
Supporting apprentices' autonomy in vocational training: Insights into the practices at the Swiss Postal Service

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ABSTRACT

Satisfying people's basic psychological needs of relatedness, competence and autonomy plays an important role in human motivation and affects people's well-being, engagement and performance positively. Companies can contribute to the satisfaction of all three basic psychological needs by establishing autonomy-supportive working conditions, benefitting as a result from associated positive outcomes. Based on an empirical, qualitative exploratory case study, the present article supports the assumption that satisfying the need for autonomy is especially beneficial to the healthy and successful development of young adults throughout their apprenticeship. The findings indicate that various pedagogic measures support the experience of autonomy and also increase work satisfaction and the drive towards workplace learning and collaboration. Such practices include apprentices planning and steering their learning pathways together with their coaches, taking on more comprehensive responsibilities, showing greater initiative in, and ownership of, projects, and actively representing apprentices' needs in the workplace.

KEYWORDS

Self-determination theory (SDT); autonomy support; autonomy-supportive workplace conditions; vocational training; apprenticeship in Switzerland

Introduction

People's desire for autonomy plays an important role in human motivation and development (Vallerand, Pelletier & Koestner, 2008; Vansteenkiste & Ryan, 2013). 'Autonomy' refers to the need for self-organising and self-regulating behaviour according to one's own values and commitments (Deci & Ryan, 2000). Companies that express an honest concern for their employees' autonomy establish working conditions in which well-being and agency flourish (Ryan & Deci, 2017). By positively effecting job engagement in employees (Chen, Shih & Chi, 2018), knowledge-sharing (Foss et al., 2009), creativity (Wang, 2016) and autonomy support have the potential to yield long-term benefits for companies (Preenen et al., 2016; Olafsen, Deci & Halvari, 2018). This has significant implications for the design of apprenticeships.

As we argue in this article, concerns about autonomy are not only of value to companies' performance, but are also of vital importance in the context of vocational training. Autonomy support by supervisors or trainers facilitates socialisation in organisations by contributing to the satisfaction of newcomers' basic psychological needs (Chong et al., 2020). The stance of socialising agents matters especially to apprentices, as they enter work organisations in Switzerland in their early adolescence (cf., e.g., Barabasch, Keller & Caldart, 2021). At this developmental stage, maturing teenagers have – owing to the biological, cognitive and social changes they are undergoing – an increasing desire for autonomy, the satisfaction of which is critical to their healthy psychological development and adjustment (Patall et al., 2019). In supporting apprentices' autonomy, vocational education and training (VET) can make a valuable contribution to adolescents' healthy and successful development.

One could raise the concern that placing emphasis on autonomy during vocational training, especially in the early stages, could be overtaxing for apprentices (Volodina, Lindner & Retelsdorf, 2019). In agreeing that providing apprentices with assistance and guidance is of paramount importance to their effective workplace learning (cf. Mikkonen et al., 2017), we refrain from understanding autonomy as emphasising learners' independence and self-responsibility over their learning activities in an unbalanced and neglectful manner (Fuller & Unwin, 1998). Instead, we view autonomy support as being a feature of inviting workplace affordances (Billet, 2002) and as being compatible, and even synergetic, with well-structured guiding (Jang, Reeve & Deci, 2010; Aelterman et al., 2018). This approach positively affects apprentices' learning activities (Messmann & Mulder, 2015).

However, many apprentices are not used to working autonomously in work situations and need to be socialised in the work environment in a way that enables them to feel equipped with the skills, knowledge and competences that are required to fulfil particular work tasks. This confidence needs to be built throughout an apprenticeship.

This study aimed to investigate the significance and extent of considerations of autonomy in VET. In addition, it sought to provide illustrative examples of autonomy-supportive practices in this educational context. By providing insights from a qualitative study conducted at the

Swiss Postal Services (Swiss Post) from August 2019 to September 2020, we intend to contribute to the discussion about providing more autonomy for apprentices in VET. In doing so, we will substantiate our claim that autonomy support is of key value to apprentices' successful workplace learning and that it is entirely compatible with guiding apprentices actively. Furthermore, we will explain how autonomy relates to human motivation and will review some indirect effects that autonomy-supportive supervision can possibly yield for VET.

This introduction is followed by the results of our literature analysis and by the provision of a theoretical framework for this study. After a description of our data collection and analysis, we describe and illustrate some of the measures through which Swiss Post affords autonomy support to its apprentices. The article concludes with a discussion and a summary of our findings.

Fostering identification by facilitating experiences of autonomy

Research based on self-determination theory (SDT) (for a recent overview, see Ryan & Deci, 2019) shows that the satisfaction of three basic psychological needs (BPNs) is critical to human motivation and flourishing (cf. Ryan & Deci, 2000b; 2017). This means that individuals need to experience their having an effect on their environment and achieving desired outcomes in it (competence) in addition to feeling connected to relevant others and being loved and cared for (relatedness). Furthermore, human beings have a need for autonomy, that is, for experiences of 'volition and self-direction in thought, feeling, and action' (Legault, 2016:1). Satisfying these BPNs contributes to healthy psychological development and well-being, whereas their frustration has converse consequences (cf. Vansteenkiste & Ryan, 2013).

The literature now suggests that, at least in work contexts, support for autonomy plays a key role, since, with their autonomy supported, employees would also find ways to have their other needs satisfied (Deci, Olafsen & Ryan, 2017). As we argue below, vocational training can contribute actively to the satisfaction of all three BPNs when the trainers' guidance facilitates experiences of autonomy for learners. By referring to the positive effects of BPN satisfaction, we illustrate below the importance of supporting apprentices' autonomy in this way.

Effects of autonomy support

There is reason to assume that BPN support in the workplace does not affect employees' well-being or performance directly. Recent studies suggest instead that it affects employees' motivation positively by facilitating an autonomous regulation of their behaviour, and that this motivational effect in turn yields positive outcomes (De Cooman et al., 2013; Olafsen, Deci & Halvari, 2018). Therefore, it is crucial to understand the ways in which people can self-regulate their behaviour and what it means to do this autonomously. The precondition would be intrinsic motivation, which occurs when there is a deep interest in attaining activity-inherent satisfaction such as fun, pleasure or a challenge that moves people to act – which is why we experience intrinsically motivated behaviour as fully volitional. This 'prototype

of autonomous motivation' (Ryan & Deci, 2002:10) results in task absorption, challenge-seeking, creativity and well-being (Vansteenkiste et al., 2018).

The degree of autonomy experienced depends on whether and how deeply persons attach personal meaning and valence to the reason or regulation (as, e.g., a social practice, a value or a request) that guides their action. In their internalisation process, people bring acquired regulations actively in congruence with their deeply anchored interests, values and beliefs. A sense of autonomy is further established if people see a behavioural norm as being in deep harmony with their sense of self or as an expression of their identity. For apprentices, this means that identifying them is crucial to coping well with the combined demands of vocational training and school. Furthermore, if they feel their autonomy is supported, learners will generally display better levels of performance, a higher level of emotional engagement, and persistence (Vansteenkiste et al., 2018).

In the light of such effects, the question is how we can promote identification. In order for the internalisation of behavioural norms to occur in the first place, necessary preconditions are the satisfaction of the need for relatedness (feeling connected to the socialising agents) and competence (feeling capable of performing the required actions) (cf. Niemiec & Ryan, 2009; Ryan & Deci, 2020). However, in order to reach the point of identification or integration, it is crucial that people feel 'choiceful in enacting' the applicable behaviours (cf, e.g., Niemiec, Ryan & Deci, 2010:179). We therefore present ways in which apprenticeships could introduce measures that facilitate identification by supporting learners' autonomy along with the two other needs.

Fostering experiences of choice and self-initiation

Supporting autonomy is not equivalent to a lack of structure or to a chaotic, abandoning or laissez-faire culture (Jang, Reeve & Deci, 2010; Aeltermann et al., 2018). On the contrary, autonomy support is defined as 'the instructional effort to involve, nurture, and *develop* students' inner motivational resources and capacity and responsibility for self-motivation' (Reeve, 2009:139). It therefore includes developing 'the capacity and sense of personal responsibility to generate and regulate autonomous motivation of one's own' (Reeve, 2009:139). Accordingly, supporting apprentices' autonomy requires vocational trainers to adopt 'a curious, receptive, and open attitude, which allows them to better emphasise with and nurture learners' emerging interests, values, and preferences' (Aelterman et al., 2018:3). This attitude is contemporarily reflected in coaching strategies (cf., e.g., Schiemann, Mühlberger & Jonas, 2018), teaching recommendations (Patall & Zambrano, 2019) and leadership styles (e.g. Slemp et al., 2018).

In line with various recommendations (cf., e.g., Reeve & Jang, 2006; Reeve, 2009; Vansteenkiste et al., 2018; Patall & Zambrano, 2019; Gross et al., 2020), we focus on the measures with which vocational trainers can support apprentices in experiencing a sense of volition and personal meaning in their workplace learning activities. These contribute to the effective socialisation of newcomers at a company (Deci et al., 2017; Chong et al., 2020). Our shortlist includes: (a) providing opportunities for taking ownership and the initiative;

(b) offering choices or giving meaningful rationales where this is not possible; and (c) giving learners a voice. Where this can be realised, trainers and instructors enable apprentices to work in semi-autonomous teams (Barabasch, Keller & Caldart, 2021) or apply methods such as scrumming (Barabasch, Keller & Caldart, 2019) or agile learning (Barabasch & Keller, 2021). Another effective way to encourage apprentices' ownership and initiative is to let them create and work on their own projects (Barabasch & Keller, 2020). Through such methods, apprentices not only feel a sense of choiceful self-initiation and are therefore more autonomously motivated to engage in associated learning processes, but also acquire competences such as self-organisation, a sense of responsibility or communication skills.

Where such expedient, autonomy-supportive affordances are not feasible, or where they conflict with the pressure to use apprentices for productive work, vocational trainers and supervisors can still support apprentices' autonomy. One way of doing so is to offer them meaningful choices. Choices not only contribute to experiences of autonomy, but also reduce apprentices' vulnerability to experiences of failure (Legault & Inzlicht, 2013). Furthermore, they positively affect curiosity (Schutte & Malouff, 2019), which, in turn, helps to close soft-skill gaps in volatile, uncertain, complex and ambiguous work contexts (Horstmeyer, 2020).

Even meaningless choices can have positive effects, as they facilitate people's interpretation of negative feedback in an informative, improvement-oriented way, thereby enhancing their long-term performance (Murayama et al., 2015). However, not all choices satisfy learners' need for autonomy equally well (Katz & Assor, 2007). Providing options, such as choices about topics, tasks or work methods, which learners may interpret as opportunities for self-realisation or as being of value to themselves and their personal goals in general, yield the best results regarding experienced autonomy (cf. Katz & Assor, 2007; Messmann & Mulder, 2015).

Where such choices are not affordable because of organisational or professional constraints, especially where particular tasks are not interesting per se, then offering a meaningful rationale helps to enhance apprentices' autonomy experience (Jang, 2008; cf. Vansteenkiste et al., 2018). This has various implications for the work of trainers and the training of trainers. Most often, trainers can indeed provide some choice, in that they allow apprentices to participate in defining their personal learning goals, modes, frequencies or dates of work evaluations, or in granting them some flexibility in allocating their working time (Katz & Assor, 2007).

Allowing apprentices to participate in defining the concrete elements of their apprenticeship programme is also conducive to their experience of having a voice. If supervisors and vocational trainers adopt an empathetic stance towards their trainees, they nurture feelings of being understood and listened to. This would include taking into account apprentices' interests (Parall et al., 2013), accepting their perspectives and welcoming their input (Jang, Reeve & Halusic, 2016), in addition to acknowledging their feelings and even their expressions of negativity (Reeve, 2009). By giving trainees a voice in this regard, trainers gain information that they are able to use to attune the learning activities more finely to apprentices' interests and skill level or to identify particular needs for assistance.

With this openness to apprentices' concerns, trainers not only help to satisfy learners' need for autonomy. In its empathetic aspect, this attitude also contributes to satisfying their need for relatedness (Deci & Ryan, 2013; Deci, Olafsen & Ryan, 2017; Deci & Ryan, 2020). Expressions of honest concern for apprentices' perceptions are part of an inviting and caring culture; they allow apprentices to feel genuinely liked, respected and valued. This is important, as it fosters a sense of belonging which, in turn, is an indispensable prerequisite for people's identification with the social practices and behavioural regulations of a specific group (Niemic & Ryan, 2009).

Furthermore, the autonomy-supportive attitude described above helps trainers to identify optimally challenging learning activities and opportunities for their apprentices in order to test and expand their acquired capabilities. In this respect, it facilitates satisfying the need for competence (Niemic & Ryan, 2009), since, after all, nurturing experiences and the development of competence need to depart from the specific capabilities and abilities of learners (Aelterman et al., 2018).

To be clear, it is important to complement affordances of procedural and organisational autonomy support as sketched above with what Stefanou and colleagues called 'cognitive autonomy-support', that is, the kind of support which focuses on 'empowering students to develop self-reliance in thinking' (Stefanou et al., 2004:105). Trainers can encourage apprentices' independent thinking or 'cognitive autonomy' (Stefanou et al., 2004:100–101) by providing them with well-structured guidance. This could involve setting out clear expectations and guidelines at the pre-performance stage, providing assistance, guidance and supervision during the task, and also giving efficacy-supportive feedback that helps the learner to reflect on and develop their competences further (cf., e.g., Reeve, 2006; Vansteenkiste et al., 2012; Aelterman et al., 2018). During in- and post-performance exchanges, trainers can stimulate apprentices to reflect seriously on processes, to understand these as embedded in broader processes, and to identify and evaluate alternative solutions. In this way, vocational trainers can foster apprentices' cognitive autonomy and contribute effectively to satisfying their need for competence.

As these remarks suggest, well-structured, autonomy-supportive guidance has the potential to satisfy all three BPNs at once, and, therefore, it is conducive to apprentices' effectively identifying with behavioural regulations, such as with a company's cultural practices or with professional performance standards. Although extensive autonomy-supportive affordances sometimes seem to be at odds with using apprentices for productive work, it is nonetheless fruitful to adopt and sustain an autonomy-supportive attitude towards apprentices and to implement at least some instances of choice or participation. This approach is fruitful because, in line with SDT's reasoning, trainers' readiness to listen to the concerns of apprentices would not interfere with their productive work but instead tends to enhance its quality.

After presenting our methodology below, we illustrate some of Swiss Post's affordances that can engender experiences of ownership, choice or participation and of having a voice.

Methodology

Between August 2019 and March 2020, a comprehensive, explorative case study was conducted at Swiss Post, including the logistics, Post Finance and Post Bus divisions. The company offers 750 apprenticeship places every year. In total, more than 1 900 apprentices are trained for 19 different occupations. At the start of an apprenticeship, the trainees have completed their compulsory schooling, which, in Switzerland, consists of up to 11 school years. Recruitment is carried out by human resources (HR) in Swiss Post's Career Entry department, and, to date, some 60 000 employees have completed training and work as workplace trainers. This training is offered by private providers in Switzerland (Keller & Barabasch, 2018); at Swiss Post, trainers' training is offered internally and includes follow-up courses.

In total, 14 apprentices, 15 vocational trainers, seven regional training managers and seven managers were interviewed using a semi-structured interview guideline. The apprentices were in five different apprenticeships in logistics, informatics, technical support, customer service and office administration. The duration of the apprenticeships was either three or four years and comprised school-based instruction, instruction in specific training centres, and work at departments within Swiss Post. As part of the exploratory case study, field data were gathered by visiting 11 innovative projects and by documenting the interviewees' workplaces. Innovative projects comprised measures to improve the development of allied skills or that of autonomy and self-regulated learning.

The interviews lasted between 30 and 45 minutes for the apprentices and between 45 and 60 minutes for the other participants. The interviews were conducted in the work environment of the interviewees and were recorded and subsequently transcribed. The interviews with the apprentices comprised an open question at the beginning to obtain an initial picture of their perception of the apprenticeship. Further questions aimed at generating narratives of perceived guidance, the responsibility to manage one's learning or working, successes, difficult situations, feedback, and the culture of support for learning from mistakes, and also the degree of flexibility in the workplace environment. The 15 vocational trainers (VTs) were asked about their conception of training, their experience with the apprentices, and their expectations of them. The interviews with the regional training managers (RTMs) focused on their perceptions of the learners' socialisation in the workplace and their educational background. From both the RTMs and management, we also wanted to know what their visions and ideas were regarding the further development of the apprenticeship and the learning culture overall.

Data were processed using a qualitative content analysis (Kuckartz, 2016). After a first overall viewing of all the transcripts, they were coded. Step by step, the coding system was refined, as the codes were selected according to the themes that seemed to be important in the transcripts (inductive categorisation). The cases were then analysed based on the research questions, and some additional themes were added to the existing coding system. In this way, a detailed category system was developed. A certain cohesiveness of the coding has been

ensured by working together as a team on several transcripts. The entire material was then finally coded by two coders.

Our data revealed that the apprenticeship programmes at Swiss Post include some measures that contribute to an autonomy-supportive environment. For this reason, we use these data below to illustrate the ways in which training companies can engender experiences of autonomously motivated work engagement in their apprentices.

Findings

The substantial investments in the coaching of learners at Swiss Post ensure that apprentices receive much attention during their apprenticeships. The company adopts a triple-level approach with workplace trainers, VTs and RTMs. Whereas the workplace trainers supervise and assist the apprentices in their daily work, the VTs are responsible for their overall guidance. They set out the expectations and guidelines and ensure the individualised structuring and fine-tuning of the apprentices' programme. In regular meetings, they give personal feedback, set further learning goals, and reflect on the competence development, performance and conduct together with the apprentice. Furthermore, RTMs supervise the whole educational process, gather all the information about their assigned apprentices' development, and serve as a contact point for both the VTs and the learners in case problems or requests arise. The autonomy-supportive affordances of offering opportunities to take ownership, enabling choice and participation, and of giving learners a voice are therefore situated against a background of close and structured guiding that is an indispensable prerequisite for these measures to have the desired effect on learners' autonomy experiences.

Opportunities to take ownership

Owing to the close support of their learners, the VTs can detect and counteract feelings of over- or under-challenge at an early stage. Our data revealed that VTs throughout the company try to ensure that the apprentices' learning activities are optimally challenging. To support the development of their apprentices' autonomy competences, the coaches continuously expand the apprentices' area of responsibility at an individually adjusted pace and offer them opportunities to take ownership of some of their workplace learning. Here, we present two affordances that give apprentices the opportunity to take the initiative and to accept ownership of, and responsibility for, some of their workplace activities on both a small and a large scale: opportunities for self-study and the formation of learner teams.

Individually appointed hours for self-study

Swiss Post grants every apprentice the use of up to three hours a week for studying their VET-related materials during paid working time. During these hours, the apprentices must be present but they can decide autonomously how to use the time for personal study. They can do their vocational school's homework, prepare for examinations or work towards some of the learning objectives their coaches set them as part of their training.

At least some learners even have some choice over the scheduling of their weekly hours for study, about which they must consult their workplace trainer and ensure that their schedule is transparent to their team so that the learners do not receive any work-related tasks to perform during these time slots. The responsibility for organising these hours lies with the apprentices and they are expected to take the initiative to use this offer. However, being given the opportunity to take the initiative does not always work well, as one VT told us:

Our apprentices are allowed to study up to two hours per week on paid work. ... Although we always communicate this to them, they don't take it up sufficiently of their own accord. And so, I always have to tell the apprentices the Post is a mother company; they are really given time to learn, and it is paid for. (VT)

This may indicate a lack of interest in theoretical learning on the part of some apprentices, leading them to feel less motivated to use their allocated time for studying even if they receive poor grades at school. In some cases, this same VT tries to overcome the lack of initiative by making individual, binding arrangements regarding the use of personal study hours together with the respective learners. Another VT offered their apprentices personal support with their learning. As one apprentice reported, her VT asked her:

Can we help you? Do you need support somewhere? Because we have learning time in the company ... and we could also learn together with him. That's no problem at all. (Apprentice)

However, we found some variation between training places in the handling of learners' study hours by vocational and workplace trainers. Some logistics apprentices in particular reported that they could not take up all their study hours every week and always had to ask their supervisors before actually using them. This indicates that this offer is not equally well implemented throughout the whole enterprise. Nonetheless, some apprentices reported of their own accord that they receive a great deal of time for studying during paid work time and that they highly appreciate this offer.

In sum, we see this affordance as a small-scale measure to allow apprentices to experience responsibility, initiative and ownership as long as they receive an appropriate level of leeway and support by the VTs in organising their study hours autonomously.

Learner teams

Swiss Post offers its apprentices in commercials, retail, distribution logistics, and information and communication technology (ICT) the opportunity to apply for a place in a learner team. They recruit jobs in-house and fulfil various services. Such teams are led by a more advanced apprentice and consist solely of learners in different years of their apprenticeship. Discreetly supervised by VTs, they must organise autonomously the planning, coordination and distribution of tasks according to time and human resources, and also assume some managerial responsibilities.

Retail apprentices can also apply to spend one year at a junior post office. With only two to three experienced supervisors in the background, these branches are run solely by apprentices from different years, meaning that the customers are served exclusively by learners. In addition, these apprentices assume a great deal of responsibility, in that they process postal transactions and even manage the administration of the post office themselves.

Although their supervision and guidance are more discreet, that is, supervisors in general do not intervene actively without an apprentice asking for it, there is always the opportunity to receive help when needed, which means that the apprentices do not feel abandoned. Nevertheless, the declared aim of this supervision is not to help the apprentices with firm answers but to show them how they can help themselves when problems arise, as one apprentice illustrates:

In case of difficulties, we can ask anything; they know how ... to show us where to find the solution, because this is a little bit [of] their aim. It's not 'Find it here', it's rather 'Try, search, do it!', but they help us in a specific way. If we are really panicking, you can go, ask, and tell them I can't understand this thing; they [then] sit down with you, [and] they explain it to you. (Apprentice)

The learners in both of the trainee-run post offices we visited – Lugano Cassarate (canton of Ticino) and Prilly (canton of Vaud) – described this setting as being exciting and stimulating. They reported that their enlarged area of responsibilities motivates them more to learn by themselves, to develop their skills further or to help or tutor others. For instance, one apprentice stated that 'having had the opportunity to come to the Cassarate branch was fantastic, because here you really have 100% responsibility for your actions and for the actions of others too'. After being asked whether she experienced these responsibilities as motivating or as challenging, she answered:

It is a challenge, but it is something that motivates you, because knowing that you can learn things by yourself, going to look for them, maybe motivates you more. You know that there is no one who will come to you to say: 'You can find it here.' It is *you* who must go to look for it. Also, the fact that you have some younger apprentices whom you can teach, motivates you a little bit more in searching, to say: 'Come on, then I can teach them too, I learned something new.' (Apprentice)

Another apprentice points to a contrast between the experiences she had at her first year's training place and those she had at the learner branch. In her first year, she felt rigidly controlled and distrusted by her supervisor, which diminished her motivation. In contrast, she described the increased autonomy at the trainee-run post offices as increasing both her self-confidence and her motivation to help herself and to try out and learn things on her own:

Yes, I really like to work a little bit more autonomously. Because in the first year I felt they were too much on me, always watching me, not trusting me. That's a

little ... I don't know, you don't have too much motivation. Here, it's a little bit up to you. ... I think this is good, because we learn ourselves, from our mistakes and so on. We learn to dare to do things. ... You find out for yourself too. (Apprentice)

In the light of SDT, we interpret these reports as illustrating the positive effects of such a setting on apprentices' motivation. Those apprentices who experience more self-initiation and responsibility about their daily work tasks displayed more enjoyment or enthusiasm with respect to their workplace learning activities. Although we suspect such attitudes to be more closely related to autonomous than to extrinsic or introjected forms of motivation, we do not want to verify this claim. Overall, our data revealed a theory-fitting coincidence between reports of workplace settings experienced as yielding a relatively high level of responsibilities and opportunities for taking ownership and initiative, on the one hand, and reports of high and constant motivation for engaging in and initiating work and learning activities, on the other.

Choice and participation regarding learning activities

At Swiss Post, apprentices receive up to CHF 1 000 as a personal budget, which they may use for a language course in Switzerland, France, Germany or the United Kingdom, or for some other courses that will help them to develop further their competences related to vocational training. Apprentices must discuss their ideas about spending this credit with their VTs or RTMs on their own initiative. Although the VTs or the RTMs must accept or give their permission, it is ultimately the apprentices themselves who decide whether and how this credit is to be spent. The apprentices may choose those options that pertain to self-realisation or those that they consider to be of value to themselves or their personal goals. However, this affordance is only one measure that initiates a momentum of relevant choice over some elements of their apprenticeship at Swiss Post. Another way of engendering autonomy-related experiences is to allow the apprentices to participate in defining some of their workplace learning activities.

Through individual coaching, the VTs at Swiss Post not only identify optimally challenging learning activities for their apprentices; we frequently observed that they also ask for their apprentices' opinions and perspectives and consider their specific interests wherever possible. One learner told us that she experiences her VT responding regularly to her requests regarding specific workplace activities, if circumstances permit:

If, as in summer, we have a period when there is less activity, we can also make suggestions: 'Hey, we'd rather go to the cleaning service instead of gardening. This is more important for me right now', and so on, and he [the VT] always takes that into account. (Apprentice)

While, for most professions, corresponding workplace environments restrict the range of opportunities for apprentices' participation in the choice of specific workplace learning activities, in the training of ICT learners, their involvement in defining their learning tasks

is an elementary part of the coaching approach that is implemented. The specific training programmes for these professionals are not completely arranged in advance; instead, they are explicitly open to the learners' input. And by holding individual 'status meetings' regularly, ICT coaches not only give their apprentices personal feedback, but also define additional learning activities together with them:

They always have to set a personal goal at each meeting, some topic they want to work on. It's not like we set the goals. We always discuss them together. They always have a say, depending on what is important to them or what they want to work on. (VT)

The responsiveness to ICT learners' inputs is a distinguishing feature of this apprenticeship programme, one that is based in the VTs' open and curious attitude towards their apprentices' ideas. One of the VTs told us that learners sometimes have 'exciting ideas' and that the coaches generally try to realise what is possible. Furthermore, VTs allow those learners who progress easily with their learning materials to define a personal project to work on:

For example, one of them is currently programming something with VR [virtual reality] glasses. Or two have just asked me whether they could film and edit. Because they are learners of the faster kind, we defined time slots for filming and editing. So, if they have an idea, we try to make quite a lot possible. (VT)

As discussed above, such measures can provide moments of choice or participation, and they therefore tend to engender experiences of autonomy. Furthermore, if supervisors adopt an open and receptive attitude towards learners and their input as described here, they also foster apprentices' experience of having a voice.

Experiences of having a voice

Allowing apprentices to speak their mind and to contribute their ideas and suggestions may not only benefit a team or an organisation. We consider the opportunity to contribute one's own view as a possible way of facilitating experiences of having a voice; accordingly, we present here two approaches through which Swiss Post fosters this experience in its apprentices.

Apprentices' inclusion in Kaizen

Kaizen is a Japanese approach to continuing improvement that can be applied in organisations. As part of the Kaizen philosophy that was introduced a decade ago, Swiss Post lives a company-wide culture of welcoming inputs from its employees. Its apprentices are included in this culture. RTMs and VTs told us that they invite learners explicitly and repeatedly to contribute their ideas, especially if they notice something they would like to see changed. This might not be easy from the start, because, at this age, and especially at an early stage of their training, some apprentices might be shy about articulating their views. For this reason, the VTs give them some encouragement, as the following two reports illustrate:

We encourage apprentices to tell us their point of view, their vision of work. It is a bit difficult because they are in training, so, many times they don't dare to say anything or to bring in their ideas, but we stimulate them in this respect. (VT)

Right from the start of their apprenticeship, we emphatically point out that, if they think 'Why do we have to do it this way, why can't we do it any other way?', they really [should] bring in their ideas. ... In commercials, we tell them even more so, because there are some long-established teams in which a breath of fresh air is never bad ... they should really state it, because the departments are usually open for it. (RTM)

Apprentices can make suggestions or submit their ideas either by pinning Post-it Notes on a Kaizen pinboard or by discussing them directly with their VTs or supervisors. The ideas submitted are then discussed among the whole team at the next team meeting and, if applicable, are either passed on to higher levels or implemented directly. In this way, apprentices suggested the following changes, for instance:

- Shifting their personal study time to certain business hours;
- Introducing a table containing all the birthday dates of the team;
- Changing some applications in the distribution logisticians' scanners, and
- Developing the PostCard Creator service further.

Since every idea is taken and discussed seriously regardless of its originator, the apprentices reported that they feel listened to, as the following statements illustrate:

We also have the whole room full of pinboards and, if you have any idea, you write it down and say, 'Hey, now we have to sit together; I have a cool idea, can't we somehow implement it, do this and that? Yes, they are always quite open. (Apprentice)

There are a lot of people who put things there [on the pinboard]. For example, ... if they see something in the office that is not going well, they can write it down and then it is often passed on. ... So that's good, we're listened to anyway. If we say something, they look to see if it's possible or not. And if it's possible, they implement it. (Apprentice)

Concerning their inputs, an RTM told us that 'a group of learners is permanently far ahead with these ideas, because they come unencumbered into the working world, do not have this operational blindness', and that 'sometimes really cool things are among their inputs'. Such statements not only illustrate the potential gain of Kaizen, but also the open attitude which encourages apprentices to speak their minds. It fosters experiences of being listened to, that is, of having a voice that is heard.

Learners' union at the Swiss Post

Through a union-like institution, which until 2020 was called 'Insieme' (Italian for 'together'), the apprentices at Swiss Post have a voice regarding matters that affect them directly. During annual meetings with some of the RTMs, the apprentices can influence some aspects of their apprenticeship through their representatives. Every learner is potentially available for election as a representative of their profession and/or region. They then serve as the voice for those who elected them. One apprentice described the procedure and her role as follows:

Apprentice: If someone has an idea for doing something, adding something, eliminating, or improving something, I can propose it, then the Post processes it.

Interviewer1: How did you decide to join Insieme?

Apprentice: Basically, all our comrades decided. We had to vote for one person, and I went out for the majority and so I was chosen.

Interviewer2: So, they identify with you?

Apprentice: Yes.

Interviewer1: Did you have to apply or were they all candidates?

Apprentice: Everyone was a candidate. (Apprentice)

As an RTM told us, there are all kinds of ideas that learners have already proposed:

Maybe there are logisticians who would like to have trainings on snow, for instance. Commercial employees, who would like computer courses ... or language courses, or maybe in a job where they stand all day long, they ask, for instance, for something to support their backs that are hurting a bit. And they can make all kinds of proposals. So, we really take up their ideas and see which ones we can develop. (RTM)

The most frequently mentioned idea developed in this way was that of offering every apprentice the General Abonnement, that is, a ticket for free public transportation within Switzerland – something that has been implemented at the national level. However, 'Insieme' is not only meant to be a playground for developing ideas. A member of management told us that they regularly contact the representatives of the learners' union to involve apprentices in the further development of products and training courses in order to 'receive feedback from the people it affects'. This manager is convinced that it is 'a very important sign to the young people that they are not simply at the mercy of what is happening here, but that they can have their own say'.

Together with management, the 'Insieme' representatives are currently involved in developing this institution further to strengthen the role of the apprentices. The aim of this process, which is actively embraced by the apprentices themselves, is to give learners more responsibility in steering their participation. A member of management emphasises the significance of this process for Swiss Post by stating: 'If we include self-responsibility in our mission and want to prepare our people for the job market, then this is a big issue.'

Conclusion

The aim of this article was to explain why and to what extent considerations of autonomy matter in VET, and to give some examples of autonomy-supportive practices. Based on qualitative data from our survey at Swiss Post, we identified three groups of affordance through which companies and vocational trainers can respond appropriately to adolescents' basic psychological need for autonomy. The first group comprises measures that enable experiences of responsibility, initiative and ownership; the second group provides apprentices with meaningful choices and the opportunity to participate in the definition of workplace learning activities; the third group includes examples of giving apprentices a voice. All three groups were identified by SDT-related research as valuable contributions to satisfying the need for autonomy and as stimulating autonomous forms of motivation.

Regarding the first group, we identified the practice of granting individually appointed weekly hours which apprentices have to use self-responsibly for their VET-related studies during paid working time. As long as the apprentices receive an appropriate level of leeway and support by supervisors in organising such study hours, we see this as a small-scale measure that engenders experiences of responsibility, initiative and ownership. As an example of a large-scale affordance, we introduced Swiss Post's learner teams in which apprentices must organise the planning, coordination and distribution of daily work tasks themselves. In self-responsibly administering their team, apprentices not only learn to work self-reliably, but also experience a high level of autonomy that significantly boosts their motivation. The discreet supervision by experienced coaches and workplace trainers provides a guiding structure in the background and prevents the apprentices making serious mistakes and becoming overtaxed.

To illustrate the second group of autonomy-supportive affordances, we introduced Swiss Post's provision of a credit that apprentices can use for further training on their own initiative. This permits them to develop some of their vocational training-related competences further and to make choices that are personally meaningful to them. Furthermore, coaches regularly ask for apprentices' opinions and perspectives and consider their specific interests in scheduling their learning pathways. In doing so, they not only foster learners' autonomy-related experiences of participation, but also ensure that the learning activities for their apprentices are optimally challenging and motivating.

The apprentices at Swiss Post have access to two institutionalised opportunities for having a voice. On the one hand, coaches and workplace trainers encourage the apprentices

to participate actively in the company's Kaizen practice of submitting ideas. Owing to the company-wide culture of welcoming input and the widespread readiness to discuss submitted ideas seriously, regardless of their originator, the apprentices experience being involved and listened to. On the other hand, there is a union-like institution with elected representatives through which the apprentices have a voice regarding matters that directly affect them and through which they can influence some aspects of their apprenticeship effectively.

Based on the SDT framework, we can expect such measures to have a positive effect on learners' motivation and to enhance apprentices' performance quality, work commitment and (practical) learning. We had access to reports that were explicitly related to the autonomy-supportive practices and which demonstrate the apprentices' high levels of satisfaction with, enjoyment of and personal involvement in their workplace learning settings and activities.

A number of suggestions for practical ways in which to improve the autonomy of apprentices can be derived from this research project. First, apprentices should be provided with opportunities to self-manage parts of their work, such as individual projects or team projects. In particular, self-initiated projects should be supported. Second, apprentices should be given a choice about aspects of their training – for example, selecting additional workshops, internships or projects in the enterprise to work on, supports their experience of autonomy. Third, critical thinking and participation can be supported by allowing apprentices to represent themselves and their concerns and also by gathering their ideas about potential improvements of work processes.

While this research presents some helpful insights, it is also important to note its limitations. We could not assess the conditions under which each measure effectively leads to associable outcomes, nor could we isolate predictable outcomes for each affordance. We suspect that the types and strengths of observable effects do depend on the entirety of the framework conditions and the specific interplay of established incentives. We assume that both a company's culture and the work of coaches and their attitudes towards learners are essential concerns here and that they play a key role in creating the conditions necessary for successfully implementing autonomy-supportive affordances.

Further research could help to understand more specifically the relevant preconditions and identify those practices which are functioning well and which account for the specific needs of different professions, in addition to the differences between companies in respect of their size and their human and financial resources. In demonstrating how an organisation's being seriously concerned about learners' autonomy can stimulate apprentices' motivation and enhance their productivity and learning outcomes, we hope to have given impetus to future such investigations.

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Data-availability statement

Since the data analysis is ongoing, transcripts have not been stored in a depository at this stage.

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