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Apprentices' perceptions of quality in the Swiss initial vocational education and training dual system

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Abstract

The quality of education and training is a key factor in explaining apprentices' motivations and helping sustain their efforts in acquiring the necessary skills for their future occupation. Yet, the perceived quality of initial vocational education and training (IVET) may vary according to the learning location and the occupational fields. To identify the characteristics defining IVET quality, according to apprentices, and whether these characteristics differ between occupational fields, a survey was administered to 320 apprentices enrolled in a Swiss dual IVET program in the fields of retail and technics. The apprentices were asked what they consider to be the high- and low-quality aspects of their education and training. Results showed that the most frequently mentioned aspects reflecting high quality referred to the apprentices' social learning environment, whereas the codes related to poor quality referred to the IVET context. Differences in the perception of quality were found between the two occupational fields.

Keywords

initial vocational education and training; quality of education and training; dual system; qualitative study

1 Conceptual and theoretical framework

The quality of initial vocational education and training (IVET) is a key factor in explaining apprentices' motivations and helping them sustain their efforts in acquiring the necessary skills for their future occupation (Ebbinghaus, Krewerth, Flemming, Beicht, Eberhard, & Granato, 2010). However, no shared understanding of what characterizes a high- or low-quality education exists (Wittek & Kvernbekk, 2011). Teachers are mainly considered those responsible for these performances and, consequently, for the quality of education (Hattie, 2009). Therefore, the concept is often measured through *teacher/teaching quality or effectiveness* (Smith & Yasukawa, 2017). However, while teaching practices have a major influence on learners' motivations and achievements (Hattie, 2009), these are not the only factors that play a role. To define quality in IVET, we assume, like other scholars, that it is necessary to consider the conceptions or perceptions of the multiple stakeholders acting at the different levels of the educational system, such as the apprentices, teachers, in-company



trainers, and professional associations (Griffin, 2017). In sum, the quality of IVET is a complex topic that still requires investigation.

The conclusions of several studies conducted in the context of Swiss IVET indirectly inform about some aspects of the apprentices' conceptions of training quality. Only some aspects are underlined in what follows. First, an aspect that appears central is that teachers and trainers who have professional experience not only in the learning location they work in but also in other learning locations are valued by apprentices (Sappa, Aprea, & Vogt, 2018). Second, the degree to which in-company trainers can offer the apprentices meaningful learning opportunities is strongly tied to how apprentices perceived the quality of training and their perseverance in their current apprenticeship (Stalder & Carigiet Reinhard, 2014). Finally, in the case of apprentices in the retail field, which is characterized by a flexible work organization, the quality of social relationships within the training company and with customers appears crucial in helping apprentices face highly demanding working conditions (Duemmler & Caprani, 2017).

The current study took place in the Swiss initial IVET dual system. It focuses on apprentices' perceptions of the quality of their training at school and at the training company in two occupational fields: retail and technical. The study aims at examining what characterizes quality across learning locations and across occupational fields.

The study was driven by two research questions:

1. According to apprentices, which characteristics define the perceptions of IVET quality at school and at the training company?
2. Do these perceptions differ between the two occupational fields considered?

2 Methods

2.1 Participants

The participants were 320 apprentices enrolled in a Swiss dual IVET program ($M_{age}=18.8$; $SD=3.15$). Two occupational fields were considered: technical ($n=188$, 10.5% women) and retail ($n=132$, 64.1% women). These programs alternate between two main learning locations (dual system): the professional school and the training company. Therefore, apprentices attend classes at school on a basis of one to two days per week and spend the remaining days at the training company, supervised by a trainer.

2.2 Procedure

As part of a larger survey administered during class time, participants were asked to answer six open-ended questions assessing their perceptions of the quality of education and training at school and at the training company. They were asked to report, for each of the two learning locations, at least three aspects about a) what they like in their education and training, b) the positive aspects of their IVET program (again for both learning locations), and c) the negative aspects (e.g., "What could be improved in your education at school/at the training company?").

The answers were fully transcribed and imported into the Nvivo software for coding. A coding scheme was developed both in a deductive, or theory-based, and inductive (i.e., emerging from the data) way. Each meaning unit was analyzed in relation to the others to improve the coding scheme's coherence. A total of 3713 meaning units were coded: 1872 referred to quality at school (using 17 codes), and 1841 to the training company (using 18

codes). The list of codes is shown in the appendix. The intercoder agreement, based on 5% of the statements, was satisfying (school: Cohen's $\kappa=.782$, company: $\kappa=.735$).

3 Findings

For most of the codes, similar themes reflecting the perceived quality at school and at the training company were found. Inspired by Bronfenbrenner's (1977) *Ecological systems theory*, which distinguishes several nested environmental systems that individuals interact with, all codes were further categorized according to their level in the system: 1) *micro-level* ("learning") codes referred to the main activities realized at school (classes) or at the training company (tasks) (e.g., diversity of the classes/tasks); 2) *meso-level* ("social learning environment") codes referred to the direct or indirect involvement of persons influencing the perceptions of IVET quality (e.g., the pedagogical skills of teachers/trainers); 3) *exo-level* ("IVET context") codes referred to the organization of the IVET, the educational programs, i.e., the institutional and decisional level. Overall, the most frequently mentioned aspects reflecting high quality referred to persons, whereas the codes associated with low quality referred mostly to the system.

Regarding the first research question, the main elements characterizing high quality at school were intrinsically motivating classes (14.6% of the total), relationships with peers (12.8%), and links between theory and practice (9.4%). On the contrary, aspects related to demands and pressures (15.4%), the educational system (13.6%), and the (lack of) teachers' pedagogical skills (12.8%) were found to reflect a low quality according to the apprentices.

At the training company, the main elements characterizing high quality were the relationships with colleagues (18.8%), the trainers' pedagogical skills (10.8%), and the diversity of the tasks (8.9%). Low quality was characterized by the trainers' poor pedagogical skills (15%), time management (14.6%), and organizational management (13.5%).

The pedagogical skills of the teachers and trainers appeared as reflecting both the positive and negative aspects of quality. These skills were the most indicated among all the teacher and/or trainer competences: they represent two-third of these codes for the teachers and three-fourths for the trainers. These results confirm the importance, for the apprentices, of their teachers' and trainers' pedagogical skills, and their central place in the perceived IVET quality (Stalder & Carigiet Reinhard, 2014). While similar themes emerged at the two learning locations, their degree of relevance differed.

Concerning the second research question, the comparisons between the occupational fields concerning the education at school, using a χ^2 test, revealed that aspects like the link between theory and practice and the material were more prominent in the perceptions of quality in the technical field than in retail. For the latter, contacts with peers were seen as more important. Concerning the training at the workplace, it was found that, for the technical field, the diversity of tasks or working conditions were more important, whereas, for retail, the contact with customers and time management were central.

4 Significance of the research

This study sheds light on how IVET quality is perceived by apprentices in two occupational fields. Quality of training is, unsurprisingly, multidimensional and complex, depending on several levels of the apprentices' ecological system. Accordingly, the most important aspects contributing to a high quality education refer to social relationships (with peers and teachers at school, with colleagues, trainers, and customers at the training company), reflecting a strong need to belong (Baumeister & Leary, 1995), and to the content to be learned at school or the tasks to be realized at the training company, in terms of variety and the perceived links between theory and practice. Conversely, what contributes to a low quality refers mainly to

institutional aspects, like the educational system, time management, or salary. A transversal and central element concerns the pedagogical skills of teachers and trainers, showing the importance of providing these professionals with strong pedagogical preparation. In fact, apprentices seem to give a lot of importance to the pedagogical competences of their teachers but also of their trainers. Even if the latter must transmit a trade, they are also expected to have strong pedagogical skills. Furthermore, the importance and criteria of IVET quality depend, to some extent, on the occupational field. Notably, according to the perceptions of quality of apprentices in retail, the social aspect appears particularly important (in terms of relationships with peers, colleagues, and customers) (see also Duemmler & Caprani, 2017). For apprentices in the technical field, quality is more strongly tied to the tasks, material, or working conditions, whereas the social aspect is less pronounced. Such specificities suggest that IVET quality is, to some extent, different between professional fields.

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Biographical notes

Florinda Sauli is a junior researcher at the Swiss Federal Institute for Vocational Education and Training SFIVET. Her PhD thesis, currently under development, will compare the perception of the training quality of institutional and noninstitutional actors in the context of the Swiss vocational education and training system.

Matilde Wenger is a junior researcher at the Swiss Federal Institute for Vocational Education and Training SFIVET. Her research interests concern teachers' gender identities, apprentices' and stakeholders' perceptions of training quality, and apprentices' commitment to vocational education and training.

Jean-Louis Berger is a professor at the Swiss Federal Institute for Vocational Education and Training SFIVET. His research interests include the perceptions of training quality, in addition to apprentices', teachers', and trainers' beliefs, motivations, and self-regulated learning.

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Appendix: coding scheme of quality aspect

A. Learning location: Vocational school

A.1. Micro-level: Learning

- A.1.1. Extrinsically motivating classes
- A.1.2. Intrinsically motivating classes
- A.1.3. Class diversity
- A.1.4. Class (not specified)
- A.1.5. Links between theory and practice

A.2. Meso-level: Social learning environments

- A.2.1. Teacher general pedagogical skills
- A.2.2. Teacher structure skills
- A.2.3. Teacher occupation-specific skills
- A.2.4. Teacher social skills and intrinsic motivation
- A.2.5. Autonomy-supportive teaching
- A.2.6. Teachers (unspecified)
- A.2.7. Demands (i.e., expectations, tests, exams)
- A.2.8. Relationships with peers and climate

A.3. Exo-level: VET context

- A.3.1. Time management
- A.3.2. Educational system
- A.3.3. School geographical location
- A.3.4. Material

B. Learning location: Training company

B.1. Micro-level: Learning

- B.1.1. Extrinsically motivating tasks
- B.1.2. Intrinsically motivating tasks

- B.1.3. Skill acquisition
- B.1.4. Tasks diversity
- B.1.5. Links between theory and practice
- B.1.6. Tasks (unspecified)

B.2. Meso-level: Social learning environments

- B.2.1. Trainer pedagogical skills
- B.2.2. Trainer occupation-specific and social skills
- B.2.3. Demands
- B.2.4. Apprentice's autonomy
- B.2.5. Relationships with colleagues and climate
- B.2.6. Contact with customers

B.3. Exo-level: VET context

- B.3.1. Organizational management
- B.3.2. Training management
- B.3.3. Time management
- B.3.4. Working conditions
- B.3.5. Company geographical location
- B.3.6. Salary