



Verification or Falsification of Career Ideas Through Internships? Objectives and Expectations of Former Students with Learning Disabilities in Germany

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RESEARCH



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ABSTRACT

The transition from school to work is a significant phase in adolescent development. For students with special educational needs (SEN), preparing for this process involves many requirements, making vocational orientation particularly challenging. In Germany, vocational orientation programmes are established in all federal states and schools. Studies indicate that longer practical phases are particularly important from the perspective of students with SEN. However, it is unclear what objectives and expectations these students have for practical experience and how these experiences influence their pathway after school. In this exploratory qualitative study, 14 former students with learning disabilities (LD) were asked about the relevance of various internships for their vocational orientation process. The interviews were analysed using qualitative content analysis.

The statements emphasise that several and longer practical phases are relevant. The analysis shows that interviewees retrospectively describe how undertaking various internships allows a process of verification and/or falsification, significantly influencing their vocational orientation. This contrasts with students without SEN, who generally complete fewer internships. Overall, it is evident that students with SEN rely on diverse practical experiences during their school years and that the frequency, duration, and quality of practical experience have a lasting influence on their vocational orientation.

ABSTRAKT

Övergången mellan skola och arbetsliv utgör en central fas i ungas utveckling och har stor betydelse för deras framtida yrkesmässiga etablering. För elever med särskilda utbildningsbehov (SOU) innebär förberedelserna inför denna process många krav, vilket gör yrkesorienteringen särskilt utmanande. Forskning visar att längre praktikperioder är av särskilt betydelse för elever med SOU ur ett elevperspektiv. Det är dock fortfarande oklart vilka mål och förväntningar dessa elever har på sina praktiska erfarenheter samt på vilket sätt dessa erfarenheter påverkar deras fortsatta väg efter avslutad skolgång. I denna explorativa kvalitativa studie tillfrågades 14 före detta tyska elever med inlärningssvårigheter (IS) om relevansen av olika praktikperioder för deras yrkesorienteringsprocess. Intervjuerna analyserades med hjälp av kvalitativ innehållsanalys.

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Studenternas utsagor betonar att flera och längre praktikperioder är relevanta. Analysen visar att de intervjuade retrospektivt beskriver hur olika praktikplatser möjliggör en process av verifiering och/eller förfalskning, vilket har en betydande inverkan på deras yrkesorientering. Detta står i kontrast till elever utan behov av särskilt stöd, som i allmänhet genomför färre praktikperioder. Sammantaget framstår det som tydligt att elever med SOU är beroende av olika praktiska erfarenheter under sin skoltid och att frekvensen, varaktigheten samt kvaliteten på dessa erfarenheterna har ett varaktigt inflytande på deras yrkesinriktning.

INTRODUCTION

The vocational orientation phase and the associated successful transition from school to work is a developmental task for students (Havighurst, 1974; Marciniak et al., 2022) and an important educational mandate for education policy. In Germany as well as in other (European) countries (Kettunen et al., 2023; Messer, 2018), general education schools are regarded as the central authority in preparing for this transition. Their main task is to prepare students with their individual inclinations, potential, and skills for the world of work through targeted and early programmes and intensive support (Kultusministerkonferenz [KMK], 2017; Ulrich et al., 2022). For this reason, all secondary schools have vocational orientation programmes focusing on the transition from school to vocational training in the final school phase (Greiten et al., 2024; Schels & Abraham, 2023). In the discussions on inclusion, an expansion of these programmes to encompass inclusive vocational guidance is increasingly being called for and has already been implemented (Greiten et al., 2024; Lindmeier et al., 2019) – although the term “inclusive vocational orientation” has yet to be defined (Greiten et al., 2024).

Especially students with SEN face numerous challenges in this transition process (Bienengräber et al., 2021; Gebhardt et al., 2011; Hübner, 2023; Versnel et al., 2008). The Federal Government of Germany defines a total of seven different SEN categories recognized across all federal states (European Agency for Special Needs and Inclusive Education [EASNIE], 2020; Eurydice-*Informationsstelle des Bundes* [Eurydice], 2025). Students with SEN in LD have long-term and comprehensive learning difficulties. They require extensive personal support and content differentiation in their learning process (EASNIE, 2020; Eurydice, 2025; Gebhardt et al., 2011). Federal statistics (Author group of national report on education, 2024) show that this group generally does not achieve a qualified school-leaving certificate. However, training regulations and company perspectives consider this criterion a prerequisite for completing vocational training (Schels & Abraham, 2023). It should also be noted that, due to their special needs school, status and possible impairments, these students have limited vocational opportunities, which may not meet their career wishes. Consequently, school-based programmes are particularly relevant for vocational orientation (Gebhardt et al., 2011; Hübner, 2023).

Of the numerous vocational orientation offers, work experience opportunities are particularly important from the perspective of students as well as the labour market (Alliance for education and training, 2023; Beinke, 2020; Bienengräber et al., 2021; Hochmuth, 2023; Hübner, 2023; Kettunen et al., 2023; Lee et al., 2019; Lee & Branford, 2024; Messer, 2018; Shoenfelt et al., 2013). All federal states provide different work experience opportunities. These differ also regarding the needs and initial situations of the students (Table 1) (Greiten et al., 2019). For the implementation of work experience opportunities as part of school-based and explicitly inclusive vocational orientation, the qualifications of the parties involved are central. This especially includes their knowledge, clarification of responsibilities, and actions in relation to the individual student (Greiten et al., 2019; Joho et al., 2024). In addition, the interplay of cooperations within, outside, and between schools is required, especially cooperation with companies (Bienengräber et al., 2021). First quantitative findings on the preference and importance of practical elements from the perspective of students with SEN are available (Hübner, 2023). They indicate that students at special needs schools complete many internships compared to those at other secondary schools and consider the two- to three-week internship and the longer-term work placement to be particularly important for their vocational orientation. Female students tend to rate all measures as more important than their male counterparts (Hübner, 2023). Although this exploratory qualitative study is embedded in the context of the German system, it focuses on the question of which experiences former students with special educational needs draw on when deciding for or

against a company or an industry – a question that is likely unresolved in other countries as well. It also examines how the practical experience affects their professional biography and to what extent the experiences differ in terms of length and range of the internships.

THEORETICAL BACKGROUND AND RESEARCH QUESTIONS

CAREER CHOICE THEORIES

The choice of a career is a highly complex process, multi-year process extending across life stages. It involves individual personality traits, developmental phases, normative demands, and social contexts (Hallpike et al., 2022; Hirschi, 2011). The theories of Holland (1997) and Super (1980) offer complementary explanatory approaches. Holland's approach (1997) assumes that people prefer occupations matching their personalities. The fit between personality and work environment (person–environment fit), as well as their interaction, is considered relevant to career choice (Holland, 1997). In contrast, Super's theory (1980), known as the *Life-Span, Life-Space Theory of Career Development*, views career choice as a lifelong process. Individuals assume various roles ("life spaces")—such as student, worker, or parent—that shape career decisions. This approach integrates identity development, life stages, and social conditions into the career path. Despite their relevance, these theories do not fully capture the complex decision-making processes influencing adolescents' career choices. Considering existing opportunities, career choice in adolescence appears more dynamic, shaped by multiple factors such as experiences in companies, motivation, developmental stage, feedback, and access to information (Hallpike et al., 2022; Hirschi, 2011).

Popper's (1959) principle of falsification offers a valuable complement. According to this principle, career choices can be viewed as hypotheses that individuals test through professional experience. Following Popper (1959), young people thus engage in a process of verification and falsification. Verification (as we use the term to refer to the empirical level) occurs when a career idea is confirmed by positive experiences – confirmation, in the epistemological sense – whereas falsification takes place when discrepancies or negative experiences arise that indicate the individual or the professional environment does not fit the idea. This aligns with Popper's principle and complements Super's theory. A career choice is not definitively proven but is continuously reviewed and adjusted. Career development is thus a dynamic, learnable, and adaptable process, promoted through opportunities for work experience in schools.

WORK EXPERIENCE OPPORTUNITIES IN SCHOOL SYSTEMS

In Germany, the two-to three-week internship is historically one of the oldest programmes offered at secondary school level in the context of career choice (Scheffler et al., 2003). As in other European countries (Kettunen et al., 2023), it is now a mandatory part of vocational orientation in all schools (Bergzog, 2011). Additionally, many federal states offer work experience opportunities serving different functions depending on students' needs and initial situations (Bergzog, 2011; Hübner, 2023).

Most federal states distinguish between one-day insight days, two-to three-week internships, and longer-term work placements (Table 1), although terms, objectives, and organisational details vary (KMK, 2017; Ministry of Labor, Health & Social Affairs of the State of North Rhine-Westphalia [MAGS], 2020).

Due to Germany's federal structures, there are various forms of work experience opportunities, whose curricular contexts and specifications differ (Greiten et al., 2024). Nevertheless, all federal states agree that practical phases should familiarise students with the world of work and allow them to compare their interests, skills, and information with professional realities (Alliance for education & training, 2023; Hochmuth, 2023). Curriculum-related modules support continuous and early career orientation (Greiten et al., 2024; MAGS, 2020).

Longer-term placements and offers such as "Girls' Day" and "Boys' Day" address individual needs and raise awareness of diverse occupational fields, including those affected by skills shortages (KMK, 2017; MAGS, 2020). In the context of inclusion, extended practical phases have been introduced in secondary schools, especially for students with SEN or at risk of disengagement (Greiten et al., 2024; Hübner, 2023; MAGS, 2020). Given Germany's shortage of skilled workers, companies increasingly view work experience as an opportunity for early

Table 1 Different work experience opportunities in NRW.

Note. Table 1, oriented to Table 1 Hübner, 2023, p. 4; Eurydice, 2025; MAGS, 2020.

opportunities and how, or to what extent, these experiences influence their educational pathways after leaving school. The following questions are examined in the interview study presented here:

QST 1: To what extent do former students with LD from special needs schools describe their practical experience as a process of verification or falsification of their career decisions regarding further work experience opportunities, further orientation processes, or decisions for training and employment?

QST 2: To what extent do the experiences of this group of students differ in the work experience opportunities regarding the duration of practical phases?

The qualitative approach was chosen because it allows for an in-depth understanding of individual perspectives on internships from the viewpoint of former students. It provides space to better capture complex and personal factors that contributed to vocational orientation process. Additionally, it is assumed that interviews can flexibly address the individual needs of this target group. As this was an educational study with adults, no ethics vote was required. However, the study was conducted in accordance with the Declaration of Helsinki. Participants were informed about the study, the handling of their data, and gave consent to participate in the qualitative survey. They were able to drop out of the survey at any time without giving reasons. They could withdraw at any time without giving reasons. Following a consultation with the university's data protection department, personal data were pseudonymised after all surveys, transferred to an external hard drive, and stored in a locked location.

METHOD

To investigate the research objective and answer the research questions, the guided interview (Brinkmann, 2020; Helfferich, 2019) was chosen for data collection and the content-structuring qualitative content analysis (Kuckartz & Rädiker, 2023; Mayring, 2014) for data analysis. The group of interviewees was put together based on criteria. The research design is described below.

SAMPLING

Interview partners were recruited using theoretical sampling from a previous questionnaire study (Hübner, 2023) ($n_{t2} = 80$). The interview study started four years after graduation from a special needs school focusing on learning. From the earlier sample, individuals who had completed at least two types of work experience opportunities were selected (Table 1). This resulted in 53 identified individuals. Contact attempts succeeded with 32, of whom 14 agreed to be interviewed via video conference. The sample therefore consists of 14 former students (participants = P) from special needs schools focusing on learning, who are in various phases of vocational training or orientation four years after leaving school. It includes six females and eight males with an average age of 20 years. Nine participants obtained a school-leaving certificate in education for students with LD, while five attained a secondary general school certificate (*Hauptschulabschluss*) at the special needs school (Eurydice, 2025; Hübner, 2023).

After special needs school, six participants from this sample (four males, two females) gained further qualifications at a vocational college to obtain apprenticeships (P3; P4; P5; P14; P11; P12). One from this group was completing a vocational diploma at the time of the survey (P4).

Of the 14 participants, nine were in company-based training. Six were completing a three-year full apprenticeship (P2; P5; P8; P11; P12; P13). Three of them were in two-year, theory-reduced apprenticeships they planned to extend by one year in summer 2021 to become full apprenticeships (P6; P10; P14).

One participant had discontinued training as an undertaker shortly before the survey and intended to complete it in another company from 2021 (P3). One worked in a workshop for people with disabilities (P1) and another in a vocational training facility (P9); both wanted to start theory-reduced apprenticeships in summer 2021.

One participant was in full-time employment without training and not seeking further training (P7). The semi-structured interview approach enabled topic-related impulses through question composition, which participants could answer freely with narrative components (Brinkmann,

2020). This foregrounded subjective relevance (Helfferich, 2019) and allowed individual perspectives to be analysed. The method also enabled individual follow-up questions and additions. The interview guideline was developed by the research team and piloted with two participants meeting the sampling criteria. Interviews were conducted and transcribed between January and March 2021.

DATA ANALYSIS WITH QUALITATIVE CONTENT ANALYSIS

The strength of qualitative content analysis lies in its systematic, rule-based, category-oriented evaluation of data, enabling comparisons between interviews. The category system was developed deductively by deriving topics from the guidelines and inductively through further interpretations (Kuckartz & Rädiker, 2023; Mayring, 2014). The categories were transferred to a coding guide (Kuckartz & Rädiker, 2023) and provided with coding rules. The development of the coding guide and the testing of the analysis of selected transcripts were validated by consensus within the research team. The entire data set was then analysed by category using MAXQDA22, focusing on content-structuring qualitative content analysis.

The coding guide includes four main categories (1) importance of work experience, (2) specific importance of work experience (3) process of verifying and falsifying professional ideas, (4) comparison of different work experience opportunities regarding the duration and six sub-categories (e.g. 1.1 promotion of motivation and willingness to exert effort; 2.3 promotes understanding of working and professional life; 3.1 fun). The deductive categories are based on theoretical insights regarding the importance of internships and provide a structured framework for data analysis. The inductive categories emerged during analysis from the data itself to capture new or unforeseen aspects.

CATEGORY	DEFINITION	RULE
Process of verifying and falsifying professional ideas (PVF)	Work experience opportunities serve as reason for further decisions regarding vocational orientation	Decisions and patterns of reasoning regarding vocational orientation after internship experiences are described comprehensibly. Decision regarding: - further internships - vocational orientation in other professions/occupational fields - school-leaving certificate - trainings - generally, further educational pathways Experience can also lead to the exclusion of a profession or occupational field. If P justify and report that an internship experience and related requirements/working conditions were experienced positively and, as a result, the career path was pursued in this direction (verify). If P justify and report that an internship experience and the related requirements/working conditions were experienced negatively and, therefore, the decision led to a different career choice (falsification of the original idea). Is not coded if it concerns the specific or fundamental interest in the world of work and labour. Is not coded if no reasons and argumentation patterns can be recognised.
Comparison of different work experience opportunities regarding the duration (CD)	The subjective experiences that the students associate with the different internships regarding the length or duration of the different work experience opportunities (evoke and justify comparison)	Is coded if the length of the internship has led to a more intensive or extensive professional experience. If the work experience opportunities are compared directly with each other. When the advantages and disadvantages of the work experience opportunities are weighed against each other in terms of duration. If some options are considered (comparatively) more sensible than others due to the duration and organisation. Is not coded if only one work experience opportunity is described. Is not coded if only a list of work experience opportunities is given, without mentioning advantages or disadvantages for vocational orientation (if applicable, category general importance).

Table 2 Excerpt from the coding guideline.

The following presentation of results is based on the two categories described above.

PROCESS OF VERIFYING AND FALSIFYING CAREER IDEAS

A central finding regarding the first question is that the interviewees retrospectively describe the succession of several work experience opportunities as an individual process of their vocational orientation, from which they derived later career choices. This process can be characterised as the verification and falsification of their own career ideas. These processes can be seen in the data both in the use of expressions and in argumentation patterns as we will explain below.

Many interview passages from the interviewees regarding this process experience are frequently associated with terms linked to decisions and evaluations, such as “confirmed” (P2, 65; P4, 19), “established” (P3, 30), “decide” (P10, 51), “...I realised” (P5, 56; P7, 33; P9, 46; P14, 38), “I knew” (P2, 107; P12, 76), “...I decided” (P3, 32; P6, 78; P13, 34), “...I was sure” (P13, 76), “...I ruled it out” (P12, 24). In addition, the experiences are often arranged in temporal or causal clauses (P12, 76; P13, 34) or a list of experiences (P5, 11; P6, 78), which weigh up the advantages and disadvantages of the profession and suggest a clear and precise description of the decision-making process and reflection.

Furthermore, patterns of reasoning emerge regarding the relevance of the variety and quality of experiences with different work experience opportunities. These make it possible to try out and test and thus verify and falsify career ideas and/or future professional development. The following explanation illustrates this connection. This is how one interviewee describes it:

...because I realised through the internships before, which were over, that I really like the social sector. And that I was then able to do more internships in these areas with the social assistant, which ultimately led me to what I’m doing now. (P12, 128).

This statement describes the decision-making process. As a result of the large number of internships, he was able to develop an idea of his career choice, which he then tested in further work experience opportunities. Popper’s approaches (1959) are thus also reflected in the career choice process. However, Holland’s theory (1997) is also evident in the fact that it was apparently necessary to first identify the inclinations through many internships. This enabled him to narrow down and refine his choice of career field. Some interviewees completed several work experience opportunities in the same occupational field, but in different companies, to make sure that the occupation appealed to them in principle and regardless of the company. It is therefore a matter of repeatedly reviewing a particular profession, a career choice hypothesis, which Popper’s principle (1959) also recognizes as “confirmation”. This is how one interviewee explains it:

I would actually only say that you should definitely do it in a certain way, even if you already know that you don’t want to do this job, just to have this confirmation that it really isn’t for you and to know what disadvantages this job could have. (P4, 119)

Other interviewees described how they had a career idea which they checked with the help of the internship and then ruled out for themselves, as the following interviewee describes:

And there were things that I had actually imagined doing, but which, with hindsight, were somehow not for me. At the time, I would have liked to go into social work, I would have liked to go into childcare, I did a few internships in different nurseries, but that just wasn’t for me. Hospital too, but that was such physical contact, it just wasn’t for me. And, yes, that’s why I’m happy with my decision. (P5, 11)

This statement shows that original career ideas of working in the social care (e.g. kindergarten) sector could not be confirmed despite several internships in this occupational field. Instead, the later decision to train as a bakery sales assistant is justified as the better option. Falsification is evident here.

Fun and enjoyment as influencing factors in vocational orientation

“Fun” and “enjoyment” of the work are important factors in this process. From the interviewees’ perspective, these emotions during the work experience act as a compass in the process of

verifying and falsifying their career expectations. The emotional markers “fun” (P4, 92; P5, 46; P6, 66; P7, 29; P8, 117; P9, 185; P11, 96; P12, 102; P13, 44; P14, 56), “joy” (P10, 47), and “pleasure” (P1, 81; P2, 93; P3, 102; P9, 62; P10, 46; P11, 86) can be identified in numerous excerpts from the interviews in connection with the work experience and the further pursuit or rejection of a career idea. For the confirmation of the career idea, it seems to be relevant that the activity or internship is fun or enjoyable to find professional fulfilment.

One interviewee, who is in his second year of training as a chef, describes how he did not enjoy his internship with a building cleaner and decided against training in this field as a result of the experience: “No, I’m actually quite proud of the fact that I didn’t actually choose this profession, because this profession in general doesn’t really fulfil me, to be honest” (P10, 47).

Another interviewee, who was in her third year of training as a bakery sales assistant at the time of the interview, reported the following about her internship experience in sales: “Yes, and then they just gave me another week. Yes, and then I really enjoyed it. I realised straight away, okay, I really enjoy being in contact with the customers and serving them at the till on the side” (P8, 119). One aspect that adds to the fun here is the time factor, the transfer of responsibility and the associated change in role, which is consistent with Supers’ approach (1980).

COMPARISON OF DIFFERENT WORK EXPERIENCE OPPORTUNITIES

The second research question covers the differences in experience in the various work experience opportunities, considering the duration of an internship (based on category CD, Table 2).

Across all interviews, it shows that longer practical phases in a company (internship and longer-term work placement) are favoured over shorter experiences. The reason given for this is that one gets to know an occupation, an occupational field, or the company better. Shorter internship, like one-day insight days, phases are valued as supplementary modules, but according to the interviewees, they only provide a “small glimpse” (P12, 149), enable a “taste” (P3, 42), but do not provide orientation compared to longer practical phases. According to Holland (1997) and Super’s theory (1980), choosing a career involves, among other things, comparing one’s abilities with external requirements and recognising role changes. It seems conceivable that the time allocated for these possibilities is too short for these students and that getting to know and trying out a profession is more feasible in longer phases.

All interviewees completed the one-day insight days in eighth grade at an external vocational training facility (Table 1), which they initially compared to a school day or a school trip, as the following statement shows: “I didn’t think CJD and Nestor were that great, because for me it was more like school, you didn’t really do much. Yes, I thought it was a waste of time” (P5, 48). “We went there as a class” (P6, 131). In addition, the interviewees rated this experience as less significant in their process because these days were not spent in a real company, which is highlighted by the following statements: “...and then I think we played a few games, did some tasks. In the hairdressing salon, I think we presented something on the mannequins” (P14, 62).

...I would definitely prefer the longer-term work placement in a real company, not an organisation like the CJD. So that you can see what real working life looks like, because the CJD is also an organisation that does that a bit, yes/So now in garden landscaping, there are these big sandpits, I say (P12, 70).

The interviewees experienced these work-related situations in a vocational training facility more as a game than as a re-enacted scene of working life, which does not allow for a more intensive experience.

DISCUSSION

For this study, 14 former students with LD were interviewed about their post-school careers and the importance of different work experience opportunities for vocational orientation. For all interviewees, practical work phases were highly relevant, consistent with the quantitative findings (Hübner, 2023; Lee et al., 2019; Messer, 2018). However, the paths and interests were very individual, which this qualitative study can trace. The results show that the former students go through a process of verification and falsification of their individual career-choices due to the variety of internship options and that length of the internships is also relevant.

About the first question, former students with LD were able to test their individual hypotheses about career choices, according to Popper (1959), owing to the wealth of practical experience they gained. However, different approaches to this process emerged. Some respondents fundamentally tested their career ideas regarding occupational fields during their initial practical experiences, finding both processes important, falsification and verification. Others use the practical phase to review their existing career aspirations several times, independently of the company in question, and to repeatedly confirm their individual hypotheses of career aspirations or refine their ideas. These findings align with Holland's (1997) assumption that personal interests and abilities are tested through experience and then determine career choice. The results also reflect Super's (1980) concept of career readiness. Exploratory activity refers to exploring the world of work and careers to develop a professional self-concept (Super 1980). The participants sounded out their possibilities in many internships, explored their wishes, skills and abilities by confirming or excluding certain sectors or companies, and developed a professional self-concept.

Using terms from the lexical field of 'decisions', in combination with causal and temporal sentence structures, depicts this process retrospectively on a mental level and illustrates an analytical approach to professional orientation. Such experiences include the confirmation or rejection – a verification or falsification – of a professional idea, as also discussed by Lee and Branford (2024). The data revealed that in some cases, some career ideas could not be realised in the professional biography after the practical experience. However, the interviewees were able to connote these experiences as part of the decision-making process.

In the context of students with LD, Seligman's (1975) theory of learned helplessness is also discussed in relation to future decisions (Brandmeier & Kastner, 2019). Accumulated unpleasant experiences regarding cognitive performance may block willingness to learn and interest to such an extent that internally attributed hopelessness arises, and further vocational orientation efforts are avoided. Unsuccessful experiences could be interpreted as a personal failure. However, if the internship led to the exclusion of a career idea, this is not associated with a statement of failure in any of the interviewees' text passages. Discarding a career idea was also perceived as helpful, and interviewees valued all experiences contributing to their career decisions. They integrated these experiences into their professional self-concept, reinterpreted them, and were motivated to pursue another professional field. According to the data analysis, students can go through this almost analytical process only if given multiple experiences allowing comparison between occupational fields, professions, and companies, aligning them with their interests as described by Holland (1997). A one-off practical programme can hardly enable this processual experience. It should be noted critically that students without SEN can go through the process only to a limited extent because they have fewer internship options than students with SEN.

The second question focusses on the significance of the duration of the work experience opportunities. The longer work placement phases appear to be particularly relevant, as the quantitative findings also show (Hübner, 2023). However, the statements in the present study on career biographies show that, especially after longer periods of practical experience, the interviewees were offered apprenticeships, holiday jobs, or subsequent employment in companies. This means that they benefited from their practical experience in two ways: firstly, with experience in the occupational field and secondly, by establishing contact with a specific company. This is consistent with the findings of other studies (Bindl & Thielen, 2013; Hofmann-Lun, 2011). Thus, longer periods of practical work experience help with vocational orientation, as it is possible to try out a profession that corresponds to one's own aspirations more intensively.

The so-called "one-day insight days", on the other hand, only provide a glimpse and are not associated with the same relevance for vocational orientation as the longer phases. This also corresponds to the findings of the quantitative study (Hübner, 2023). The statements provide deep insight. The staged, simulated experience of the working world in a vocational training facility or even the switch between occupational fields was described as problematic. This may be specific for the special needs students, as flexible adaptation to new situations in adolescence can be a challenge due to limited emotional, social, or cognitive skills (Eurydice, 2025; Gebhardt et al., 2011; Versnel et al., 2008). Regardless of the significance for the students, the school perspective must also be viewed critically. The organisation of these insight days involves a great deal of effort and costs for schools (Hübner, 2023). The effectiveness of this offer must, therefore, be questioned if students do not attribute any benefit to this measure. Individualised offers in

companies or the extension of one-day insight days, alternating with everyday school life, could be more beneficial for these students to gradually process their impressions and experiences.

Fun seems to be an important aspect of the practical experience for the interviewees, which is also shown by quantitative findings (Messer, 2018). Whether fun, enjoyment, or pleasure is experienced in the activity essentially contributes to the career decision and post-school progression. Tews, Michel, and Noe (2016) assume that fun is an important precursor to learning. If work can be linked to fun and play, it is highly likely that individuals will also direct their efforts towards informal learning (Tews et al., 2016). The concept of fun complements the self-determination theory, which characterizes motivation by qualitative differences expressed in the experience of autonomy (Ryan & Deci, 2000). Respondents also appeared to feel motivated to pursue their careers because of perceived fun. Not perceiving fun also led to reorientation. Although it is known that fun brings important benefits in working life (Collins & Porras, 1997; Collinson, 2002), the importance of fun in the field of informal learning (Tews et al., 2016; Tisza & Markopoulos, 2021) and, thus, also in the context of internships has hardly been researched. Tisza and Markopoulos (2021, p.3) found that young people experience enjoyment when they (a) have control over an activity and participation, (b) feel comfortable, (c) are immersed in their activity in the sense of flow, (d) can free themselves from social inhibitions and demands, and (e) the level of challenge matches their abilities. Although this definition originates from the field of computer science and programming, many aspects also apply to the interviewees' work experience. Above all, they experienced control regarding their activities in longer internship phases. They were given responsibility and experienced themselves as competent in a new professional setting. The school status of the need for support recedes into the background in many descriptions.

LIMITATION AND OUTLOOK

This study examined the perspectives of former students with LD regarding the importance of different types of work experience for their vocational orientation. The results of this study apply to this group of interviewees, who are characterised by the fact that they were satisfied with their post-school careers and were, therefore, presumably willing to be interviewed. The limitation of the sampling is that people who have no qualifications in their professional careers and have been able to develop little or no professional vision are not included (self-selection bias; Heckman, 2010). As revealed in the preliminary discussions with people who were contacted for the study, they justified their non-participation with the precarious careers they described. They depicted themselves as former special needs students whose post-school educational processes were rather unfavourable, which they considered a failure, so they did not want to report on it.

In future studies, it would be interesting to survey other perspectives (companies, trainers, etc.) in addition to the internal perspective. It remains unclear to what extent the interviewees consciously remembered their experiences during the internship or whether they responded in a socially desirable way. It is known that students with special needs regarding learning have difficulties in situations that require their cognitive, social, and emotional skills (Gebhardt et al., 2011; Versnel et al., 2008). In this respect, limited self-awareness could have a repercussion on the evaluation of the experience.

From a theoretical perspective, Popper's principles (1959) offer an interesting and important approach that complements existing theories in the context of career guidance. Not only confirmation leads to successful orientation during internships by further differentiating individual strengths and interests, but also falsification is used to (correct or) reject inaccurate assumptions about the chosen field of work.

Fun, enjoyment, and motivation are important influencing factors that require further research in the context of career guidance for students with SEN. Current educational policy discussions in vocational orientation are increasingly focusing on inclusive vocational orientation and labour market development. It is, therefore, doubtful whether students with SEN can even be offered such accumulated practical experiences and work experience opportunities in inclusive learning, as these are not provided for in the regular school system (Greiten et al., 2019, 2024). Inclusive schools would have to integrate these options and concepts (MAGS, 2020), which is likely to involve a great deal of effort in terms of school organisational processes and timetabling. In this respect, it would be interesting for further research to investigate the processes described explicitly for students with SEN in inclusive schools.

To summarise, it is particularly important for students with SEN to have many numbers of longer practical phases in their vocational orientation. With this perspective on the internship experience, it is not only the variety that is important for the verification and falsification process, but also the experience of fun and enjoyment, so that this experience can have a long-term effect on the vocational orientation of students with SEN.

DATA ACCESSIBILITY STATEMENT

Due to confidential and privacy agreements the data cannot be made available.

ADDITIONAL FILE

The additional file for this article can be found as follows:

- **Coding guideline for research on student work experience opportunities.** Coding guideline. DOI: <https://doi.org/10.16993/njtcg.106.s1>

COMPETING INTERESTS

The authors have no competing interests to declare.

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