

Review

Apprenticeships as a Unique Shaping Field for the Development of an Individual Future-Oriented “Vocationality”

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Abstract: With the labor market and work environments becoming increasingly dynamic, the question of how young people can find their way to a sustainable professional future becomes ever more complex. This paper looks from different perspectives at apprenticeships, at their advantages and limitations. The first step is a description of the prerequisites that are necessary for a sustainable career choice. In this respect, the role of career guidance is particularly relevant, as guidance needs to take into account both individual characteristics as well as labor market aspects in order to support a sustainable career choice. Based on a comprehensive critical literature review of current interdisciplinary and international papers, as well as of basic career choice theory literature, the theoretical framework is set out and linked to empirical results. The conclusion emphasizes the high importance of apprenticeships for the holistic personality development of young people and a positive as well as a sustainable effect on their lifelong employment careers. It should be stressed that this success depends, to a large extent, on the structure of the vocational education and training system, on labor market developments, and on individual advanced qualifications in the course of working life.

Keywords: apprenticeship; adolescents; vocational guidance; life design; sustainability



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1. Introduction

An education system has the task of making a trade-off between successful labor market allocation and equality of educational opportunity. While specific vocational contents facilitate labor market allocation, they increase social inequality [1]. Therefore, on the one hand, it must be taken into account that dual apprenticeships can lead to a reproduction of socio-economic inequalities. On the other hand, the extensive consequences of inadequate training for youth unemployment and the development of individual sustainable career paths must not be ignored. The different prioritization of these goals, the corresponding design of the vocational content, and a comprehensive guidance concept lead to national differences in education systems. The two most important contextual factors are, on the one hand, the organization of schooling and, on the other hand, the design of the labor market [2].

In Germany, Switzerland, Austria, and South Tyrol (Italy), dual vocational education and training (VET) is highly valued, as it has an extremely positive effect on young people’s transitions from school to work [2–5]. For example, the German VET system is characterized by specific vocational skills combined with strong employment protection legislation. Intensive negotiations between employers’ associations, trade unions, and the German government have, compared to other countries, already enabled successful adaptation to changing economic conditions several times in the past [6].

As vocational education and training in the dual system takes place in two learning locations, the company and the vocational school, it is characterized by learning processes

across these two learning locations [7]. A survey by Cedefop [8] illustrates that satisfaction with the job-related knowledge and key qualifications acquired in the course of VET is very high overall and that the reputation of vocational education and training is, on the whole, also quite high. Moreover, dual vocational training is seen as playing a key role in strengthening the economy and preventing unemployment [9]. Nevertheless, the dual system of vocational education and training is constantly faced with criticism. It is regularly said that VET is in dire need of modernization and, above all since the introduction of the European Qualifications Framework (EQF), there have been many calls for greater flexibility and modularization of the dual system in order to ensure it remains internationally competitive and supports lifelong learning [10].

A successful start into vocational and professional training and, thus, into working life, constitutes the foundation for a sustainable occupational future. In this context, the life design approach may play an important role for the individual as before, during, and after training, life, and career constructions go on and the individuals themselves must become experts in this endeavor.

To attain the status of an expert, professional guidance and support are needed, particularly during career transitions [11]. This acknowledgment is important because otherwise there is a risk of seeing the advantage of the dual system of vocational education and training only in the provision of employability. This is closely related to addressing the challenges for lifelong career guidance that arise from the constant changes in the labor market and in the resulting demands on people throughout their working lives. If the training qualifications once achieved do not evolve, that initial advantage at the beginning of a career can easily turn into a competitive disadvantage in terms of salary [12]. Hence, it is important to further develop the technical and interdisciplinary competencies acquired during training that are important for entering the labor market, on one hand, in order to keep these competencies up to date and, on the other hand, to take into account the changing needs of the individual [13]. However, this should also apply to a greater or lesser degree to all other types of training, including higher education.

Both structural changes and the current COVID-19 pandemic have had a direct impact on dual vocational training, as VET is provided through company-based factors that are directly linked to economic developments. As a result, forward-looking vocational choices and the continuous adaptation of competencies to labor market conditions, as well as to personal circumstances, are essential elements of lifelong career counseling.

To derive the special challenges resulting from this situation, the professional maturity and the professional concept, as well as other prerequisites for successful vocational training, are presented first. Dual vocational training is then linked to the employability approach and the question of those problems that arise from the dynamic progression of an employment biography if the only qualification is the vocational training qualification obtained at the beginning of one's working life. In addition, an evaluation of the difficulties and challenges arising from the current economic changes due to the COVID-19 pandemic will be provided. Finally, the central statements of this paper are outlined and the dual vocational education and training system in Germany will be discussed from different perspectives.

2. Vocational Training as the First Step into the Occupational Future

In this article, apprenticeship is considered as the basis for the occupational career, which is defined by the chosen vocation. The concepts of career and vocation are consequently linked through apprenticeship. The "Life-Career Rainbow" by Super and colleagues [14] assumes that the occupational career is a lifelong development process that takes place in phases and involves different life and occupational roles. The phase of adolescence refers, on one hand, to the entry into a specific occupational field and, on the other hand, to the verification of the career choice made. At the same time, it is important to develop a realistic self-concept that evolves and changes over time. In this process, a

lack of exploration has a negative impact on career choice [14]. Career success across all stages of life ultimately depends on individual career maturity.

Career maturity in turn can be fostered in dual vocational training by developing certain competencies and interests in trainees and testing them in everyday workplaces. “Training delivered in workplaces is at the heart of apprenticeships. Workplaces provide a powerful learning environment that allows for technical skills to be learned on the latest equipment and under the guidance and supervision of practitioners who know how to use the equipment. Soft skills, such as teamwork and negotiation, are acquired in context following the example of experienced professionals. The learning experience at work is a crucial determinant of the overall quality of an apprenticeship program. This is because apprentices typically spend at least half of their time in a workplace, unlike in school-based vocational programs, where work-based learning, if offered, is a top-up to learning at school” [7] (p. 92). This finding highlights the assumption that social learning [15] in a dual education program shapes individuals in terms of their “vocationality”. “Vocationality” could be defined as a combination of vocational interests and aspirations with an individual’s personal characteristics that come together in the execution of professional activities. Beck [16] describes the dimensions of “vocationality” as metacognitions that are necessary for building individual vocational awareness. Thus, an experience context that endures and progresses throughout the individual’s professional life—and does so in line with the self-concept—is created [17]. Interdisciplinary competencies, such as independence, work techniques, or cooperation skills, can also be acquired and practiced during vocational training. These competencies are key to high adaptability and flexibility in everyday working life so that training graduates can quickly adapt to new situations and work techniques throughout their entire working lives [18].

Gottfried and Plasman [19] conclude that students in the United States who enroll in career and technical education (CTE) courses are less likely to drop out of high school. These courses do not merely provide theoretical input but, above all, also career-relevant, hands-on content in many different areas. The aim of these courses is, among other things, to prepare the students for the world of work through competency-based learning and to provide them with knowledge in their chosen career field before they leave school. These findings support the assumption that dual vocational training is important, firstly, for a successful transition from school into working life and, secondly, for sustained satisfaction throughout an individual’s working life. As regards their first jobs, Bertschy and colleagues [20] found that graduates of dual vocational training have better prospects of finding adequate employment than graduates of purely school-based training.

This is because a training program that stretches over several years imparts job-related knowledge in both theory and practice that enables adolescents to work as professionals, and does so very much more intensively than the CTE courses described above. Dual vocational training imparts this knowledge at two different learning locations and, thus, forms an independent environment for the transition from school into working life—an environment that marks the entry into the world of work and forms the basis for social and societal integration. Furthermore, the confrontation with professional reality takes place in a pedagogical safe space that gives adolescents the opportunity to further develop their knowledge and competencies in their chosen professional fields in both theory and practice [21]. At the same time, the interdisciplinary competencies acquired during training contribute to shaping personality dimensions [22]. In this context, experiences of success during training are essential, as they have a significant influence on self-efficacy [23]. The theory assumes that individuals with a high self-efficacy are more confident, more likely to accept challenges, and, in the event of failure, are also more likely to increase their efforts in order to achieve a given goal rather than give up. High self-efficacy is also associated with stronger intrinsic motivation and less stress in difficult situations [23]. Applied to vocational training, this means creating situations for apprentices that challenge them but do not overstretch their potential in order to create successful experiences that strengthen their confidence in their own abilities. In a study, Pinquart and colleagues [24] were able

to show the connection between high self-efficacy and a lower risk of unemployment as well as higher job satisfaction. Consequently, self-efficacy has a positive effect on career development, which Savickas [25] views as a reflection of professional behavior and which continues to develop throughout life. Thus, if the first professional experiences are positive, the self-efficacy expectation grows with positive anticipation of career development.

2.1. Requirements for Job-Related Apprenticeships

To create an experience framework within the context of a company-based apprenticeship, various prerequisites must be fulfilled. As young people spend a significant part of the training period in the workplace, the activities performed there constitute a vital learning experience. It is important that the apprentices carry out skilled work and that they receive appropriate professional guidance in order to acquire new competencies [7]. While here, and for the duration of the time spent in the workplace, the role of mentors, who have the necessary pedagogical skills and motivation to supervise the apprentices, is essential [26].

Likewise, a coordinated interaction between the company and the vocational school is crucial. Hence, it is very important that the skills acquired at school are coordinated with practice in the workplace and that they are used and tested in the work context. Conversely, the training companies should teach their apprentices the practical skills that are essential for the occupation in such a way that the vocational school can build on them. Linking the learning experiences between company and school is an important prerequisite for becoming an adaptive rather than a routine expert, connecting theoretical and practical knowledge in such a way that the apprentice can adapt quickly and flexibly to new work situations [27].

The mission of the vocational school in the construct of the dual apprenticeship is to deepen the practical knowledge acquired in the company and to impart basic and specialized vocational education, including essential elements of general knowledge. By imparting theoretical knowledge, good vocational school instruction can help to ensure that apprentices can at least partially compensate for training contents that may be missing in the workplace due to carrying out activities that are unrelated to the training program or through the absence of trainers [28]. For sustainable learning processes and in order to coordinate teaching units with company training contents, the exchange and cooperation between the training company and the vocational school are indispensable [29]. At the same time, vocational schoolteachers also have considerable influence on the success of the training by promoting social competence and the ability to learn as well as the pleasure of learning. Individual support and positive experiences in the learning environments of the apprentices are crucial training components [30].

Despite the criticism of in-company training, which is justified in some cases, it should be noted that when the interaction between the training company, the vocational school, and the responsible professional chamber functions properly, apprentices are given the opportunity to develop professionally and personally in a safe setting, and to prepare themselves for the transition to working life. At the same time, the skills acquired can enable a young person to adapt quickly to changing working conditions and open up opportunities for advanced qualifications up to the level of higher education (HE).

2.2. Sustainability of Vocational Education

Choosing a suitable apprenticeship is crucial for young people's future careers. On one hand, the individual prerequisites of an adolescent must be taken into account; on the other hand, labor market developments play an important role. Digitalization has brought about major changes in the world of work, with the creation of new jobs and the disappearance of other ones. Hence, the issues of structural change and the associated changes in the demands placed on employees are of great importance when looking for ways to sustainably change vocational training.

When considering the rates of job creation and job loss over time, the overall employment rate has increased. However, there are substantial differences in employment rates as a function of the level of qualification, as demand for high-skilled workers has increased and demand for low-skilled workers has decreased sharply [31]. Similarly, the risk of unemployment is significantly lower for those with a successfully concluded apprenticeship than for those without such a qualification [32,33]. It should also be noted that the lower the substitution potential of an occupation is, the higher the risk of unemployment is. The replacement of jobs through technological progress is stronger with evermore routine activities that can be performed by machines. However, there are sectorial differences: while the service sector has recently seen a sharp increase in employment opportunities, the manufacturing and production sector has seen a significant decline [31]. Here, the influence of the substitutability potential of certain occupations over the course of a working life is very much apparent. In the COVID-19 pandemic, for example, occupational fields with previously good employment prospects have come under pressure. These include, in particular, the motor vehicle and the hotel and restaurant industries, as well as the sports and leisure sector. However, it is precisely in these sectors that the proportion of apprentices is comparatively high [34,35]. At the same time, the crisis has so far clearly shown that many often poorly paid occupational groups are indispensable for the maintenance of the infrastructure and, thus, for the proper functioning of society (e.g., in retail, nursing, child education, and in care). These “system-relevant” activities cannot be replaced by technical solutions, irrespective of the level of training, and in future years, they should also become more highly valued in terms of status and pay [36]. Irrespective of the crisis, the currently accelerating digitalization and the development of new technologies will sustainably change the labor market [37].

The longer-term impact of the COVID-19 pandemic on the labor market cannot yet be estimated. However, initial surveys show that the negative effects on vocational training in 2020 are quite small. The willingness of companies to provide apprenticeship positions has hardly changed and the rate of companies taking on apprentices after completion of their apprenticeship is only slightly lower than they had originally planned [38]. Hence, this does not indicate a considerably higher risk of young people becoming unemployed during or after their training. The Organization for Economic Co-operation and Development (OECD) describes dual vocational education and training as a major strength of the German education system and attributes it as a “key role in the recovery phase after the COVID-19 pandemic” [39] (p 1). In the medium term, it is to be expected that changed labor market conditions will be transferred to dual apprenticeships. Furthermore, the aforementioned systemic relevance of some occupations should, in terms of prestige and remuneration, have a positive impact on the attractiveness of these occupations (e.g., in healthcare or retail).

2.3. Impact of the Occupational Paradigm on a Sustainable Professional Future

An occupational paradigm is more than just a summary of activities. On one hand, it includes professional qualifications; on the other hand, it has a sociocultural, socially integrative, and individually subjective meaning for the adolescents and is, therefore, to be clearly distinguished from “simple” jobs. Apprenticeships provide young people with vocational skills as well as occupational identities and occupational self-confidence [40]. At the same time, it can be assumed that young people in dual apprenticeships develop a high level of occupational identity, not least through the company-based learning environment that forms the basis for the concept of “Beruflichkeit”, that is, vocationality. Consequently, dual vocational training enables a direct experience of the interaction of interests and occupational requirements at a critically important stage in young people’s personality development, which, according to the trait-and-factor theory, represents the actual matching of consistency between occupational requirements and personality traits [41]. A high-perceived fit between the individual and the occupation contributes significantly to occupational satisfaction and to the attachment to the occupation [42].

Furthermore, a successfully completed apprenticeship is seen by companies as a standardized indication for the performance potential of workers [43]. This also facilitates entry into the general labor market if the young person is not immediately taken on by his or her company after completion of vocational training, with a new job-related matching process taking place. If employers aim to optimize productivity and costs through an ideal employee, the goal of employees is to maximize the quality of their occupations [44]. In this context, and bearing in mind the existing strong protection against dismissal in Germany, it is particularly relevant to know what valid information is available about the applicant's competencies based on his or her vocational training [45]. The transparency of the competencies imparted through apprenticeships is, here, particularly relevant. Empirical studies confirm this assumption and show that youth unemployment is significantly lower in countries with an education system into which specific vocational training contents are integrated [46]. A study including regional factors as well as differences between education programs confirms this effect with the observation that specific vocational education contents improve labor market opportunities for young people [3]. The positive effect, in terms of shortening the duration of the transition into the labor market, had already been emphasized earlier on [47].

Based on these findings, countries with a high degree of occupation specificity, such as Germany, Austria, Switzerland, Denmark, South Tyrol (Italy), and the Netherlands, have lower youth unemployment than countries whose education systems teach less occupation-specific contents, such as France and the United Kingdom [44]. In addition, the broad subject-based structure of dual vocational training in these countries should be emphasized. The higher the number of apprenticeships on offer, the more specifically the contents will relate to the requirement profiles of these occupations [1]. These effects are strongest in those countries with an important segment of dual vocational training, and they result in the largest employment benefits for young people aged 15 to 24 [5]. As regards career entry, several studies show a clear advantage of specifically designed vocational education qualifications. Verhaest and colleagues [48] report that individuals with a VET qualification face, at the start of their working lives, a less important labor market mismatch, and this advantage is greatest in those countries with specific dual vocational education and training in the workplace. De Lange and colleagues [49] have identified a high proportion of VET contents as a clear career advantage when entering the workforce and suggest that economic globalization in European countries has had a positive effect on youth employment. Strongly stratified vocational training systems also increase the probability of obtaining a job at an educational level corresponding to the apprenticeship, which Bol and van de Werfhorst [1] also attribute to the positive indication value of differentiated apprenticeships with specific competence profiles.

There exists an important difference between holistic occupational paradigms and job ideas, a difference that is essential as regards the question of a sustainable professional future. Job changes are a normal process that can occur several times in an individual's professional life. However, if an individual has completed his or her dual vocational training, this means that he or she retains, to a large extent, his or her "Beruflichkeit".

In summary, it can be said that a successfully completed apprenticeship has high significance, both for personality development as well as for successful access of young people into the world of work and into society [8]. One should nevertheless not overlook that the requirements of the labor market and the occupations themselves are constantly changing and evolving. Formalized job profiles, however, provide important orientation for individual further education and specialization, as well as for associated career guidance [11], the more so in a permanently changing environment and in increasingly unstable situations [43].

3. Challenges Posed by the Dynamics of the Labor Market

Vocational qualifications have also been shown to have a positive long-term impact on occupational status [45]. Moreover, Korber [50] reports that individuals with a vocational

qualification benefit both in terms of employment and income over their entire working careers, and women even more so than men. However, there is also some contradictory evidence that these career advantages do not always remain stable in the long term but decline over time [51]. Later on in working life and, to some extent, due to technological progress, there is a change in the demands placed on workers with job-specific knowledge becoming obsolete more quickly than general skills and competencies [52].

International comparative analyses also indicate that the initial employment advantage of vocational education and training declines with age and even reverses towards the end of a working career [53–55]. A more detailed analysis by Hanushek and colleagues [52] of a total of 18 countries with adults aged 16 to 65, examines the effect of the share of apprenticeships as well as of the forms of education on employment. Within countries that have dual vocational training systems (apprenticeship countries), the study shows that initial employment advantages are offset by later disadvantages over the course of a working life. For Germany, microcensus data were also taken into account to control for bias, due to physically demanding occupations and physical problems occurring at a later stage in the career. Surprisingly, even the more negative effects were amplified: labor market entrants with a general education degree are only 13.6 percentage points less likely to be employed at the beginning. However, this effect changes direction at the age of 43 and even reverses to a statistically negative effect of 11.5 percentage points at the age of 65. Such dynamics can also be observed as regards matching: with direct reference to Hanushek and colleagues [52], Verhaest and colleagues [48] examined the extent to which VET affects the risk of a failed labor market fit over the course of a working life. They found that, while that risk is lower at the onset of the career, this benefit contracts over the course of that career.

Choi and colleagues [56] also confirm this and, furthermore, show that literacy skills, in particular, are lower among graduates of apprenticeships. This finding can be interpreted to the effect that, while exclusively vocationally trained individuals have specific knowledge advantages, they exhibit some weaknesses as regards certain general education competencies. This may be the case with a perceived lower fit between an occupation and an individual caused by changes in the job profile [42]. However, international differences should not be ignored. In a recent in-depth study for Switzerland, which estimated a fixed-effects analysis, Schweri and colleagues found no significant wage penalties due to a horizontal mismatch for individuals with vocational education. The authors emphasize the possibility of further education, for example, through on-the-job training [57].

For these reasons, the dynamics in a work environment and the volatility of knowledge necessitate a constant comparison of professional requirements with one's own qualifications and permanent development of one's own knowledge base because the more specific knowledge is, the faster it becomes obsolete [58]. The competence required to cope with change can be defined as follows: Employability means improving oneself in the present and developing appropriate skills at the right time—that is now—that aiming at action competencies in a fluid, complex, and interconnected world—with very varied implications for one's own life [59] (pp. 218–219).

This makes it possible to draw a connection to dual vocational training because the occupational paradigm has an overarching structuring function upon which both employees and employers can guide themselves. An apprenticeship offers a certain reassurance, above all, for those just starting out in their careers, in finding employment that is not too closely aligned with a partial vocational qualification and the situation of the labor market. The combination of an initial apprenticeship and an advanced qualification that builds on it enables young people to better adapt to the volatile labor market with its ever-changing demands [60].

4. Challenges for Lifelong Career Guidance

Choosing a career is a vital but poorly defined decision-making situation that needs demand-oriented guidance services at all stages [61]. Demand-orientation in career coun-

selling means focusing on the individual interests and environmental conditions of young people in the respective phase in their decision-making processes and providing them with appropriate decision-relevant information. To this end, an addressee analysis must first be carried out in order to provide guidance that is geared towards the interests and motivation, as well as to the prior knowledge and information behaviors of the individual. Furthermore, the challenge for career counseling is also to inform young people not only about those occupations that might interest them at a casual level but rather to work towards ensuring that they will also consider apprenticeships in occupations that fit their overall personality—including their skills—even if these occupations initially seem unattractive to them [7,62,63].

As Santilli and colleagues [64] point out, accompanying preparation for the transition from school into work is particularly important for building a successful employment biography and achieving high life satisfaction. Here, factors such as adaptability in the professional context, as well as a positive expectation for the future career play a major role. In this respect, it is important to reinforce these abilities and to guide the young people through self-reflection in the counseling process so that they make sustainable career choices. This assumption is supported by another study by Ginevra and colleagues [65] from Italy, which emphasizes the mediating effect of future orientation in terms of career adaptability and diversity of career interests. A high level of future orientation in guidance enables young people to better adapt to the dynamics of the labor market.

With regard to the question of the extent to which the internationally known theories of career choice and career development can serve as a basis for sustainable career guidance in apprenticeships, Ertelt and Frey [17] conclude that these theories address the specific experiences in the transition scenarios from school into the world of work, at best, in a rudimentary way. Yet, from its basic idea, life designing seems particularly suitable for innovative approaches to counseling in dual vocational education and training because this approach is designed to be lifelong, holistic, contextual, and preventive [66].

The central goals of such guidance could then relate, firstly, to strengthening the young people's ability to adapt to the training requirements of the two learning venues (adaptability). Secondly, counseling should provide help in determining subjective forms of identity and life roles through references to the previous biography and self-construction (narratability). Thirdly, self-activity for the development of new dimensions of personality (e.g., self-efficacy beliefs) is to be strengthened through discourse with significant others (activity). Finally, possibilities for shaping one's own life must become conscious (intentionality).

Young people face a particular challenge in terms of their ability to adapt to the different contexts in a vocational school, as a pedagogically designed environment, and in a training company, as a space of experience committed to the economic performance principle.

Savickas and colleagues [66] see five necessary attitudes of the individual for the realization of the self-concept at work: Firstly, an interest in future-oriented planning (concern); secondly, the ability to overcome or, respectively, to influence negative environmental conditions as well as to self-regulate appropriately (control); thirdly, confidence as a positive self-efficacy conviction that one's own goals can be achieved (confidence); fourthly, curiosity, in the sense of exploration of new life roles and career options (curiosity); and fifthly, commitment to one's own life plans and, thus, beyond the narrower career path (commitment). These assumptions are also confirmed by Masdonati and Fournier [2], and Guichard and Dumora [67].

According to Hirschi [68], hope can also be regarded as an important individual resource for proactive career behavior, because hope is positively related to career determination, readiness to plan, self-efficacy, and career and life satisfaction.

In line with the life design approach, counseling in the school-to-work transition (STWT) must also consider contextual conditions that may influence the individual's self-construction. These include, above all, the necessary qualifications as a key variable of employability.

According to Maggiori and colleagues [69], this employability presents the activity-related form of proactive adaptability and is composed of personal adaptability, career identity, individual human capital, and personally available networks in terms of social capital.

When implementing life designing in the context of vocational guidance, the specific basic ideas of apprenticeship must be included—at least as far as the organizational forms in Switzerland, Germany, Austria, and South Tyrol (Italy) are concerned—as they have already been addressed above in connection with the occupational paradigm.

In this regard, it should be emphasized that employability is only one element, in addition to personality and society-related education. Eduard Spranger (together with Georg Kerschensteiner), one of the “fathers” of dual vocational training in the German-speaking world, spoke in this context of the three target areas of vocational training, namely the economic–technical, the state–social and the ethical–personal areas [70].

This view can still be traced today in curricular discussions about the meaning of the occupational paradigm, even at an international level [17]. Sultana [71], for example, takes a rather critical view of giving meaning to an individual occupation in today’s neo-liberal and rapidly changing world of work: references to freedom of career choice, lifelong learning, or portfolio careers are just as insufficient for such a giving of meaning as the call to develop life projects, life stories, or personal action plans. According to Sultana, career counseling should have the role of a mediator between the individual and society, but this is presently difficult to realize. Additionally, the International Association for Educational and Vocational Guidance (IAEVG) communiqué [72], regarding the role of vocational guidance, states that, in promoting social justice, policies in education, occupation, and employment should not be guided only by economic–rationalist arguments but should embrace a holistic vision that takes into account the needs of all people and their multiple development trajectories.

Exploiting the potential of the life designing approach in career guidance in dual vocational training, with the characteristics described above, requires a more intensive examination of these specific contextual conditions in relation to the curricula, the two learning locations, and their role requirements. These need to be harmonized with a view to sustainable individual career development. At the scientific level, an intensified discourse, primarily between vocational psychology and economic and business education, would be of great benefit. However, such a discourse has not yet really taken place. A suitable platform for such a discussion might be the European Society for Vocational Designing and Career Counselling (ESVDC).

Such approaches can already be found with Crites [73], who illustrated the importance of gainful employment for the development of the individual and his or her integration into society, based on the following five aspects:

- Maintaining material livelihoods and an adequate standard of living.
- Promoting personal time and performance management through time and energy expenditure.
- Identification with occupation and a sense of status are sources of self-esteem; equally important are the recognition of achievement by significant others and the determination of one’s own role.
- Integration into a community makes friendships, social contacts, and hierarchical classifications possible.
- Occupational work provides experiences that also give meaning to existence by providing services to others and the opportunity for self-fulfillment.

Beck [16] goes on to characterize six metacognitions by which an individual can self-reflexively sharpen the awareness of his or her own professionalism. For the development of a sustainable “vocationality” in the dual system of vocational training the following cognitions seem to be crucial: the “relevance cognition” (the occupation should be socially significant and appropriately rewarded), the “competence cognition” (the perception of one’s own competences and willingness to use them in this occupation, the “ideal cognition”

(self-assessment of one's own actions on the basis of ideal standards), the "sense cognition" (enables individuals to place their own occupations in a larger social and societal frame of reference), and the "status cognition" (enables the individual to classify him or herself in his or her social environment, for example, according to the prestige of his or her occupation). If an occupation has a negative image, young people are less interested in finding out more about it and, as a result, there is little willingness to complete an apprenticeship in certain fields [7]. Craft trades in particular are sometimes not very attractive to young people because they do not attribute high-value expectations to them. This is, among other things, due to a lack of knowledge of the actual activities as well as to the influence of important others, especially parents [74].

In the connection of these metacognitions with the action goals of life designing, the chances are given for an innovative counseling approach, especially for a future-related "vocationality" in the context of dual vocational training, which clarifies that, besides employability, quality of life and social responsibility are constitutive features of a future-related "vocationality".

In a tentative combination of both thinking systems, we see "relevance cognition" as closely related to the action objective of narratability, which is about reflecting on what meaning the new role as an apprentice should play for a permanent life role as an employee (with remuneration appropriate for this role).

With regard to "competence cognition", the activity objective can make the apprentice aware, in discourse with the counselor, trainer, or vocational schoolteacher, which skills and interests the individual would prefer to realize through the various activities in the apprenticeship. This reflection shapes the vocational self-concept, which, in turn, influences active action in the future.

"Sense cognition" can be promoted through intentionality, because it focuses on making sense of vocational training from different perspectives. The aim is to shape the career independently and sustainably by evaluating previous and planned behaviors. The development of an appropriate "ideal cognition" is promoted by interpreting the adaptation requirements experienced by the apprentice, above all, in the company-based parts of the apprenticeship, on the basis of the five attitude dimensions of adaptability. The focus here is on self-assessment on the basis of occupational behavioral standards to be striven for. If, for example, the aim is to prevent the threat of dropping out of VET, this counseling intervention plays a central role because the reason is often adaptation crises triggered by divergences between individual and externally set standards. It is important that the individual can develop ideal standards for himself. "Status cognition" is of particular importance in the choice of occupation, the active continuation of vocational training, the transition to gainful employment ("second threshold"), and in the further shaping of the career path. This is decisively shaped by family and school socialization. The action objective narrativity shows a counseling way to describe the subjective identity and its imprints together with the apprentice and to reflect on how they should be maintained or changed for the future career.

For a guidance offer related to the metacognitions of vocationality in an apprenticeship, in the sense of life designing, the following forms, in particular, are considered effective:

- Demand-oriented vocational information in the specialized classes of the vocational school, especially at the beginning, in the middle, and at the end of the apprenticeship.
- Portfolio methodology on the basis of the training record ("report portfolio"), to be kept by the apprentice, which is obligatory in Germany [75].
- Counselling services, especially in the cases of cognitive dissonance after entering apprenticeship, the threat of dropping out of VET, the transition to gainful employment, and questions about future career and life planning.

5. Conclusions

The dual vocational education and training system with its apprenticeships is of great importance for the holistic personality development of young people. The development of

an occupational awareness based on the occupational paradigm not only facilitates access to the labor market; it also makes it more likely that adolescents will find a suitable position in their acquired occupation and, thus, avoid low-value employment and benefit from job security, which are two key factors in individual life satisfaction [76]. However, dual vocational training is closely linked to the current situation of the labor market through the learning location company and is thus, especially in times of crisis, associated with uncertainty for individuals choosing an occupation. Both the number of apprenticeship positions on offer and the number of applicants are subject to fluctuations that need to be closely monitored during the current pandemic. However, current assumptions assume that the COVID-19-induced economic crisis will not—at least in Germany—lead to a massive slump in the number of apprenticeship contracts concluded [77].

However, the labor market situation also plays a significant role for career starters in terms of entry-level wages. The current crisis is also accelerating the structural change described above and entails employment risks for the intermediate qualification levels [78]. It is precisely at this point that the need for lifelong skills acquisition must be emphasized in order to maintain employability, and this also places an obligation on employers. Indeed, a far-reaching flexibilization of qualifications entails social downsides, such as the displacement of regular employment relationships [60]. In discussions about modularization, there exists a tendency to ignore that vocational education and training involve very much more than training in skills and abilities [21]. It is indeed crucial to teach interdisciplinary competencies that support a sustainable professional future.

Nevertheless, trade-offs also arise in the context of apprenticeships. If one assumes that education fulfills the four tasks of maximizing skills, preparing for an independent life, qualifying for the labor market, and providing equal opportunities, trade-offs are unavoidable. Bol and van de Werfhorst [1] argue that while a high differentiation of educational content facilitates the transition to work, it also significantly reduces equity and educational opportunities across social groups. Accordingly, better labor market allocation can reduce both equality of opportunity and social differences. This is also confirmed in an empirical analysis by the authors, showing that countries with dual vocational education systems have lower youth unemployment. As a more precise occupational structure is assigned through apprenticeships, the average duration of employment is also increased. However, at the same time, a greater differentiation leads to greater differences in the performance of young people, and a higher dependence of the educational attainment level on their social status.

This paper shows the area of tension between the advantages of dual vocational training for the acquisition of sustainable “vocationality” and possible limitations through the dependence on the labor market development, through the necessity of lifelong further training for the preservation of an individual’s employability, as well as for the fulfillment of personal life goals. This is the area of tension in which vocational guidance operates, to make, on one hand, an offer targeted at the individual and, on the other hand, not to disregard the needs of the labor market either.

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