his orientation in space (l.1) and by initiating a verbal exchange with his trainer: 'I have a problem. It doesn't work.' (l.2). The linguistic form associated with this request deserves particular attention. ROD uses numerous attenuation devices when asking for assistance. The production of his request is linguistically presented as an assertion ('I have a problem') and remains highly implicit. And the encountered problem is described as being caused by the computer ('it doesn't work') and not by its user. So it appears that ROD is taking numerous precautions in order to perform what seems to be anticipated as a highly face-threatening speech act (Goffman, 1959; Brown and Levinson, 1987).

The type of reaction displayed by the trainer in response to this implicit request confirms the face-threatening potential associated with ROD's help-request. In a first turn, FER replies sarcastically to ROD's request, reminding him that he is using inappropriate vocabulary for describing the problem: The computer cannot 'work'; it can only 'function'. In a second turn, FER initiates a new exchange addressed to his colleague JUL and asks him to respond to the apprentice ('You go JUL, I've had enough', l.4). In doing so, he is not immediately satisfying ROD's request for help, but instead displays explicit resistance to engage with the apprentice at this stage.

This example stresses the idea that help-seeking behaviours are complex communicative tasks in the workplace, related not so much with access to specific information but rather with deep changes in the ways workers participate in the workplace (Goffman, 1974). Indeed, ROD's request not only orients towards a verbal answer. It requires that his trainer or other colleagues interrupt their own productive tasks in order to enact specific training roles. In other terms, asking for assistance introduces multiactivity in



highly constrained local organisations of collective activities. For an apprentice to initiate such changes in the context is not an easy task, particularly when these requests for assistance are repeated over a short period of time.

### Referring to the work environment

Another challenge often faced by apprentices when joining the workplace deals with reference to the work environment. When engaging in practices they are not familiar with, apprentices sometimes lack linguistic resources to refer accurately to objects or processes related to the work environment. This is because their conceptual, procedural and dispositional knowledge of workplace practices are at an early stage of elaboration, which makes it difficult for apprentices to enact and display what has sometimes been termed a 'professional vision' of the environment (Goodwin, 1994).

This type of difficulty becomes apparent in the data when ROD tries to explain the 'problem' he is facing with the engraving procedure. Interestingly, there seems to be clear expectations from JUL that the apprentice should be able to describe accurately the problem he is encountering. In three successive turns, JUL enquires about the nature of the problem ('What's the problem now?', l.5; 'And what's your problem then?', l.8; 'What's the problem? What doesn't work?' l.10). But obviously, ROD is not in a position to satisfy these insistent requests. First, he reorients the verbal exchange on another topic and enquires about T-shirts that have just been delivered to the workshop and that will soon be dispatched amongst employees as work clothes ('are those the T-shirts?', l.6). He then reports that 'there is a problem' and that 'it doesn't work', but cannot explain precisely *what* does not work. It is only when reaching the computer room and standing in front of the screen that ROD is finally able to use the material resources afforded by the environment and to point to the problem: 'It says *this* all the time' (l.11).

There is another instance later on in this same excerpt where similar issues occur. When taking

control of the computer and the engraving procedure, JUL wonders why ROD has not listed the complete range of numbers on the plastic tags ('And why didn't you do it all at the same time?', l.17). In questioning so, he invites the apprentice to give justifications for his way of engraving the tags. ROD explains that he has not included all the numbers because he does not know how to deal with specific sorts of circuit breakers, EFI breakers in particular ('Because there are some EFI breakers here and I don't know how to deal with that', l.18). But this justification seems to be regarded as insufficient, considering JUL's renewed enquiry ('Right but 8 – 9 – 10 what's that?', l.19). So here again, the apprentice is being put in a situation where he has to provide linguistic accounts of his work and faces difficulties to share with his colleagues a common understanding of the practices in which he is engaging.

### Delivering instruction in the workplace

Other difficulties observable in this short excerpt relate to the specific ways instructions may be delivered in the work context. Unlike extended explanations and demonstrations as they can be expanded upon in the school context, instructions in the workplace are often concise, implicit and tightly related to productive tasks. From what can be observed here, ROD seems to have difficulties in retaining knowledge delivered in such forms. This is apparent when JUL observes that the encountered problem is similar to the one he just solved a couple of minutes ago: 'It's like last time. You have too many layers. You have to delete them, you see?' (l.14). ROD confesses that he forgets this procedure all the time (l.15) and JUL then makes clear that he is well aware of that 'because this is the second time he's had to come here' (l.16).

The reasons why ROD faces problems in retaining instruction in the context may be related to the specific ways these instructions are provided by JUL. Like previously, JUL is not really

assisting ROD in his task, but rather taking control of the procedure and acting in substitution of the apprentice (see Figure 1). In such conditions, ROD participates in the procedure as an observer and not as an active ‘doer’ of the work.

Finally, another issue often raised by instructions in the workplace is their problematic temporal alignment with the ongoing process of work. Instructing takes time and may conflict with other tasks and priorities as they shape work environments (Filliettaz, forthcoming a). This is what happens at the end of the excerpt, when JUL postpones additional explanation about the engraving procedure to an unclear future: ‘Right I’ll explain this to you another time’ (l.21). He then makes the choice to set the parameter on the computer on his own, before going back to the workshop and leaving ROD alone in the computer room.

### Doing relational work

All the different microscopic speech events pointed to here have in common the fact that they convey important social implications for the apprentice and the ways he is being regarded by his colleagues. In sociolinguistic terms, they are the product of the ongoing ‘relational work’ by which participants build rapport in interaction (Brown and Levinson, 1987). FER and JUL are not only exchanging information with ROD and



FIGURE 1: JUL TAKES CONTROL OF ROD’S TASK IN FRONT OF THE COMPUTER.

assisting him in the performance of work procedures. They are also displaying attitudes towards the apprentice and the specific ways he engages in the context. They respond with sarcasm to his requests, express explicit resistance towards his needs for assistance. ‘Of course it cannot work. It can only function!’, ‘I’ve had enough’, ‘What’s the problem now?’, ‘It’s the second time I’ve had to come here’: All these speech acts affect the relational climate in which ROD is evolving and contribute to establish a rather negative image of the apprentice in the workplace. When repeated over time, these devices may lead to a progressive marginalisation of the apprentice, and, in ROD’s case, to the non-recognition of his status as a legitimate learning worker within this specific community (Lave and Wenger, 1991).

### CONCLUSIONS AND IMPLICATIONS

These elements of the case study are of course very local and highly contextualized. Much more data should be taken into consideration to understand *why* and most importantly *how* ROD’s immersion into the work context failed and led to a reorientation of his training trajectory. However, these local observations have important theoretical, methodological as well as practical implications for the research field related to initial vocational education and training.

At a theoretical level, the kinds of data and analysis briefly presented in this paper stress the complex and collective conditions in which vocational learners access knowledge and experience identity changes in the workplace context. They illustrate how difficult it may be for apprentices to secure knowledge in productive conditions and to position themselves within work teams, particularly when, as in ROD’s case, autonomy is difficult to achieve. As shown in the data, trainers and experienced workers exert various forms of power over apprentices. They shape the ways apprentices take part in production tasks, they orient their perceptions and understandings of the material environment, and they provide negative evaluations as responses to their requests for assistance.

On the one hand, these actions can be regarded as rather benign realities, consistent with workplace cultures and inherent to professional lives (Holmes and Stubbe, 2003). They can also be seen as legitimate responses to poor work performances by apprentices. But on the other hand, these practices also reveal the multiple and contradictory expectations set towards apprentices, in a context where they are often considered more as *workers* than *legitimate learners*.

These cognitive and social processes, as illustrated in the case study, are not constructed independently from language use. Rather, they are deeply shaped by discourse and by the complex range of semiotic means used by participants when engaging in interaction. It is by conducting interaction with experienced workers, by negotiating meaning with these experts, by reshaping participation in the workplace that apprentices learn to take part in productive tasks and become members of professional communities. From that standpoint, language-in-interaction is an important mediating tool through which apprentices are 'doing' learning in their training programs. This has important methodological implications for VET research. It can foster renewed ways for addressing classical issues in VET, dealing with transitions from school to work, learning in the workplace and problematic immersions into work.

Finally, the kind of methodological approach briefly introduced and illustrated in this paper also has important practical implications for practitioners and policy makers.

Based on rich naturally occurring data, this approach enables to elaborate findings that have established problematic work experiences and relational difficulties in the workplace as important causes leading to attrition, both in the Australian and Swiss contexts. Not only can a linguistic perspective support these claims, but it also illuminates the fine-grained interactional processes by which these relational difficulties and challenges are enacted in practice. This is not to say that all training conditions existing in Switzerland are similar to the ones related to this

particular case study. In the range of data collected in our research program, more supporting training practices have been observed and reported in various publications (Duc, 2008; Filliettaz, de Saint-Georges & Duc, 2009; Filliettaz, forthcoming b). These practices provide contrasts to ROD's experience and document a wide scope of interactional patterns by which teaching and learning processes are mediated.

This later observation requires a renewed approach to language in vocational education, an approach in which language is not only regarded as a disciplinary *content* of teaching and learning related to classrooms and to specific areas of the curriculum, but also as a more global *resource* through which various sorts of learning occur. From the short excerpt of data analysed, it becomes apparent that what is meant to learn in the workplace does not come down to vocational knowledge exclusively, but also includes specific discourse patterns by which professional practice may be adequately mediated. ROD is not only learning how to engrave plastic tags in this sequence. He is also being prompted towards adequate ways of asking for assistance, providing justifications, explaining problems, etc. In other terms, he is being taught at the same time *how to work* and *how work may be interactionally produced in discourse*.

This important dimension of the curriculum deserves to be made more visible in the field and, particularly, for trainers themselves. One particularly promising avenue currently being explored by our team at University of Geneva is to use the empirical material collected during our research in the context of training programs addressed to vocational trainers. As shown by the case study, vocational trainers in the workplace play an active role in the transition process experienced by apprentices. In consonance with Billett's work conducted in the field of workplace learning (Billett, 2001), research results presented here show an urgent need to increase the level of pedagogical qualification and awareness of trainers in the workplace to enhance the overall quality of the guidance provid-

ed in workplaces. Applying a discursive and interactional lens to empirical data certainly does not solve the complex issue of attrition in apprenticeship programs. However, it can make visible the sorts of difficulties faced by apprentices when joining the workplace and it can also help trainers and experienced workers to become more reflexive about their role in assisting these apprentices to accomplish consistent transitions into working lives.

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