



# Pre-vocational training for refugees in Switzerland: Characteristics of workplace learning

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## Abstract

Our explorative study focused on the analysis of workplace learning in Swiss companies offering a one-year pre-vocational programme (PAI) to young persons with a refugee background. We included three companies in the plumbing, commercial, and horticultural sectors, interviewing an in-company trainer and a former PAI apprentice from the same company in each sector. Drawing on a model of the quality of learning environments in a workplace setting (Filliettaz, 2012; Fuller & Unwin, 2003), we investigated how trainers and PAI apprentices perceived affordances, that is, social and structural resources provided in the workplace, and PAI apprentices' commitment, referring to their individual prerequisites to make use of these affordances. Our results emphasise the importance of an expansive workplace learning environment that enables PAI apprentices' progressive involvement in professional tasks, and the crucial role of trainers' and co-workers' guidance and support. Our results also showed that PAI apprentices were interested, motivated, and took initiative in the workplace, though their full involvement was undermined by their often-difficult life circumstances.

**Keywords:** refugees, pre-vocational training, workplace learning, vocational education and training, Switzerland



## Introduction

### **Access to vocational education and training (VET) for refugee persons**

The United Nations Refugee Agency reports that a total of 117.3 million persons had been forced to flee their homes worldwide at the end of 2023, with 37.3 million of these granted refugee status (UNHCR, 2024a). In Europe, this number rose to 22.5 million in the same timeframe, mostly arriving from Ukraine, Türkiye, and the South Caucasus region (UNCHR, 2024b). In April 2024, 76,695 asylum seekers, mainly originating from Syria, Venezuela, and Afghanistan, sought protection in the European Union countries (Eurostat, 2024). Professional and social integration thus represents a significant challenge for both the forcibly displaced persons and the resettlement countries (Fedrigo et al., 2023), not least due to the refugees' often traumatic pasts (Udayar et al., 2024).

Professional integration is fraught with challenges for newcomers (Hynie, 2018). VET represents a suitable option for achieving sustainable access to the local labour market, although it is often still difficult to enter (Atitsogbe et al., 2020). Consequently, a few European countries have recently developed measures to facilitate refugees' access to VET (Aerne & Bonoli, 2023). For example, Austria, Denmark, Germany, and Switzerland took advantage of the existent dual VET system, where most of the training is work-based (Bonoli & Wilson, 2019; Busse et al., 2024; Jørgensen et al., 2021). In Austria, an integration year is offered for recognised refugees and Syrian asylum seekers who are expected to receive residence permission and have completed compulsory schooling (Jørgensen et al., 2021). As part of the Adult Education Initiative, this 'integration year' either comprises vocational preparation and guidance with career orientation, application training, training for vocational qualifications, language skills, and on-the-job training or offers the possibility to complete a mandatory school-leaving qualification via the second-chance route (Busse et al., 2024). Denmark launched the Basic Integration Education initiative in 2016, which is a two-year programme offering both schooling and practical training (European Website on Integration, 2024). Germany offers vocational preparation schemes at vocational schools for young refugees, where they receive language support, vocational orientation, and assistance with finding a profession or initiating training. In Switzerland, basic language (or literacy) courses, vocational guidance, and one-year bridging courses aimed at integration into VET are offered. A recommendation issued by the State Secretariat for Migration (SEM, 2023) assists the local cantonal authorities in defining these preparatory measures (Busse et al., 2024). In addition, a pre-apprenticeship programme to support integration (PAI), preparing refugees for starting a regular dual VET programme, was developed (Scharnhorst & Kammermann, 2019).

### **Swiss pre-apprenticeship to support integration (PAI)**

The PAI, introduced by the Swiss Federal Council in 2018 for ‘motivated refugees and temporarily admitted persons’ (Scharnhorst & Kammermann, 2019, p. 16), is a one-year pre-vocational programme providing workplace training combined with courses for language proficiency as well as vocational and general knowledge at vocational schools. In some professions and/or cantons, it is also combined with courses at branch training centres. It aims to prepare apprentices with a refugee background to join a regular VET track and to introduce them to the norms and values of the Swiss labour market (Scharnhorst & Kammermann, 2019). The SEM, in cooperation with actors in 18 cantons and more than 10 professional training organisations (PTO), developed PAI programmes in approximately 20 occupational fields. The PAI turned out to be highly popular, as the number of participants rose from some 800 in 2018 to more than 4,000 up to 2023, with a completion rate of more than 80% and approximately two thirds of the participants starting a two- or three-year apprenticeship after completion (Stalder & Schönbächler, 2024).

#### *Learning environments in (pre-)apprenticeships in Switzerland*

In general, VET and pre-VET programmes targeted at native and other citizens in Switzerland are conducted at the upper secondary level, and learning generally takes place in three different locations, namely

- workplace learning in host companies, where apprentices spend three and a half or four days a week (this number differs for PAI in some cantons) while taking part in the company’s production processes,
- classroom learning at vocational schools one or one and a half days per week (this number differs for PAI in some cantons), and
- intercompany courses in branch training centres that combine and complement practical workplace and theoretical classroom learning.

For PAI, the cantons or the PTO decide whether they offer a dual (learning in vocational schools and host companies) or a trial (learning in vocational schools, host companies, and intercompany courses) model. The cooperation between companies, schools, and branch centres, prescribed in the Vocational and Professional Training Act (Swiss Confederation, 2002), enables connectivity of the apprentices’ learning and thus fosters their learning success (Sappa & Aprea, 2012). Although not always implemented successfully in apprenticeships (Kammermann & Frey, 2024), an evaluation study shows that such cooperation is established to a certain extent in PAI (Michel et al., 2023; Stalder et al., 2024).

### **Workplaces as important learning environments**

Based on the theoretical considerations of Lave and Wenger on situated learning, the analysis of learning environments in the workplace and their effect on learning has a long tradition (Lave & Wenger, 1991; Wenger, 1998). To date, numerous researchers have focused on workplace learning in VET. The work of Billett (2001, 2002) and Fuller and Unwin (2003, 2004, 2013) seems particularly significant in our context. According to Billett, 'The way workplaces afford opportunities for learning and how individuals elect to engage in activities and with the support and guidance provided by the workplace, is central to understanding workplaces as learning environments' (2001, p. 209).

Fuller and Unwin (2003) analyse learning environments in apprenticeships according to the extent to which they facilitate learning by participation. They argue that learning environments can be categorised on a continuum between expansive and restrictive, with expansive learning environments promoting stronger and richer learning.

Many authors have referred to these concepts when analysing workplace learning in VET (e.g., Doroftei et al., 2018; Felder et al., 2021; Schmid et al., 2024).

#### *Filliettaz's interactional model of workplace analysis*

Filliettaz (2012, 2013) developed a specific model for analysing workplace learning environments in two-year apprenticeships on a microlevel, which serves as a diagnostic instrument for the analysis of interactions between trainers and apprentices. This model combines the abovementioned considerations by Billett (2001, 2002) and Fuller and Unwin (2003, 2004). It relates to affordances, that is, social and structural resources provided in the workplace, on the one hand, and to engagement, referring to apprentices' individual and personal prerequisites to make use of these affordances, on the other hand. Both affordances and engagement move along a continuum from restrictive to expansive. A microanalytical look at the verbal interactions between trainers and apprentices in the workplace serves to show how trainers provide learning opportunities for apprentices during work activities and how learners exploit these opportunities. Affordances include, for example, access to productive activities offering numerous learning opportunities, appropriate guidance from experts, and sharing knowledge. Engagement, on the other hand, shows that learners are able and willing to participate in the activities available to foster learning. The characteristics of Filliettaz's model for training environments are shown in Figure 1.

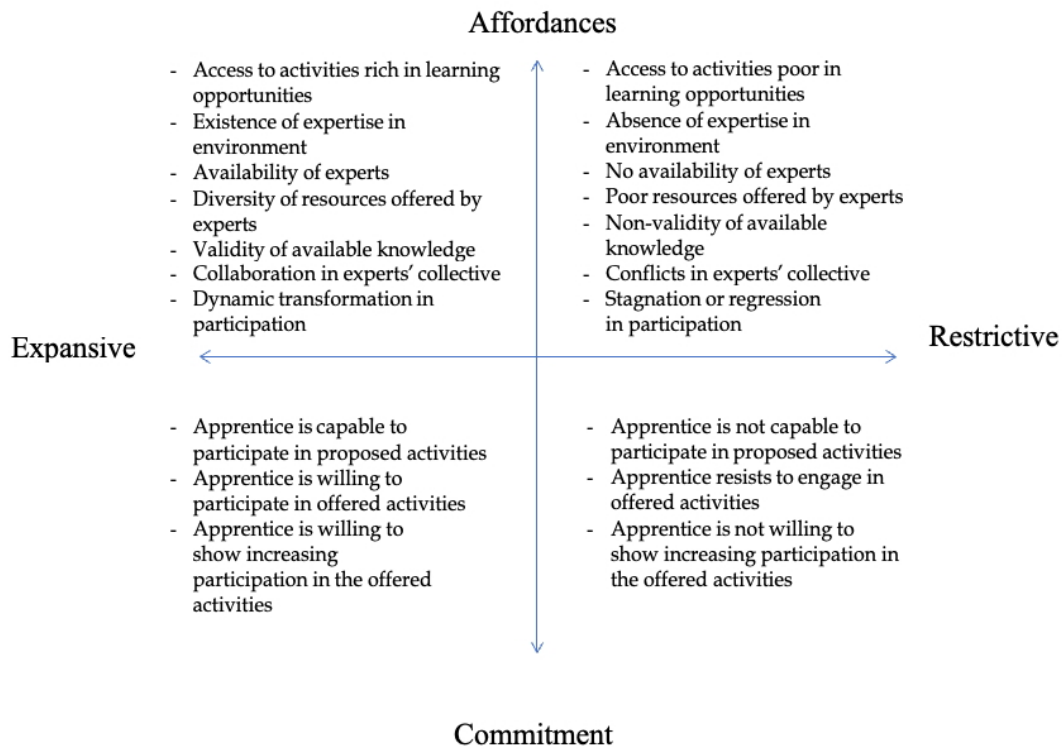


Figure 1. Factors in qualitative variation of training environments (Filliettaz, 2012, p. 75, translated).

According to Fuller and Unwin (2003), expansive learning environments in apprenticeships offer numerous learning opportunities, with apprentices being seen as learners who can contribute their own opinions and are guided in a progressive manner. Restrictive learning environments in apprenticeships, on the other hand, offer few learning opportunities and apprentices are considered as workers who are passive performers and receive little guidance. In contrast to Filliettaz, Fuller and Unwin's considerations do not relate exclusively to the microlevel of the learning and working environment in the company, but also include factors outside this microenvironment that '[connect] learning across time and space' (Fuller & Unwin, 2013, p. 3), such as learning opportunities outside the workplace (e.g., schools, intercompany courses, crossing boundary learning) and apprentices' choice of career after the apprenticeship. Their characteristics for learning environments are presented in Table 1.

Table 1. *Expansive-restrictive continuum of learning environments (adapted from Fuller & Unwin, 2003, p. 411).*

<b>Expansive</b>	<b>Restrictive</b>
<b>Participation in multiple communities of practice inside and outside the workplace</b>	<b>Restricted participation in multiple communities of practice</b>
Primary community of practice has shared 'participative memory', cultural inheritance of apprenticeship	Primary community of practice has little or no 'participative memory': no or little tradition of apprenticeship
<b>Breadth: access to learning fostered by cross-company experiences built into programme</b>	<b>Narrow: access to learning restricted in terms of tasks/knowledge/location</b>
Access to range of qualifications including knowledge-based vocational qualification	Access to competence-based qualification only
<b>Planned time off-the-job including for college attendance and for reflection</b>	<b>Virtually all-on-job: limited opportunities for reflection</b>
<b>Gradual transition to full participation</b> Apprenticeship aim: rounded expert/full participant	<b>Fast - transition as quick as possible</b> Apprenticeship aim: partial expert/full participant
<b>Post apprenticeship vision: progression for career</b>	<b>Post-apprenticeship vision: static for job</b>
Explicit institutional recognition of, and support for, apprentices' status as learner	Ambivalent institutional recognition of, and support for, apprentice's status of learner
<b>Named individual acts as dedicated support to apprentices</b>	<b>No dedicated individual ad-hoc support</b>
<b>Apprenticeship is used as a vehicle for aligning the goals of developing the individual and organisational capability</b>	<b>Apprenticeship is used to tailor individual capability to organisational need</b>
<b>Apprenticeship design fosters opportunities to extend identity through boundary crossing</b>	<b>Apprenticeship design limits opportunity to extend identity: little boundary crossing experienced</b>
<b>Reification of apprenticeship highly developed (e.g. through documents, symbols, language, tools) and accessible to apprentices</b>	<b>Limited reification of apprenticeship, patchy access to reificatory aspects of practice</b>

Note: Characteristics included in this paper's analysis model are highlighted in bold.



As described above, affordances refer to the resources available in work environments that support workers and apprentices in learning through their participation in the company's activities (Billett, 2001; Filliettaz, 2012). These resources, shaped by social and organisational structures, include access to tasks that offer rich learning opportunities, the presence of expertise within work teams, and the availability of experienced colleagues willing to share their knowledge and guide less experienced workers, such as apprentices. Additionally, these resources encompass support that is tailored to the needs of novices, indirect learning through observation or listening, the overall quality and relevance of the knowledge circulating within the workgroup, as well as the additional resources provided for learning. Workers/apprentices can actively use the available resources in their work environments to foster learning. This pertains to the concept of commitment. Forms of individual commitment include the workers'/apprentices' ability to participate in the productive activities made accessible to them, as well as their willingness, capacity, and motivation to engage in these tasks and the associated learning processes. Commitment is influenced by the alignment of the activities with workers'/apprentices' current abilities and skill levels. When tasks are appropriately matched to their capabilities, workers/apprentices are more likely to engage fully and invest in both the activities and the learning opportunities they provide. There may also be resistance or rejection of certain forms of knowledge or learning opportunities, with some workers/apprentices opting to remain in roles that offer limited exposure to the need to renew or expand their skill sets. Based on Fuller and Unwin (2003, 2004, 2013), affordances and commitment can either be restrictive or expansive.

### Current study

As displacement increases, both refugees and resettlement countries face major integration challenges. However, preparatory programmes like PAI can help refugees meet the entry requirements for VET and access sustainable career paths. Given its growing popularity (Stalder & Schönbächler, 2024) and pivotal role in refugee persons' long-term professional integration, we conducted a study to gain an understanding of workplace training and learning environments during PAI from the perspective of both trainers and PAI apprentices utilising an explorative approach. More specifically, based on Filliettaz's model (2012, 2013) combined with Fuller and Unwin's characteristics (2003), the following research questions guided our analyses:

- 1) How do in-company trainers and former PAI apprentices perceive workplace affordances during the PAI year and their apprenticeships?
- 2) How is the commitment of PAI apprentices described by in-company trainers and former PAI apprentices themselves during the same period?

The combination of the two models allowed us to expand Filliettaz's microanalysis of a workplace learning environment by including Fuller and Unwin's contextual boundary-crossing characteristics regarding learning across different locations and over time. It also enabled us to consider the context in which VET occurs. Based on the two models, we selected those characteristics that were relevant according to our dataset. The resulting categories for our study are shown in Table 2.

*Table 2. Workplace learning characteristics.*

Category	Subcategory	Description
Affordances	1. Adapted support for PAI apprentices	Trainers and colleagues adapt their support to apprentices' skills
	2. Access to learning activities	Amount of appropriate learning possibilities for apprentices
	3. Trainer's personal involvement	Trainers are implicated in apprentices' (professional and personal) progress
	4. Availability of trainers and colleagues	Trainers and colleagues invest time and support in apprentices' (professional and personal) development
	5. Inclusive cultural enterprise	Company embraces diversity
	6. Collective collaboration	Exchanges within the team; between company, vocational schools, and inter-company course
	7. Vision and the role give to the PAI apprentices	Apprentices are seen as learners or expert workers
	8. Multiple communities of practice	Apprentices are part of communities of practice (companies, vocational schools, and inter-company courses) and link them (boundary crossing)
	9. Expertise of trainers and colleagues	Experience and expertise are passed to learners
Commitment	1. Ability to commit	Apprentices use resources in their work environment for learning
	2. Interest in becoming involved	Apprentices are committed to their training and the development of professional identity
	3. Active participation	Apprentices are proactive in work-processes



## Methods

An ongoing research project, funded by the Swiss National Science Foundation, (SNSF Nr.100017\_215130), aims at understanding the role of PAI workplace guidance in developing refugees' agency, taking into account the particularities of their trajectories and life circumstances. The research is based on interviews with in-company trainers, former PAI apprentices, and cantonal stakeholders in the PAI programme, such as coaches, career counsellors, social workers, and teachers. Moreover, professional practice analysis groups with in-company trainers comprise a further component of our research (Felder et al., 2024).

We adopted a qualitative approach to understand the learning environment in the workplace from the perspective of both trainers and former PAI apprentices, appreciating this method's suitability for exploring complex and emerging phenomena (Pratt & Bonaccio, 2016). We chose pseudonyms for both trainers and former PAI apprentices when presenting our results (see Table 3). Our three case analyses were in the plumbing, commercial, and horticultural sectors, each of which includes an interview with an in-company trainer and a former PAI apprentice within the same company. We chose to interview former PAI apprentices to give them the opportunity to gain a better perspective on their PAI training. However, this resulted in a blurred temporality in participants' accounts and made it difficult to identify an event as specific to the PAI training, since they all continued their apprenticeships within the same company. Therefore, we decided to consider their learning pathway as a whole, encompassing their experience of VET through the PAI year and the following two- or three-year apprenticeship. Our choice to focus on six participants was motivated by the fact that in all three cases, the trainers and PAI apprentices were working together in the same company and were the only paired interviews available in our dataset at that time. Their perspectives ensure data triangulation, which combines data originating from different sources and collected at different times, in different places, or from different people (Flick, 2020). In accordance with our theoretical framework and to address our research aims, we employed a hybrid deductive and inductive approach (e.g., Fereday & Muir-Cochrane, 2006), mobilising thematic analysis of six semi-structured interviews (Braun & Clarke, 2006).

### Participants and procedure

After ethics approval, we recruited three former PAI apprentices and their PAI trainers by asking members of our personal networks and by contacting the cantonal PAI programme managers to build our collaboration network and contact list. We conducted semi-structured interviews lasting from 68 to 99 minutes with three former PAI apprentices from refugee backgrounds aged

between 24 and 35. They came from Afghanistan and Iraq and arrived in Switzerland between 2013 and 2015. At the time of the interviews, all had completed a two- or three-year (regular) apprenticeship. Three other semi-structured interviews were conducted with the trainers in charge of the three selected former PAI apprentices' in-company training. These lasted between 48 and 75 minutes. The trainers were either owners and founders of the company or held a management position while being qualified for in-company training.

Table 3 provides details on the interviewees' demographics, including information on trainers/apprentices from the same company.

*Table 3. Interviewees' demographics.*

	Pseudonyms	Gender	Age	Work domain	Qualification and current work
<b>Apprentices</b>	Amir	M	24	Plumbing, <i>Company 1</i>	VET Diploma, work in <i>Company 1</i>
	Nesrin	F	35	Administration, <i>Company 2</i>	VET Diploma, job searching
	Nemat	M	35	Horticulture, <i>Company 3</i>	VET Certificate, work in <i>Company 3</i>
	Pseudonyms	Gender	Company size	Work domain	Qualification and current work
<b>Trainers</b>	Paul	M	Small– medium	Plumbing, <i>Company 1</i>	Qualified trainer, Owner
	Sarah	F	Large	Administration, <i>Company 2</i>	Qualified trainer, Manager
	David	M	Small– medium	Horticulture, <i>Company 3</i>	Qualified trainer, Owner

### Interview guidelines

The interviews conducted with former PAI apprentices were divided into five sections. The first section investigated participants' life trajectories and first impressions of the PAI programme, the second section focused on concrete learning situations in the workplace, the third section addressed career choices, the fourth section investigated the strategies they used to learn professional tasks and specific vocabulary, and the last section gathered their conclusions on their PAI experience and career prospects. For the trainers, the interviews were also composed of five sections. The first section gathered information about their job

description and the company's preparation for the PAI. The second section described the workplace guidance, including the guidance's description, specificities, and challenges. The third section focused on the PAI apprentices and their career choices, relationships, learning, and extra-professional lives. The fourth section gathered information about the PAI programme's context, and the last section investigated limits and success factors of workplace guidance in PAI. For this study, we mainly focused on excerpts that addressed the learning environment and apprentices' engagement.

### Analysis procedure

Two researchers first coded a trainer's interview based on a codebook elaborated according to Filliettaz's model and Fuller and Unwin's expansive-restrictive characteristics of learning environments in a deductive setting. They then independently coded another interview each, and the second researcher read and validated the codes. They met to discuss all uncertainties and hesitations until they reached a consensus on a final codebook. Lastly, the other two researchers reviewed the coding for validation, and the two main coders agreed on a few adjustments. The same procedure was used for the apprentices' interviews.

## Results

According to our theoretical model of workplace learning characteristics (see Table 2), and to answer our two research questions, our results are organised into two domains, namely affordances and commitment. A total of eight categories for the affordances domain are described, and three for the commitment. For each category, we first described the perspectives of the trainers and then the perspectives of the former PAI apprentices.

### Affordances

As part of affordances, we first identified *Adapted support for PAI apprentices* as frequently emerging from participants' discourses. Trainers put effort into adjusting the language, tasks, and written materials to match the apprentices' skill levels, ensuring clear communication and mutual understanding. They also adapted the degree of complexity of the tasks asked of PAI apprentices, which they then gradually increased in line with the apprentices' abilities. For example, Sarah explained that she gave Nesrin extra time to learn the local language and to deal with private issues that were affecting her mental availability and concentration. This understanding attitude seemed to have positive outcomes on PAI apprentices' training, as David explained: 'This may also have to do with the fact that you give them responsibility and trust. Then they may also be willing to invest more themselves'. From the perspective of the PAI apprentices, they

overall acknowledged and were grateful for the support provided by their trainers. However, we noticed that adapted support was not always compatible with production constraints. For example, Nemat explained that at first, he mostly just observed due to time pressure. Looking back at when he was an apprentice, he described a situation where he took the initiative to complete a task but was refused by his trainer. He asked, 'Hey, can I do it like this?' Then he [his trainer] said, 'No, I will do it'.

The second category, *Access to learning activities*, refers to the amount of appropriate learning opportunities. Trainers reported letting their PAI apprentices perform many different tasks. Their strategies comprised either explaining each step of the task first to offer a global perspective or opting for a learning-by-doing approach where PAI apprentices directly reproduced what their trainer showed them. They all noted tolerating and being patient with apprentices making mistakes, as Sarah voiced: 'The apprentice must make mistakes. That's how you learn, you learn by falling down and getting up again'. From the perspective of PAI apprentices, access to learning activities allowed them to learn new, useful skills and progressively perform more complex tasks, as Amir stated: 'Then, I think at the end of the PAI, they gave me things that were a bit complicated'. He also mentioned that he became more committed when he realised that his trainer never got angry when he made mistakes.

The third category concerns the *Trainer's personal involvement* in PAI and could take different forms and intensities, such as being available for PAI apprentices to talk about different issues they encountered, freeing up time to deal with personal problems, offering financial help for extra language or driving courses, or nurturing the relationship with their PAI apprentice. Sarah explained:

You have to believe in the person you are hiring by saying, here we are, we have to lead them to success. [You have to know] that there is therefore a risk of failure, and that, for everything we do, there is a risk of failure. But the aim is to lead them to success. And [to have] patience, understanding their life path and creating a bond. Without this link, it's not possible. You can train anyone, but you have to train people by understanding their background, because they have a very specific profile. And you must have confidence in them.

Sharing the trainers' perspectives, PAI apprentices also seemed to consider their trainer's involvement as expansive, as trainers did not hesitate to vouch for their apprentices to ensure that they had the required competences to successfully complete the PAI. Nemat explained that his trainer gave him a lot of support and travelled with him during the weekend to teach him more about gardening and plants. Amir said his trainer suggested he take some time off to deal with his personal issues: 'He'd say, "If you need one or two days to stay at home, then you can"'. He was really, empathetic'.

The fourth category identified is the *Availability of trainers and colleagues* to support PAI apprentices in daily activities. Trainers were available to talk at the

workplace, as David voiced: 'My employees know that I'm in the shop at 6 a.m. and anyone can pop in to see me at any time before work'. Paul added that he could be reached by video call in case the apprentices need to double-check something at the construction site. PAI apprentices reported that trainers were supportive and available to them. For example, Nemat said, '...I also had a good trainer. He gave me a lot of support and also [was] a very good colleague'. To illustrate his trainer's availability, Amir explained that his trainer would stop working for a few hours to help him with his homework. PAI apprentices also all mentioned supportive colleagues who were reassuring at the workplace. For example, Nesrin said she could turn to them when she could not understand a customer's accent. Amir added that his colleagues had been an important part of his motivation to work: 'One of the motivating factors was my colleagues. They were really nice. Every time I'd come to them, I'd find out what they were doing, and then I'd ask them a lot of questions. What are they up to, where are they? Why are you doing this? Why are you doing that? They took their time explaining things to me. I'm here to learn, to watch, to learn a trade'.

The fifth category refers to having an *Inclusive cultural enterprise*, whose members foster a positive attitude and value PAI apprentices' previous life and work experience. In all three cases, PAI apprentices entered in an open-minded working environment, facilitated not only by their trainers, but also their colleagues. For example, Sarah introduced Nesrin to all her colleagues and encouraged Nesrin to take breaks with them to feel like a part of the organisation from the start. Sarah also insisted that her organisation acknowledged that apprentices' mistakes are part of the learning process. In the same vein, Paul explained that his employees were aware of the PAI apprentices: 'They were understanding from the start and... they saw that you couldn't ask the same things [of a PAI apprentice] as of someone from Switzerland... who didn't have the... language barrier'. David explained the importance of being open-minded in a field involving manual labour, and the fact that Nemat had been open to sharing about his personal life helped his integration in the team and to build friendships. For their part, PAI apprentices described a supportive environment and cultivating good relationships with co-workers. For example, Nesrin felt her colleagues were already prepared and aware of what a PAI meant and were understanding. All three said they became used to going to social events with their colleagues, such as joint meals or ski trips.

The sixth category refers to *Collective collaboration* through active exchanges and discussions within the team, as well as with the vocational school, intercompany courses, and cantonal stakeholders. The trainers overall reported an effective collaboration with other professionals involved in the PAI, such as counsellors, teachers, and cantonal coordinators. This collaboration seemed to foster a strong support for PAI apprentices, as David stated,

Yes, we had quite good contacts because the people accompanying him [Nemat] were from his environment, from the [courses] for foreign speakers [language courses], the teacher who supported him there. Then there was the community of [name of city], where he lived at the time and where he still lives today. We also felt good support there, actually.

However, our results were mitigated regarding collaboration with PTO (which seemed nonexistent) and finding extra language courses. Such was the case for Sarah, who put a lot of effort into contacting the vocational school and PAI counsellors, but eventually had to finance the courses for Nesrin herself. From the perspective of PAI apprentices, Nemat and Amir both received extra language courses with a tutor or with a teacher from the vocational school. This support was important for them, and the tutor became one of Amir's close friends. Nemat stated, 'Yes, the teacher gave me help, yes, after school on Tuesday, every Tuesday evening, we had 1.5 to 2 hours to go over the work that I had done during the week. [...] He even gave me a notebook so that I could write every day about what I was doing'.

The seventh category identified is the *Vision and role given to the PAI apprentice*, who could be considered either as an active worker or as a passive performer. In our three cases, trainers reported considering their PAI apprentices as active performers. Paul stated, 'There's no point in taking them on and letting them sweep the workshop all week. The aim is for them to fit in, to learn a trade that they're interested in doing'. They were also considered learners and were granted the freedom to make mistakes. This point was highlighted by Sarah, who made sure all her colleagues were on the same page regarding apprentices in general. For PAI apprentices, Nesrin was the only one to reflect on her role as an apprentice. While it seemed that she shared her trainer Sarah's vision about the learning process, she explained that she mostly executed the demanded tasks without question: 'I did what she said, whether I agreed or not, I didn't even think about it. [...] I wasn't creative in that respect. I just took it as it was, I did it as she told me'.

The eighth category identified, *Multiple communities of practice*, describes the participation of PAI apprentices in the various communities of practice inside and outside the company, and the links and transfer between companies and vocational schools. We obtained nuanced results regarding trainers. On the one hand, David reported having discussions with teachers from vocational school about assessments. In contrast, Paul suggested that there was a gap between the theory learned in school and practice: 'Sometimes he'd [Amir] tell us, "That's not how you should do it, we learned that in classes", and I say, "Yeah but, well, the situation is such that that's it".' We considered the latter point as restrictive for the learning process, highlighting a misalignment between vocational schools and companies, potentially creating confusion for apprentices. Nemat was the only one concerned by this topic and reported receiving support from his



vocational teacher to learn about specific elements of his trade, such as materials and plants, which contributed to building links between practical knowledge, in this case outside the workplace, and learning the trade.

Lastly, we identified the category *Expertise of trainers and colleagues* who provide fair and safe working conditions for apprentices. Sarah was the only trainer to give clear examples where her expertise obviously influenced her PAI apprentice's learning process in an expansive way. She would provide a solution to every problem while teaching her how to unravel it on her own and encouraged her to ask for specific help: 'When she [Nesrin] says, "This is a bit difficult, I'm having trouble". OK, so you have to target the problem first, because it's not the whole activity, it might be something specific. OK, you're having trouble here, so what can I do for you? Can you help me create an Excel spreadsheet?'. PAI apprentices all reported having learned many skills from their experienced trainers. Amir, Nesrin, and Nemat all admired their trainers and regarded them as role models, as illustrated by Nesrin: 'I can see my trainer typing with 10 fingers. When I wasn't working, I installed the programme to start with, I wanted to be like her, because she writes, I don't know, 100 words per minute, I think! Because she's so fast'.

### **Commitment**

Commitment here refers to the specific ways in which apprentices make use of the learning resources available in their working environments. The modalities of individual engagement included the *Ability to commit*, which comprised elements that enabled the apprentices to devote themselves fully to their training. Many external factors were identified by trainers as preventing PAI apprentices from concentrating on their training, such as family problems, administrative issues, and not being able to travel due to temporary permits. For example, Sarah noted she thought Nesrin's goal to start a VET programme was challenging, as she was a single mother dealing with issues related to her temporary permit. Paul noticed it was more difficult for PAI apprentices when their family was not at their side. In this sense, we could see that refugee apprentices' life circumstances can affect their ability to be fully involved in their training.

*Interest in becoming involved* covers the actions taken by apprentices to demonstrate their interest in committing to their training, as well as the professional identity associated with their trade. The trainers all saw their PAI apprentices as determined, as Sarah stated about Nesrin: 'You could feel the drive, the desire to succeed in life. She had goals to reach, and she did everything she could to achieve them'. PAI apprentices were able to identify which behaviours appealed to their trainer, such as asking questions, being punctual, and being available to help co-workers, as Nemat noted: "'Hey, Nemat, can you

do this for me?” When I have time, I never say no. And I also have fun because there is something to do, right?”

The last category, *Active participation*, includes apprentices’ motivation and initiative-taking in the workplace, also extending to other extra-professional elements. All three trainers described their PAI apprentices as very involved in the learning process, motivated, punctual, solution-oriented, and taking initiative. For example, Paul described Amir as very motivated: ‘He almost took the tools out of our hands to try it himself...’. David described Nemat as a worker in the following:

He’s extremely independent. [...] I can send him to larger construction sites independently and he comes up with the ideas, he implements them, he communicates excellently with customers. The way he communicates with us, he also manages that with customers, even if he makes a mistake. That’s usually not a problem because he stands by it, he communicates, and he comes around.

From the PAI apprentices’ perspectives, Nesrin explained that she was curious and put a lot of effort into learning new words and work techniques to be more efficient. Nemat gained enough confidence to share his ideas for improvement, which were approved by his boss. Amir explained why he enjoyed his job, showing his determination and active engagement in his training and work in general: ‘I’m someone who’s really motivated to do things that are hard, things that are really heavy. I don’t know, I’ve got a physique that is really, that’s made for it’.

## Discussion

In this study, we aimed to explore the characteristics of workplace environments through the analysis of affordances and former PAI apprentices’ engagement on an expansive-restrictive continuum (Filliettaz, 2012; Fuller & Unwin, 2003) from both trainers’ and apprentices’ perspectives. Our analyses showed a rather expansive learning environment characterised by trainers’ strong engagement with and support of their PAI apprentices’ learning. Trainers gave apprentices access to a variety of tasks, made themselves available, provided extra time to learn the local language and deal with private issues, helped with and freed time for school assignments, and gave extra explanations to foster apprentices’ understanding of their tasks. Trainers were strongly engaged in their PAI apprentices’ personal and professional well-being, offering emotional and financial support (e.g., for extra language courses, for driving licences, or to help the apprentices to succeed in their training). It was important for trainers to make sure PAI apprentices were included in the enterprise during working hours as well as in extra-professional activities with the team. Finally, colleagues also played an important role, fostering a positive, motivating, and supportive

learning environment. A high level of commitment on the part of the PAI apprentices has also emerged from our analyses: they were interested and motivated, and showed initiative when it came to future work and learning new skills in the company.

Aspects of a more restrictive learning environment were related to factors such as obtaining administrative permissions to access certain work documents as a PAI apprentice. Moreover, it could be assumed that in an over-structured learning environment, PAI apprentices are less encouraged to take initiative and ownership of their work. When attempting to establish a connection between learning environments and applying school-acquired knowledge in the workplace, in one case, we noticed resistance and a lack of readiness on the trainer's side. However, in another case, the former PAI apprentice highlighted the importance of the connectivity between the vocational school and the workplace, appreciating the extra time and learning support given by his teacher. On the PAI apprentices' side, our results showed that their personal life situations threatened their ability to commit to their learning process.

All in all, our results suggest that workplace learning environments in PAI are mainly expansive, though with some exceptions that we believe are important to consider.

### **Trainers' crucial role in workplace guidance during PAI**

Existing models in the field of VET underline the importance of affordances as the resources available in the workplace to foster apprentices' participation in work activities (Billett, 2001; Filliettaz, 2012; Fuller & Unwin, 2003). Extending this finding, our results also stressed that in our specific case of the PAI programme, trainers as individuals play a pivotal role in the PAI apprentices' training. Indeed, trainers all spontaneously adapted their overall support and guidance to their PAI apprentices' capabilities, sometimes even without noticing these efforts. The most common strategy was to progressively include them in work, starting with observation and subsequently assigning simple tasks. Then, trainers slowly increased the tasks' complexity while at the same time reducing their support. This method corresponds with cognitive apprenticeship, which is a common method used by trainers and teachers, offering/explaining cognitive processes while showing (modelling) how a certain task has to be fulfilled and adapting the subsequent coaching to the apprentice's progress (Collins, 1991). Moreover, in all three former PAI apprentices' accounts, their trainers were seen as role models who increased their motivation to learn the trade, which we could consider as contributing to building their professional identity. Based on this result, trainers appear to be the cornerstone of PAI apprenticeship. Against this backdrop and supported by our three examples, we obtained highly positive testimonials from both trainers and former PAI apprentices. However, we can

speculate that not all trainers have the same capacity for reflexivity and empathy, which appeared to be important factors. In that sense, trainers can exert a strong power that can be decisive for the apprentices' training success, and even more in the case of PAI, where we observe that trainers are also involved in extra-curricular spheres. This observation does not deny PAI apprentices' capabilities to succeed, but rather emphasises that the power of the trainer should be acknowledged and treated with caution.

### **Specificities of refugee PAI apprentices**

The originality of our study lies in the distinct mission of the PAI programme, which aims to introduce apprentices with refugee backgrounds to, and facilitate their participation in VET, ultimately leading to a recognised qualification, that is, a VET Certificate (two-year apprenticeship) or a VET Diploma (three- or four-year apprenticeship). As previous studies have mentioned, refugee persons have been through an arduous journey, often experiencing traumas and difficult life conditions and challenges in the resettlement country (Hynie, 2018; Udayar et al., 2024). In our results, we observed that the challenges faced by PAI apprentices are not only related to language or learning, but also to their often-difficult life circumstances, which are fraught with great uncertainty. In fact, from both trainers' and PAI apprentices' points of view, external factors, such as family or administrative problems linked to temporary permits, emerged as preventing them from being able to completely concentrate on their training. This result supports the Swiss Federal Council's initiative and, on a broader European level, to implement specific programmes that allow for the adaptation of the support provided by trainers to alleviate the challenges encountered by apprentices with refugee backgrounds.

### **Limitations of the study and future directions**

A limitation of the study concerns the classification of affordances and involvement according to our theoretical framework. These were not defined by the participants themselves but were coded as expansive or restrictive by the researchers based on participants' answers. Moreover, the interviews were not specifically developed to refer to Filliettaz's model, but they addressed workplace learning environments in PAI from a broad perspective, as suggested by Fuller and Unwin (2003, see Table 2), also including learning outside the workplace. In addition, it is important to note that Filliettaz developed his model to observe verbal interactions between trainers and apprentices, whereas we based our analyses on interviews, focusing the interviewees' personal assessments of their workplace learning environments. Another limitation stems from the rather low language proficiency of the apprentices, which poses an additional challenge to achieving mutual understanding during interviews. Finally, our

choice to focus on three cases (i.e., six interviews) to attain a deep understanding of their perspectives also features a limitation. While our three cases reflected a generally positive view of the PAI training, it is possible that analysing additional cases might have revealed a more nuanced understanding of the situation. We therefore recommend extending the analysis to more participants and professions in future research.

## Conclusion

This research provided a detailed focus on three cases of PAI apprentices in Switzerland. By using a combined theoretical framework, our study offered an understanding of the extent to which affordances and commitment can be considered as expansive or restrictive from both trainers' and former PAI apprentices' points of view. Our study illustrates a rather expansive learning environment, with strong support and personal involvement from trainers in promoting their PAI apprentices' learning and inclusion within the team and larger organisation. In addition, our results stress the important role – and power – of trainers and the contextual factors that can impede a PAI apprentice's learning journey. Consequently, we encourage these elements to be acknowledged and treated with caution by stakeholders involved in PAI programmes.

Although the results of our study refer to pre-vocational programmes in Switzerland and cannot be generalised due to the small sample size, they provide valuable insights into workplace learning environments in (pre-)apprenticeships. As dual VET programmes are also offered in some Nordic countries, our results can be considered relevant for readers from that region too.

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## References

- Aerne, A., & Bonoli, G. (2023). Normative, rational, and relational motives in crosscoalition coordination for a VET refugee programme. *Journal of Public Policy*, 43(2), 215–239. <https://doi.org/10.1017/S0143814X22000290>
- Atitsogbe, K. A., Durante, F., & Rossier, J. (2020). Intégration des demandeurs d'asile admis provisoirement en Suisse: Rôle de la formation professionnelle [Integration of asylum seekers granted temporary admission to Switzerland: The role of vocational training]. *L'Orientation Scolaire et Professionnelle*, 49(3), 481–501. <https://doi.org/10.4000/osp.12563>
- Felder, A., Caprani, I., Kammermann, M., & Fedrigo, L. (2024). Transition of refugees into vocational training and guidance in companies. In C. Nägele, B. Esmond, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, vol. VII: Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 144–153). VETNET. <https://doi.org/10.5281/zenodo.13238155>
- Billett, S. (2001). *Learning in the workplace: Strategies for effective practice*. Allen and Unwin.
- Billet, S. (2002). Toward a workplace pedagogy: Guidance, participation and engagement. *Adult Education Quarterly* 53(1), 27–43. <https://doi.org/10.1177/074171302237202>
- Bonoli, G., & Wilson, A. (2019). Bringing firms on board: Inclusiveness of the dual apprenticeship systems in Germany, Switzerland and Denmark. *International Journal of Social Welfare*, 28(4), 369–379. <https://onlinelibrary.wiley.com/doi/epdf/10.1111/ijsw.12371>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Busse, R., Bock-Schappelwein, J., & Kammermann, M. (2024). Access to vocational education and training for refugees: Insights into Germany, Austria and Switzerland. *BWP – Berufsbildung in Wissenschaft und Praxis*, 53(2), 19–22. [https://www.bwp-zeitschrift.de/en/bwp\\_189936.php](https://www.bwp-zeitschrift.de/en/bwp_189936.php)
- Collins, A. (1991). Cognitive apprenticeship and instructional technology. In L. Idol, & B. F. Jones (Eds.), *Educational values and cognitive instruction: Implications for reform* (pp. 121–138). Hillsdale.
- Doroftei, A. O., Marques da Silva, S., & Araújo, H. C. (2018). Perspectives of young people enrolled in apprenticeship courses in Portugal about learning in work contexts. *Studia in Pedagogica* 23(2), 77–99. <https://doi.org/10.5817/SP2018-2-6>
- European Website on Integration. (2024). *Denmark: IGU state integration project extended*. [https://home-affairs.ec.europa.eu/news/denmark-igu-state-integration-project-extended-2024-05-10\\_en](https://home-affairs.ec.europa.eu/news/denmark-igu-state-integration-project-extended-2024-05-10_en)

- Eurostat. (2024, July 19). 76,695 asylum applications in April 2024.  
<https://ec.europa.eu/eurostat/web/products-eurostat-news/w/ddn-20240719-2>
- Fedrigo, L., Cerantola, M., Frésard, C. E., & Masdonati, J. (2023). Refugees' meaning of work: A qualitative investigation of work purposes and expectations. *Journal of Career Development*, 50(1), 52–68.  
<https://doi.org/10.1177/08948453211066343>
- Felder, A., Duemmler, K., & Caprani, I. (2021). Restrictive and expansive participation in companies' activities: A case study of bricklaying and automation technology apprentices in Switzerland. *Journal of Education and Work*, 34(1), 53–66. <https://doi.org/10.1080/13639080.2020.1858231>
- Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5(1), 80–92.  
<https://doi.org/10.1177/160940690600500107>
- Filliettaz, L. (2012). Interactions tutorales et formation des formateurs [Tutorial interactions and trainer training]. *Travail et apprentissages*, 9, 62–83.  
<https://www.unige.ch/fapse/interaction-formation/application/files/2514/2608/6883/Filliettaz-Interactions-tutorales-et-formation-des-formateurs-2.pdf>
- Filliettaz, L. (2013). Affording learning environments in workplace contexts: An interactional and multimodal perspective. *International Journal of Lifelong Education*, 32(1), 107–122. <https://doi.org/10.1080/02601370.2012.734480>
- Flick, U. (2020). Triangulation. In G. Mey, & K. Mruck (Eds.), *Handbuch qualitative Forschung in der Psychologie* (pp. 185–199). Springer.  
[https://doi.org/10.1007/978-3-658-26887-9\\_23](https://doi.org/10.1007/978-3-658-26887-9_23)
- Fuller, A., & Unwin, L. (2003). Learning as apprentices in the contemporary UK workplace: Creating and managing expansive and restrictive participation. *Journal of Education and Work* 16(4), 407–426.  
<https://doi.org/10.1080/1363908032000093012>
- Fuller, A., & Unwin, L. (2004). Expansive learning environments: Integrating personal and organizational development. In H. Rainbird, A. Fuller, & A. Munro (Eds.), *Workplace learning in context* (pp. 126–144). Routledge.  
<https://doi.org/10.4324/9780203571644>
- Fuller, A., & Unwin, L. (2013). International perspectives on apprenticeship. In A. Fuller, & L. Unwin (Eds.), *Contemporary apprenticeship: International perspectives on an evolving model of learning* (pp. 1–8). Routledge.  
<https://doi.org/10.4324/9781315872919>
- Hynie, M. (2018). Refugee integration: Research and policy. *Peace and Conflict: Journal of Peace Psychology*, 24(3), 265–276. <http://doi.org/10.1037/pac0000326>

- Jørgensen, C. H., Hautz, H., & Li, J. (2021). The role of vocational education and training in the integration of refugees in Austria, Denmark and Germany. *International Journal for Research in Vocational Education and Training*, 8(3), 276–299. <https://doi.org/10.13152/IJRVET.8.3.2>
- Kammermann, M., & Frey, A. (2024). Wie sich der Lerntransfer erfolgreich fördern lässt: 20 Jahre Lernortkooperationsprojekte an der EHB [How to successfully promote learning transfer: 20 years of learning location cooperation projects at the EHB]. *Skilled*, 1, 18–19. <https://www.ehb.swiss/sites/default/files/2024-05/Skilled%202024-1-18-19%20-%20DE%20%28Kammermann%2C%20Frey%29.pdf>
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.
- Michel, I., Kammermann, M., Hämmerli, S., Frias, A., Schönbächler, M.-T., & Stalder, B. E. (2023). *Evaluation Integrationsvorlehre (INVOL/PAI/PTI) – Erfolgsgeschichte(n) INVOL: Bericht zu den Fallanalysen, erstellt im Auftrag des Staatssekretariats für Migration* [Evaluation of integration pre-apprenticeships (INVOL/PAI/PTI) – success stories INVOL: Report on case studies, commissioned by the State Secretariat for Migration]. Pädagogische Hochschule Bern.
- Pratt, M. G., & Bonaccio, S. (2016). Qualitative research in IO psychology: Maps, myths, and moving forward. *Industrial and Organizational Psychology*, 9(4), 693–715. <https://doi.org/10.1017/iop.2016.92>
- Sappa, V., & Aprea, C. (2014). Conceptions of connectivity: How Swiss teachers, trainers and apprentices perceive vocational learning and teaching across different learning sites. *Vocations & Learning*, 7(3), 263–287. <https://doi.org/10.1007/s12186-014-9115-y>
- Scharnhorst, U., & Kammermann, M. (2019). Integrationsvorlehren: Eine Flexibilisierung des Zugangs zur Berufsbildung für Geflüchtete in der Schweiz [Integration apprenticeships: Making access to vocational training more flexible for refugees in Switzerland]. *BWP – Berufsbildung in Wissenschaft und Praxis*, 48(5), 16–20. <https://www.bwp-zeitschrift.de/dienst/publikationen/de/10521>
- Schmid, E., Nordlie, G. S., & Jørstad, B. (2024). Workplace learning environment and participation in work communities: A qualitative comparison of stayers' and leavers' perceptions and experiences. *Vocations and Learning* 17, 487–507. <https://doi.org/10.1007/s12186-024-09351-4>
- SEM. (2023). *Bildungscurriculum INVOL und vorbereitende Massnahmen* [PAI educational curriculum and preparatory measures]. [www.e-doc.admin.ch/dam/e-doc/de/data/sem/pilot-ivl-fsf/bildungscurriculum-invol.pdf.download.pdf/bildungscurriculum-invol.pdf](http://www.e-doc.admin.ch/dam/e-doc/de/data/sem/pilot-ivl-fsf/bildungscurriculum-invol.pdf.download.pdf/bildungscurriculum-invol.pdf)

- Stalder, B. E., Kammermann, M., Michel, I., & Schönbächler, M.-T. (2024). Successful integration of refugees in vocational education and training: Experiences from a new pre-vocational programme. In M. Teräs, A. Osman, & E. Eliasson (Eds.), *Migration, education and employment: Pathways to successful integration* (pp. 133–154). Springer International Publishing.  
[https://doi.org/10.1007/978-3-031-41919-5\\_9](https://doi.org/10.1007/978-3-031-41919-5_9)
- Stalder, B. E., & Schönbächler, M.-T. (2024). Revisiting the pre-apprenticeship for integration: Who has access, who does not, and why? In C. Nägele, B. Esmond, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, vol. VII: Proceedings of the European conference on educational research (ECER), vocational education and training network (VETNET)* (pp. 138–143). VETNET. <https://doi.org/10.5281/zenodo.13237607>
- Swiss Confederation. (2002). *Vocational and professional education and training Act (VPETA)*. Swiss Federal Chancellery.
- Udayar, S., Fedrigo, L., Durante, F., Clot-Siegrist, E., & Masdonati, J. (2024). Labour market integration of young refugees and asylum seekers: A look at perceived barriers and resources. In D. Hughes, & M. Eduarda-Duarte (Eds.), *Decent work, inclusion and sustainability* (pp. 161–177). Routledge.
- UNHCR. (2024a). *Refugee data finder*. <https://unhcr.org/refugee-statistics/>
- UNHCR. (2024b). *Global report 2023*.  
[https://reporting.unhcr.org/sites/default/files/2024-07/Europe-regional-overview\\_GR23\\_0.pdf](https://reporting.unhcr.org/sites/default/files/2024-07/Europe-regional-overview_GR23_0.pdf)
- Wenger, E. (1998). *Communities of practice: Learning, meaning and identity*. Cambridge University Press.