pedocs
Open Access Erziehungswissenschaften

DIPF

Beierle, Sarah; Hemming, Karen; Hümmer, Sandra

The role of non-formal education in school-to-work transition. Conceptual framework and analytic potentials of selected survey data in Germany

Journal for educational research online 16 (2024) 2, S. 182-205

Quellenangabe/ Reference:
Beierle, Sarah; Hemming, Karen; Hümmer, Sandra: The role of non-formal education in school-to-work transition. Conceptual framework and analytic potentials of selected survey data in Germany - In: Journal for educational research online 16 (2024) 2, S. 182-205 - URN: urn:nbn:de:0111-pedocs-346943 - DOI: 10.25656/01:34694; 10.31244/jero.2024.02.02

https://nbn-resolving.org/urn:nbn:de:0111-pedocs-346943
https://doi.org/10.25656/01:34694

in Kooperation mit / in cooperation with:

WAXMANN
www.waxmann.com

http://www.waxmann.com

Nutzungsbedingungen

Dieses Dokument steht unter folgender Creative Commons-Lizenz: http://creativecommons.org/licenses/by-nc-sa/4.0/deed.de - Sie dürfen das Werk bzw. den Inhalt unter folgenden Bedingungen vervielfältigen, verbreiten und öffentlich zugänglich machen sowie Abwandlungen und Bearbeitungen des Werkes bzw. Inhaltes anfertigen: Sie müssen den Namen des Autors/Rechteinhabers in der von ihm festgelegten Weise nennen. Dieses Werk bzw. der Inhalt darf nicht für kommerzielle Zwecke verwendet werden. Die neu entstandenen Werke bzw. Inhalte dürfen nur unter Verwendung von Lizenzbedingungen weitergegeben werden, die mit denen dieses Lizenzvertrages identisch oder vergleichbar sind.
Mit der Verwendung dieses Dokuments erkennen Sie die Nutzungsbedingungen an.

Terms of use

This document is published under following Creative Commons-License: http://creativecommons.org/licenses/by-nc-sa/4.0/deed.en - You may copy, distribute and transmit, adapt or exhibit the work in the public and alter, transform or change this work as long as you attribute the work in the manner specified by the author or licensor. You are not allowed to make commercial use of the work. If you alter, transform, or change this work in any way, you may distribute the resulting work only under this or a comparable license.

By using this particular document, you accept the above-stated conditions of use.

Kontakt / Contact:

peDOCS
DIPF | Leibniz-Institut für Bildungsforschung und Bildungsinformation
Informationszentrum (IZ) Bildung
E-Mail: pedocs@dipf.de
Internet: www.pedocs.de

Mitglied der Leibniz-Gemeinschaft

Journal for Educational Research Online
Journal für Bildungsforschung Online
https://doi.org/10.31244/jero.2024.02.02
Volume 16 (2024), No. 2, S. 182–205
CC BY-NC-SA 4.0 Waxmann

Sarah Beierle, Karen Hemming & Sandra Hümmer

The Role of Non-Formal Education in School-to-Work Transition: Conceptual Framework and Analytic Potentials of Selected Survey Data in Germany

Abstract

Non-formal education and related competencies extending beyond formal skills are not (yet) given equal consideration in education research. In particular, studies dealing with the relationship between non-formal education and positive effects on school-to-work-transition (STWT) are rare. The aim of the paper is to strengthen research in this field theoretically and practically. In doing so, we (1) developed a conceptual framework for potential research. Considerations include social background variables, characteristics of participation in activities, and skills and resources related to the STWT. We have (2) worked out which problems arise in measuring non-formal education with German surveys, and then go into more detail on the potential and limitations of the Socio-Economic Panel (SOEP) and the National Education Panel Study (NEPS). It has been shown that non-formal education is only recorded to a limited extent in both longitudinal studies. In general, the focus is often on the frequency of sports, school, music, and art activities. Other activities, as well as engagement and program characteristics, are neglected, measured irregularly, or sometimes only included in the panel at a later stage. To increase the potential for research on the connections between non-formal education and STWT, non-formal education would have to be recorded in a more differentiated way in the existing German (panel) studies.

Sarah Beierle, wissenschaftliche Referentin am Deutschen Jugendinstitut,
Franckeplatz 1, Haus 12/13, 06110 Halle (Saale)
e-mail: beierle@dji.de

Dr. Karen Hemming, wissenschaftliche Referentin im kommunalen Bildungsmonitoring der Stadt Leipzig, ehemals Referentin am Deutschen Jugendinstitut
e-mail: karen.hemming@gmx.de

Sandra Hümmer, wissenschaftliche Referentin Klinikum der Universität München, ehem. wissenschaftliche Referentin am Deutschen Jugendinstitut
e-mail: sandra.huemmer@gmx.de

Keywords
School-to-work transitions, non-formal education, organized leisure activities, panel data, conceptual framework

Die Rolle der non-formalen Bildung beim Übergang von der Schule ins Berufsleben
Konzeptioneller Rahmen und Analysepotenziale ausgewählter Umfragedaten in Deutschland

Zusammenfassung
Non-formale Bildung und damit verbundene Kompetenzen, die über schulische Fähigkeiten hinausgehen, werden in der Bildungsforschung (noch) nicht gleichwertig berücksichtigt. Insbesondere Studien, die sich mit dem Zusammenhang zwischen non-formaler Bildung und positiven Effekten auf den Übergang von der Schule ins Berufsleben beschäftigen, sind selten. Ziel des Beitrags ist es, Forschung in diesem Feld theoretisch und praktisch zu stärken. Hierzu haben wir (1) ein konzeptionelles Rahmenmodell für potentielle Forschungsarbeiten entwickelt. Berücksichtigt sind dabei u.a. der soziale Hintergrund, Merkmale der Teilnahme an Aktivitäten sowie Fähigkeiten und Ressourcen in Bezug auf den Übergang Schule–Beruf. Wir haben (2) herausgearbeitet, welche Probleme sich in der Messung non-formaler Bildung mit deutschen Surveys ergeben, und gehen anschließend näher auf das Potential und die Limitationen des Sozio-ökonomischen Panel (SOEP) und des Nationalen Bildungspanels (NEPS) ein. Es hat sich gezeigt, dass non-formale Bildung in beiden Längsschnittstudien nur eingeschränkt erfasst wird. Im Allgemeinen liegt der Fokus oft auf der Häufigkeit von Sport-, Schul-, Musik- oder Kunstaktivitäten. Andere Aktivitäten sowie Engagement- und Programmmerkmale werden vernachlässigt, unregelmäßig gemessen oder wurden teils erst später in das Panel aufgenommen. Um das Potenzial für die Erforschung von Zusammenhängen zwischen non-formaler Bildung und Übergangserfolg zu erhöhen, müsste non-formale Bildung in den bestehenden deutschen (Längsschnitt-)Studien differenzierter erfasst werden.

Schlagworte
Übergang Schule–Beruf, non-formale Bildung, organisierte Freizeitaktivitäten, Panel-Studien, konzeptionelles Rahmenmodell

Introduction

Formal education and therewith-linked qualifications play an important role in successfully coping with school-to-work transitions (STWT), as they facilitate ac-

cess to further education and qualifications and the labor market. Nevertheless, a rapidly changing world of work constantly places new demands on employees and their personal attitudes; thus, other competencies are becoming more important. These so-called "key qualifications" cannot be "taught"; rather, one has to create opportunity spaces in which they can be learned (Arnold et al., 2020). Consequently, research on informal and non-formal education with a focus on the potential of participation in extracurricular activities has increased recently regarding positive youth development in general and specifically for the acquisition of key qualifications (Farb & Matjasko, 2012, p. 1928). Accordingly, non-formal activity participation can be referred to as "key ecological resources" for young people (Agans et al., 2014, p. 928).

Since the availability of the first PISA study and the confirmation of the strong effects of social origin, especially for the German educational system (Prenzel et al., 2013), attention to non-formal and informal educational processes has also increased in Germany (Düx & Rauschenbach, 2013). However, this rising interest is especially aimed at acquiring formal competences and improving school performance (Fischer, 2020). Until today, non-formal settings and related competences extending beyond formal skills are not (yet) given equal consideration (Harring, 2013). Research on the role of non-formal education for STWT is limited, even though non-formal education can improve future opportunities for young people (Rauschenbach, 2011). Existing studies confirmed positive effects on the development of vocational goal orientation and STWT through actively participating in non-formal settings (Hemming et al., 2020; Hemming & Reißig, 2015).

As non-formal educational processes occur in different fields and settings, research is challenging from a theoretical and methodological perspective. Accordingly, the related field of research is diverse, albeit small. Due to its interdisciplinary character, emerging research questions are also heterogeneous. Moreover, there is a lack of theoretical models and methodological approaches based on which the developmental potential of non-formal processes could be theoretically explained, and detailed questions answered (Fischer et al., 2011; Grunert, 2016).

Accordingly, the paper focuses on the following objectives, which are processed in succession: (1) developing a conceptual framework for non-formal education and STWT based on the state of research and existing measuring concepts of non-formal education; and (2) reviewing NEPS and SOEP regarding their fit to the conceptual framework, in order to draw conclusions for the further development of these panel studies.

1. Specification of Basic Terminologies

Although research on non-formal education has increased significantly in the last 20 years, there are no uniform definitions. The lack of a conceptual basis for edu-

cational processes in non-formal settings is reflected in inaccuracies or overlapping terms that need to be fundamentally clarified (Grunert, 2016).

However, non-formal education cannot be defined in "isolation" but is always to be seen in relation to formal and informal education. For this paper, we use the definition of formal, non-formal, and informal learning/education following the European Council, which led to a stronger focus on informal and non-formal education in the political and scientific discourse in the past decades (Commission of the European Communities, 2000, p. 8):

> "Formal learning takes place in education [...] institutions, leading to recognized [...] qualifications. [...] Non-formal learning takes place alongside the mainstream systems of education [...] and does not typically lead to [...] certificates. [...] Informal learning is a natural accompaniment to everyday life. Unlike formal and non-formal learning, informal learning is not necessarily intentional."

However, as Colley, Hodkinson, and Malcolm argue, a strict subdivision also has disadvantages: "Seeing informal and formal learning as fundamentally separate results in stereotyping and a tendency for the advocates of one to see only the weaknesses of the other" (2003, p. 8). Rather, an integrated understanding of formality and informality – which can be found in all learning modes, sometimes even at the same time – would be suitable. Thus, non-formal education should be seen on a continuum between formal and informal learning (Rohs, 2014), which can be illustrated by the example of schools, long considered a purely formal place of education in Germany. German schools have changed significantly lately with the expansion of all-day schools and the rising number of non-formal activities, which are offered on school premises mostly in the afternoon hours. At the same time, non-obligatory courses are offered, which typically belong to the formal sector. Not least, many non-formal activities continue outside of school in other institutionalized structures or private contexts, accompanied by informal learning processes.

According to our understanding, non-formal education mainly includes participation in organized extracurricular activities that take place in leisure time, i. e., regular hobbies, and are led by an activity leader (Mahoney & Stattin, 2000). Such activities can be found in various institutional contexts in Germany, e. g., in (sports) clubs, music or art schools, commercial providers, churches, offers of child and youth work, mentoring, adult education centers, libraries, and not least in the context of (all-day) schools.

From a life-course perspective, these activities are an integral part of the lifelong learning concept. The concept allows (young) people to acquire and maintain the skills, abilities, and perspectives they need to adapt to a continuously changing environment (Commission of the European Communities, 2000). In the course of increased challenges in STWT, non-formal activities are expected to provide young people with specific skills that are important for the transition and later employment (Grunert, 2012).

2. State of Research on the Role of Non-Formal Education for School-to-Work Transition

When considering the role of non-formal education in STWT, two aspects have to be taken into account (UNICEF, 2019, p. 3): (1) the process of preparing for the transition, in which young people have access to and can develop skills, competencies, and qualifications with the aim of entering into employment; and (2) the process of making the transition, where young people access job opportunities by making use of their skills. The transition process thus plays a key role in social integration for young people (Kreher, 2008). Transition pathways depend on macro-level structural factors, like the labor or training market, and institutional factors, like school or career orientation offers (Fink, 2010). Regional contextual conditions are also important in this respect, such as the supply demand ratio or the proportion of high school graduates (Kleinert, 2015; Seeber, 2013). On the micro level, personal and social resources, like social support or specific competencies, and indicators of social origin, like migration background, affect the transition process (Finger, 2022). In this regard, school performance and the attended educational track play a particularly important role (Achatz et al., 2022; Jacob & Solga, 2015). Especially, social and personal resources can be positively promoted through participation and gained experiences in non-formal educational offers.

Research has demonstrated that non-formal education is associated with a number of general positive personal and interpersonal developmental experiences in adolescence (Blomfield & Barber, 2011; Farb & Matjasko, 2012), which can be linked to resources relevant for STWT. Seeing STWT as one of the most important developmental tasks in adolescence, participating in non-formal activities can support dealing with this developmental challenge as these activities can have positive effects on coping with different developmental tasks (Mahoney et al., 2005). Furthermore, participation is linked with positive effects on well-being and life satisfaction (Larson, 2000; Sporer & Noack, 2008), which, on the one hand, are considered a prerequisite for successfully managing the transition and, on the other hand, also function as the result of a successful transition. Participation can also support the positive development of societal values (Denault & Poulin, 2009; Mahoney & Vest, 2012) and social competencies (Blomfield & Barber, 2011; Busseri et al., 2006), both important soft skills for managing the transition. Engaged adolescents show less psychosocial distress (Mahoney & Vest, 2012; Oberle et al., 2019) and less problem behavior (Mahoney & Vest, 2012; Simmons et al., 2021). It can be assumed that the absence of stress and problems can also foster the transition process.

From a formal perspective and linkage to STWT-relevant output, non-formal activity participation can support school attachment, academic achievement, and higher academic aspirations, and can reduce drop-out rates (Arnoldt et al., 2016; Metsäpelto & Pulkkinen, 2014; Modecki et al., 2018). In addition, an optimistic view of the future can be supported through activity participation (Erlinghagen et al., 2018).

In turn, other studies confirm positive developmental effects on personal and social resources that are directly important for successful transitions: Activity participation can promote goal achievement and priority-setting through the motivation to set challenging goals in the activity (Larson, 2000) and, thus, positively influence educational pathways and educational aspirations (Arnoldt et al., 2016; Farb & Matjasko, 2012; Fischer & Theis, 2014). Furthermore, activity participation can support the development of relationships with adults outside the home in a work-relevant network (Denault & Poulin, 2009; Hansen et al., 2003). In the specific case of volunteering, competence development is particularly promoted in the social and political spheres (Düx, 2009).

In addition, different longitudinal studies with a specific focus on STWT were found: Cabane (2015) showed that childhood sporting activities were correlated with the level of autonomy and leadership tasks reported at work 13 years later. Gardner, Roth, and Brooks-Gunn (2008) demonstrated that positive developmental effects of intensity and duration of participation extend well into young adulthood, with effects evident up to eight years after graduation. A study on career indecision illustrated that participation in arts/sociocultural activities predicted increased vocational exploration, whereas in academic-related committees and civic engagement, a decrease was captured at the end of high school (Denault et al., 2019). German studies also proved that valuable experiences and competences for working life, such as problem-solving skills, decision-making abilities, or acceptance of responsibility, are acquired in organized activities (Düx & Sass, 2005; Kreher, 2008; Tully & Wahler, 2004). Moreover, Düx (2009) confirmed the effect of civic engagement on career choice; she showed that those engaged during adolescence were more likely to work in healthcare, education, or social sectors. Hemming and Reißig (2015) demonstrated that club activities positively support the transition to work five years after graduation, but not the transition to vocational educational training one year later. Hemming et al. (2020) showed that sports club participation can foster vocational goal orientation for young people in low educational tracks. Martin Schmid (2020) analyzed the comparability of non-formally and informally acquired competences for vocational education and training in Germany, Austria and Switzerland. He came to the conclusion that cross-national comparability is reserved for formal education in particular due to different structures in the in-school and out-of-school education sectors.

This literature review shows that numerous studies exist addressing indirectly or directly effects of non-formal activities on STWT and reveal various correlations. With the positive effects shown, non-formal education offers even have the potential to reduce the gap between social origin indicators and school performance (Barber et al., 2014) an important parameter in the transition process. However, the use of non-formal education is also subject to selective processes, which means that disadvantaged young people miss out on important educational opportunities (Hemming & Tillmann, 2023). However, correlations in most studies were small; sometimes contradictory results appeared, or general effects were missing. Thus, al-

though non-formal activity participation contributes to individual development and motivation and can promote employment opportunities (Abdullai et al., 2012), positive effects are not found generally so far and seem to do not work equally for all young people (Balaguer et al., 2020). Nevertheless, this is not uncommon in social science studies, considering that successful STWT depends not only on individual social and personal resources but also on local structures in the labor and training markets, as well as on overall social and economic conditions. Yet, there is still a lack of studies that systematically analyze the relationship between non-formal activities and STWT by using a suitable theoretical and empirical framework, especially regarding longitudinal studies. Studies should take into account the various relevant dimensions and program characteristics discussed below. This could also strengthen an international research direction from a comparative perspective.

3. Conceptual Framework Development

Due to the interdisciplinary, diverse, and broad orientation of the research, there is a lack of unified theoretical concepts. Based on the limited research on the relationship between non-formal activity participation and STWT from an integrated perspective, we have developed a conceptual framework (Fig.1). The framework has a heuristic characteristic and, thus, shall apply to different questions, related activities, and programs in the field of research on non-formal education and STWT. To show a complete picture, we complete our approach of the "state of research", where the focus was only on the effects of non-formal activities on STWT, with considering influences in various directions.

To serve as a basis, we integrated different existing theoretical approaches and concepts. Following Hemming (2019), the *resource model of coping with life* (Fend et al., 2009) acts as a heuristic background. Also, Alicke et al. (2009) used this model for analyzing STWT. Accordingly, STWT as a developmental task in adolescence is affected by different resources, social background indicators, and the choice of a "specific context." Non-formal activity participation can be understood in such a context. Thus, the framework integrates non-formal activity participation, predicting indicators, and outcome indicators. To specify further, we used the *conceptual model of participation in organized activities* (Bohnert et al., 2010, p. 579) and the *general model of education effectiveness in the field of extended education* (Stecher & Maschke, 2013, p. 34), as well as complementary perspectives of the state of research.

Participation in non-formal education: When analyzing positive effects, specific characteristics of participation and activities need to be considered (Agans et al., 2014; Hemming et al. 2024). Following Bohnert et al. (2010), we distinguish between program and engagement characteristics. We assume that these two dimensions are determining factors for whether and how the supportive potential of non-formal education for STWT can unfold. However, we adapted/extended some

of the indicators. As engagement characteristics, we include *intensity*, *duration*, and *variety* (Agans et al., 2014; Denault & Poulin, 2009), and enhanced the model of Bohnert et al. (2010) by the dimensions of *joy*, *self-determination* (Mahoney & Cairns, 1997), and *responsibility* in the form of a specific role or function within an activity (Braun, 2014). For program characteristics, the *quality* of the offers is found to be central (Denault & Poulin, 2009; Fischer & Theis, 2014). We integrated further *type*, *peer orientation,* and *norms/structure*. Mahoney and Stattin (2000) pointed out the significant role of the *relationship with the activity leader*, thus, we also included this specific indicator. The model of Stecher and Maschke (2013) considers comparable indicators, although not as specified.

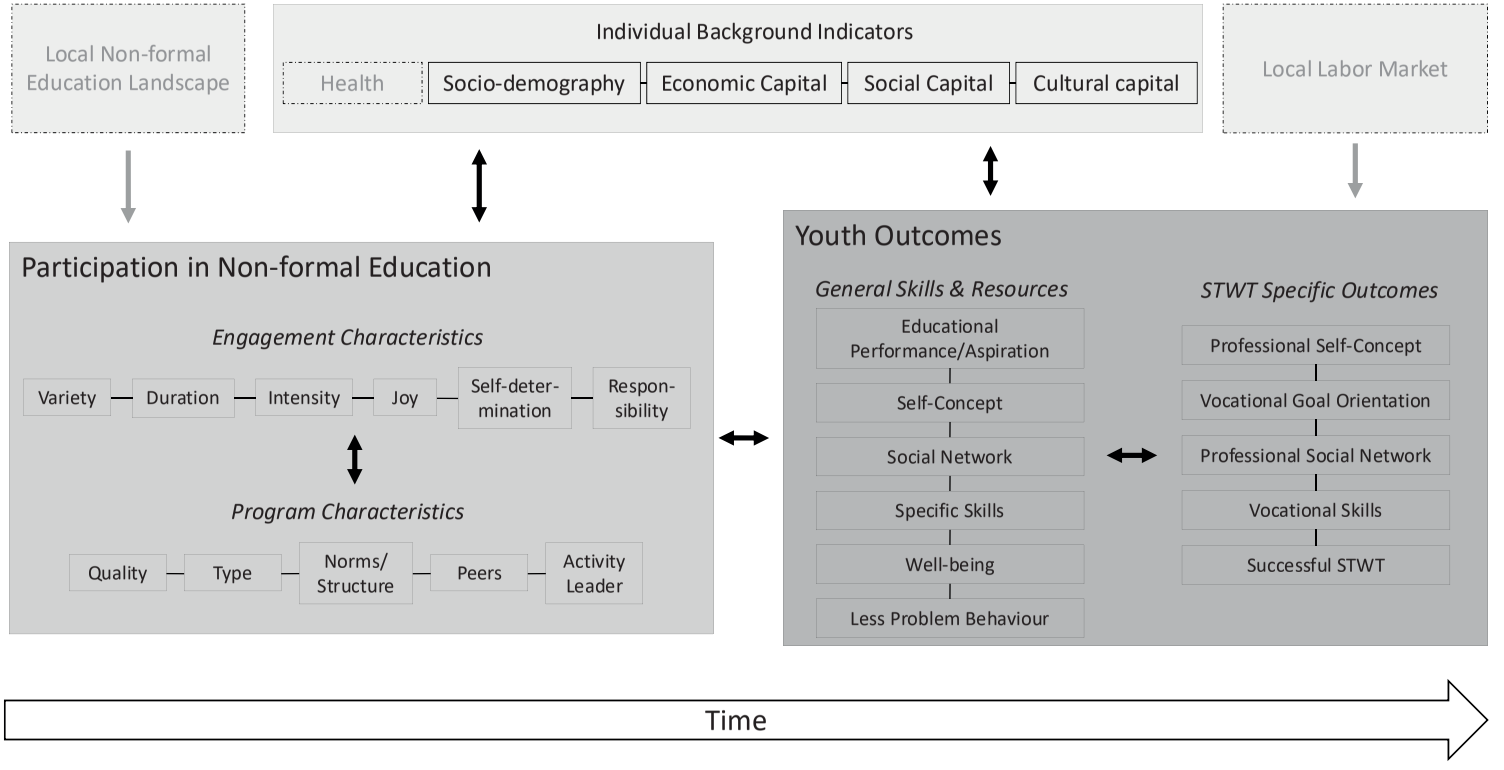
Social background indicators: Participation in non-formal education is characterized by social selection. Accordingly, it is important to consider background indicators in the conceptual framework. Following Hemming (2019), we refer to Bourdieu's concept of social, economic, and cultural capital (1983), and complementary sociodemographic factors. Based on a valid theoretical concept, we cover individual and family contexts, also identified as predictors in other models (Bohnert et al., 2010; Stecher & Maschke, 2013). In addition, physical and mental health can be analyzed as an important personal indicator of both, the influence on access to non-formal education, and also partly as a result of non-formal education (Oberle et al. 2019).

Local non-formal education landscape and local labor market: The local supply structures and conditions in the fields of non-formal education and transition labor market are particularly important to consider in (comparative) regional analyses (Cabane et al. 2016).

Youth outcomes: Existing models refer to youth outcomes of non-formal activity participation but are not further differentiated for STWT (Bohnert et al., 2010; Stecher & Maschke, 2013). Also, the outcome categories are primarily general (Bohnert et al., 2010). In addition, most studies focus on formal competencies, such as academic achievement or learning strategies (Fischer, 2020; Schüpbach & Lilla, 2019; Stecher & Maschke, 2013). Following impact studies with a developmental perspective, we use a broader definition of positive youth outcomes. In the framework, *educational performance/aspirations* are only one aspect of general skills and resources. Following the presented state of research, we also included *self-concept, social network, specific skills, well-being*, and *less problem behavior* as positively affected dimensions of participation in non-formal education. We assume that these *general skills and resources* are related to *STWT-specific outcomes*, both as predictor and criterion indicators, whereas a mutual reinforcement is expected. The included STWT outcomes are likewise deduced from the presented state of research, focusing on relevant skills and resources: *vocational goal orientation*, *professional self-concept*, *professional social network*, *vocational skills,* and *successful STWT*.

To better understand the heuristic conceptual framework, it is important to note that individual elements can influence each other, and no linear dependen-

Figure 1: *Conceptual Framework of Participation in Non-Formal Education and School-to-Work Transition*



cies are assumed. Moreover, interdependencies will grow with increasing (life) time (Bohnert et al., 2010). However, when applying the conceptual framework to concrete empirical studies, it is necessary to specify the assumptions and formulate them in certain directions. The conceptual framework can thus be used to indicate the directions and strengths of the influences, both as a research template and to illustrate the results. In addition, it can be expanded or focused on specific research questions. For example, health can, on the one hand, be seen as an individual background indicator in connection with access to non-formal education, and on the other hand, it can be analyzed as a dependent variable.

4. The Potential of German Survey Data for Analyzing Non-Formal Education and School-to-Work Transition

To elaborate the potential of existing data sets regarding non-formal education and STWT, we first provide a general overview of existing survey data. Then we go into more detail with the NEPS and SOEP data sets and their potentials and limitations for applying our previously developed conceptual framework.

4.1 Overview of German Survey Data[2]

For our review, databases from FDZ-GESIS, Verbund-FDB, and FDZ-IAB were searched using fixed keywords: labor market, youth, leisure activities, and non-formal education. As far as possible, questions on STWT and non-formal education were examined in the related questionnaires. Additionally, data sets referred to in the literature were added. However, our data search did not follow the principles of a systematic review (Pollock & Berge, 2018), nor did it include international databases due to the focus on German survey data. Both would have exceeded the objectives of the paper. The complete overview of our review can be accessed here (Link to the attachment)[3]. In the following, the main results of our research will be presented comprehensively.

Overall, 43 data sets were found: 20 panel and 23 trend/cross-sectional surveys. Panel studies especially focus on educational trajectories (e. g., BIJU, BIKS, NEPS). While most of them only look at the school years, a few go beyond and look at STWT or only focus on STWT (e. g., BIBB-Übergangsstudie, PASS). Some panels only survey certain target groups, e. g., low secondary school graduates (e. g., DJI-Übergangspanel, Bildungsverläufe in Arbeiterfamilen) or students (e. g., TOS-

2 See Table A1 at the end of the paper for list of used abbreviations in this chapter.

3 The overview includes the assessment of the indicators listed in the above presented Conceptual Framework. It should be noted that the aspects “local non-formal education landscape”, “local labour market”, and “health” were not examined in detail.

CA, BerO, BerinA). In contrast, others focus on broader target groups (e. g., NEPS, SOEP) and/or cover different birth cohorts (e. g., SOEP, NEPS).

The range of data sets focusing on education is broad (e. g., NEPS, BIKS, LAU/ULME, Mannheimer Bildungspanel). Even if education is not the main focus, educational indicators are often captured as control variables. However, due to the focus on formal education, non-formal educational indicators are less included. Only a few surveys (mainly trend studies) include items on non-formal education (e. g., Shell study, Freiwilligensurvey, NEPS, SOEP). While comparing those, the following measurement issues have been found:

- Most studies cover non-formal education only through sports, arts, and music activities (e. g., SOEP, BIJU/BIKS). Other activities were neglected or not measured continuously (e. g., NEPS such as youth clubs, and political associations – two measurement points in grade 9 and three years later). Thus, breadth and changes in activity participation cannot be reconstructed.
- Short-term engagements are often not covered. However, young people have increasingly preferred these kinds of engagements recently (Bundesministerium für Familie, Senioren, Frauen und Jugend, 2021, 29ff.). Thus, short-term activities and their effects remain undetected and cannot be related to (positive) outcomes.
- Most engagement and program characteristics are not or only partially covered. The most measured characteristics are frequency, duration, and responsibility.
- The items on leisure time behavior of young people rarely reveal whether the activity is guided or not guided, and to which extent it is guided. Exceptions to those problems are certain trend studies such as the Shell study and FWS due to their thematic focus on spare time activities.
- Mostly, the frequency scale ranges from “once a month” to “daily” and does not always fit the type of activity. Most activities are practiced on a weekly basis, and some activities are seasonal or irregular (e. g., youth leaders in summer camps).
- Due to the design and thematic focus of the studies, non-formal activities are either measured during school time (e. g., BIJU, Mannheimer Bildungspanel), in working life (e. g., AES, especially on-the-job training), or cross-sectionally. Hardly any of the cross-life studies look at participation in non-formal activities from childhood to adulthood (exception: e. g., NEPS, SOEP). Thus, it is not possible to track engagement and related changes in non-formal activities over different life stages or compare different birth cohorts.
- Most studies do not include items regarding the internal or external motivation for joining/leaving an activity. However, those are of particular interest in analyzing the selectivity of participation in non-formal activities.
- Some studies survey psychosocial aspects (e. g. subjective life satisfaction). Diagnoses are not usually recorded.

Consequently, the available data sets that include information on non-formal education and STWT are insufficient.

Since NEPS and SOEP collect information over the life span (in-school vs. after-school), it is possible to track different stages in STWT as well as specific aspects of participation in non-formal activities over time. Both provide monthly information about employment status through retrospective items and frequent measurement points. Furthermore, they are easily accessible and have a high number of cases, which is needed for complex statistical procedures. The data overview showed, that among these Studies NEPS and SOEP have a high potential for analysis of the relationship between non-formal education and STWT following our conceptual framework, and thus these two panels will be discussed in more detail in the following section.

4.2 Comparison of the Socio-Economic Panel and National Educational Panel Study

The SOEP determines the socio-economic situation from a longitudinal perspective in Germany since 1984. It is one of the most extensive and longest-running multidisciplinary household surveys worldwide and is designed as an active panel. Although its focus lies on adults' socio-economic situations, childhood and youth have been considered over the last 20 years. Consequently, items that capture formal and non-formal education and thus enable the analysis of educational trajectories from birth onwards were also included (Lohmann et al., 2009). The youth survey (age 16/17) was implemented in 2000. After, surveys during secondary school (age 13/14), primary school (age 11/12, 9/10, and 7/8), and during preschool, birth, and the fetal phase (newborn until age 6) were added step by step. Depending on the age, the parents or the child answered the questionnaire. SOEP is also part of international data sets. The enrichment, linkage and harmonization of SOEP survey data with household (panel) data from other countries (e. g., Canada, USA, Japan, Switzerland) is thus partly possible.

The NEPS focuses on the development of competencies, educational processes, educational decisions, and returns to education in formal, non-formal, and informal contexts throughout the life span. It has a multi-cohort sequential design with approximately 60,000 subjects and six different cohorts starting at various stages of life (adults, students, 9th grade, 5th grade, kindergarten, and newborns). While the start cohort 06 – SC06 (adults) began in 2007, the others followed between 2010 and 2012. Thus, two cohorts are of particular interest: SC03 (from 5th grade on/11 waves) and SC04 (from 9th grade on/11 waves.).

We now focus on the potentials of SOEP and NEPS regarding the application of the conceptual framework and related research questions. Table 1 provides an overview of all dimensions of our framework and indicates whether and how they were captured and operationalized in SOEP and NEPS, respectively.

Table 1: *Overview: Analyzing Potential of SOEP and NEPS for Applying Conceptual Framework*

Dimensions	SOEP	NEPS (SC03 & SC04)
Social Background Indicators		
Sociodemographic Indicators & Forms of Capital (Economic, Social, Cultural), Health	• Standard indicators such as migration background, age, school certificates, educational background of the parents • Focus is on economic capital: detailed information about income, property, and so on • Social/cultural capital such as networks and friends is captured less compared to economic capital (most questions were added in the last 5 years) • Health: subjective wellbeing, Satisfaction with health, self-rated health, quality of sleep, sadness, disability, stress	• Standard indicators such as migration background, age, school certificates, educational background of the parents • Economic capital is measured, i. e., by income, parents' job • Main focus on language, reading skills, education-related questions, as well as social and cultural capital • Especially items regarding social and cultural capital, i. e., visiting the theater, ambitious friends, support from family • Health: self-rated health, school wellbeing, days of absence due to illness, stress
Regional Labor Market Indicators		
Number of apprenticeship vacancies, unemployment rate, Skilled labor shortage	Provision of labor market data via the Research Data Center of the Federal Employment Agency at the IAB (FDZ IAB)	
Non-formal Education Landscape		
Number of offers in different sectors, Variety of activities	No comprehensive data available	
Participation in Non-Formal Education		
Engagement Characteristics		
Variety	• Organized activities: sports, music (only at age 17) • Early childhood education activities (e. g., music activities) • Spare-time activities: e. g., spending time with friends, playing music, social engagement, playing on a computer at 11/12, 13/14, and 17 (unclear whether guided/non-guided) • More options for refugees/migrants (e. g. cultural club) • Engagement in school (e. g., student representative, school paramedic)	• Organized activities: Sport, Music, Arts (available each wave) • Additional battery organized activities: youth clubs, voluntary relief organizations, churches, denominational/religious youth groups, fan clubs, culture clubs, political associations, others (open question) (asked grade 9 and 3 years after) • Engagement in school (e. g., student representative, school paramedic)

Dimensions	SOEP	NEPS (SC03 & SC04)
Duration	• Only for music and sports, if the person still participates at age 17 • Spare-time activities: regularly asked from age 11 on (3 measurement points before 18, yearly after)	• Continuous measuring of sports, arts, and music during and after school years • Beginning/duration of additional activities is unclear
Intensity	• No information about music or sports • Frequency measured for spare-time activities ranges from daily to once a month/never	• Organized activities: frequency measured for sports, music, arts • Additional organized activities: intensity only asked grade 9 and 3 years after/frequency measured from daily to once a month/never
Joy	/	Available for music, arts (not frequently measured)
Self-determination	/	/
Responsibility	Item: holding an honorary office (from 18 years on) added in a leisure time battery and as an additional independent question	Additional organized activities: Only asked grade 9 and 3 years later (includes sports and music clubs)
Program Characteristics		
Quality	/	/
Type	/	Information on the type of provider (VHS, club, school, alone) given for art, music, sports
Norms/Structure	/	/
Peers	/	/
Activity Leader	/	/
Youth Outcomes		
General Skills & Resources		
Educational Performance/Aspiration, Self-Concept, Social Network, Specific Skills, Well-being, Less Problem Behavior	• Information on grades (main subjects), educational aspiration, occupational wish, well-being, partly problem behavior (cigarettes and alcohol) • Cognitive test for assignment of word pairs, complete equations, and assign figures at age 16/17 since 2006 • Scales such as Big5, locus of control frequently measured during childhood and after • No information on social networks and specific skills • Social capital covers information about friends and family (most added in survey year 2015/2017)	• Information on grades (different subjects), self-assessment of school performance, well-being, educational and occupational aspiration (frequently measured) • Various competency tests (e. g., ICT literacy, mathematic/language competencies) conducted at different survey years • Broad range of scales on skills and attitudes, such as Big5 • Focus on language and reading skills • Social capital covers detailed information on friends and family, i. e., if they are ambitious, time and effort, career orientation

Dimensions	SOEP	NEPS (SC03 & SC04)
STWT Specific Outcomes		
Professional Self-Concept	/	/
Vocational Goal Orientation	• Occupational wish measured at age 16/17 • Career orientation/plans measured at age 16/17 • Information on income, working hours, and details about the employer (yearly)	• Occupational aspiration, frequently asked from grade 9 on • Career orientation, frequently asked from grade 9 on • Information about income, working hours, and vocational success is frequently asked once the respondent leaves school
Professional Social Network	/	Acquaintances working in the same profession, advice of acquaintances
Vocational Skills	No specific skills captured (only, e. g., Big5, risk aversion, locus of control)	• Skills achieved during an internship, i. e., working with computers, communication skills, handling money (grade 9) • Taking part in further job training during apprenticeship • Skills achieved during the study program, i. e., critical thinking, working independently
Successful STWT	Monthly deployment status (but no difference between school, university, or school-based vocational educational training)	• Monthly employment and educational status (different and detailed questions about the kind of apprenticeship/study program) • Questions regarding the quality and success of the apprenticeship/study program, i. e., joy, grades, motivation, skills, further job training

Note. Information on captured indicators derived from open access documentation of data sets (cf. Table 1, Appendix).

As shown in Tab. 1, non-formal education is not measured adequately in both data sets. Not all dimensions are captured sufficiently; program characteristics are rarely considered in both data sets. Thus, their analytic potential for our conceptual framework can be rated as widely equal. While the SOEP offers the possibility to analyze the birth cohort effect and track whether a person holds a voluntary office from 18 years on, the NEPS covers non-formal education in more detail during childhood. Through the regular measurement of sports, music, and art activities, and an additional item battery at two measurement points (a few program characteristics regarding music, sports, and art activities), non-formal education is captured in more detail. A difference, however, is seen when looking at the measurement of STWT. Although both track occupational status and current working conditions, the NEPS captures general skills for STWT as well as the occupational decision and its further process in more detail. Another difference is observable when considering social background indicators as well as the three capital forms. The SOEP does not

capture social and cultural capital broadly. Although more questions were added in the last few years, the NEPS still covers this information in more detail and continuously. Overall, the choice of data set depends on the research question and interest. Besides their limitations, both data sets have considerable potential for analyzing non-formal education.

5. Discussion

The synopsis of the state of research reveals the potential of non-formal education through organized activity participation for positive youth development (Farb & Matjasko, 2012), going beyond the strengthening of school-related formal competencies. However, despite ample evidence of positive developmental effects, the review of findings must also be regarded differentiated, as positive effects do not generally occur and are mostly relatively small (Gardner et al., 2008; Hemming & Reißig, 2015). Therefore, a heuristic conceptual framework was developed in a theoretically guided approach, including sociological, psychological, and educational perspectives. The conceptual framework can serve as a basis for further empirical studies dealing with the differentiated analysis of the relationship between organized activity participation and STWT, which has rarely been addressed in previous studies (Hemming et al., 2020; Hemming & Reißig, 2015). Therein, the well-founded consideration of social background characteristics with the capital approach (Bourdieu, 1983) has proven itself in various studies (Harring, 2011) and is important for revealing social selection processes within non-formal activity participation (Hemming & Tillmann, 2023). The detailed consideration of activity determinants in the form of engagement and program characteristics is new and underlines the relevance of methodologically capturing them with specific measuring instruments, which has hardly been implemented in empirical studies (Hemming et al. 2024). Considering general skills and resources as well as STWT-specific outcomes facilitates the interpretation of supportive effects of non-formal education and enables the exploration of specific questions. Thus, the conceptual framework will strengthen and contribute to the development of the research field of non-formal education and STWT, especially in German-speaking countries.

From a methodological point of view, the paper emphasizes the need for specific measures and methods of data collection when working empirically with the developed conceptual framework and related research questions. Appropriate methods would include longitudinal designs (Grunert, 2016) or detailed (retrospective) records of leisure activities by using e. g. a calendar instrument (Furthmüller, 2016).

Our overview of selected German studies shows that data on organized activity participation and related positive developmental effects on STWT is available but limited. The listed data sets have shown several issues that restrict the potential of analyzing non-formal education (e. g., missing continuous measuring, missing breadth, motivational beliefs, and program characteristics). The comparison be-

tween the two most promising data sets, NEPS and SOEP, showed that both do not measure non-formal education adequately, especially lacking in program characteristics (e. g., quality, type, norms/structures, peers, and activity leaders in an activity) and its dimensions (e. g., breadth, frequency, and intensity) over the years. Despite their limitations, there is particular potential for the analysis of music, sports, and art activities in both panels. The NEPS especially allows for observing participation patterns in these three activities every year. Considering the limited research-economic framework under which both panel studies are conducted, we would nevertheless like to propose minimum standards for the recording of non-formal activities. Based on the NEPS's general aim to track formal, informal and non-formal education processes in the long term, we would recommend recording at least the frequency and intensity of these three activities regularly. For the SOEP, which focuses on the socio-economic dimension, the access to offers (participation costs, effort) as well as non-formal activities in young adulthood (in addition to education and work) should be focused more strongly. For this, information needs to be collected more regularly and in both the youth and adult questionnaires.

To examine the positive developmental effects of participation in non-formal activities based on the conceptual framework, future panel studies need to consider the following aspects: Research must address program elements, particularly "quality," and find adequate items for this purpose. Continuous information about different types (breadth) and intensity of activities, as well as taking an honorary office, is needed. Social background information must be included to explore selection processes. Continuously high numbers of cases are needed to examine different forms of activities and follow the effects into adulthood. Regarding the improved training and job conditions for young people in many regions and the shortage of skilled workers in many sectors, soft skills developing before but also during a professional career are becoming enormously important. Therefore, it is indispensable to be able to understand non-formally acquired skills and their influence on working life more precisely, to which the developed conceptual framework makes an important contribution.

Limitations and future prospects: Overall, the conceptual framework is based predominantly on the state of research in the field of non-formal education. Due to the limited scope of the article, less consideration was given to career choice and transition studies. This should be considered when working with the conceptual framework in future research. Nevertheless, future transition studies can and should follow on from this, e. g., to identify the specific learning and development potential of leisure activities, in order to further develop and improve measures to support STWT. So far, the type of leisure activity has not been considered in the conceptual framework. Regarding the potential for improving data collection in the large panel studies, activity specifics could play an important role and should be integrated.

References

Abdullai, J., Tresi, A., & Ramadani, K. (2012). Non-formal Education a Tool for Reducing the Transition Obstacles. *Procedia – Social and Behavioral Sciences*, *46*, 4923–4927. https://doi.org/10.1016/j.sbspro.2012.06.360

Achatz, J., Jahn, K., & Schels, B. (2022). On the non-standard routes: vocational training measures in the school-to-work transitions of lower-qualified youth in Germany. *Journal of Vocational Education & Training*, *74*(2), 289–310. https://doi.org/10.1080/13636820.2020.1760335

Agans, J.P., Champine, R.B., DeSouza, L.M., Mueller, M.K., Johnson, S.K., & Lerner, R.M. (2014). Activity involvement as an ecological asset: Profiles of participation and youth outcomes. *Journal of Youth and Adolescence*, *43*(6), 919–932. https://doi.org/10.1007/s10964-014-0091-1

Alicke, T., Heisig, S., Moisl, D., Prause, J., & Rexroth, M. (2009). Resilienz und Bewältigungsstrategien von jungen Menschen mit Migrationshintergrund beim Übergang von Schule in Ausbildung [Resilience and coping strategies of young people with a migration background during the transition from school to vocational training]. *Abschlussbericht*. Frankfurt A.M. Ua: Institut für Sozialarbeit und Sozialpädagogik.

Arnold, R., Lipsmeier, A., & Rohs, M. (Eds.). (2020). *Springer Reference. Handbuch Berufsbildung [Handbook Vocational Education and Training]: Mit 53 Abbildungen und 19 Tabellen* (3., völlig neu bearbeitete Auflage). Springer VS. https://doi.org/10.1007/978-3-658-19312-6

Arnoldt, B., Furthmüller, P., & Steiner, C. (2016). Zur Relevanz von Ganztagsteilnahme bei der Bewältigung kritischer Passagen am Ende der Schullaufbahn [Relevance of all-day participation in coping with critical passages at the end of the school career]. *Zeitschrift für Pädagogik*, *62*(6), 812–829.

Balaguer, Á., Benítez, E., Albertos, A., & Lara, S. (2020). Not everything helps the same for everyone: relevance of extracurricular activities for academic achievement. *Humanities and Social Sciences Communications*, *7*(1), 1–8; https://doi.org/10.1057/s41599-020-00573-0.

Barber, B.L., Abbott, B.D., Neira, C.J.B., & Eccles, J.S. (2014). Meaningful activity participation and positive youth development. In Furlong, Michael J., Gilman, Richard, Huebner, E. Scott (Eds.), *Handbook of positive psychology in schools* (pp. 227–244). Routledge.

Blomfield, C.J., & Barber, B.L. (2011). Developmental experiences during extracurricular activities and Australian adolescents' self-concept: Particularly important for youth from disadvantaged schools. *Journal of Youth and Adolescence*, *40*(5), 582–594. https://doi.org/10.1007/s10964-010-9563-0

Bohnert, A., Fredricks, J., & Randall, E. (2010). Capturing Unique Dimensions of Youth Organized Activity Involvement: Theoretical and Methodological Considerations. *Review of Educational Research*, *80*(4), 576–610. http://www.jstor.org/stable/40927294

Bourdieu, P. (1983). Ökonomisches Kapital, kulturelles Kapital, soziales Kapital [Economic capital, Cultural capital, Social capital]. In R. Kreckel (Ed.), *Soziale Ungleichheiten* (pp. 183–198). Schwartz.

Braun, S. (2014). Voluntary Associations and Social Capital. In M. Freise, & T. Hallmann (Eds.), *Modernizing Democracy: Associations and Associating in the 21*st *Century* (pp. 59–70). Springer.

Bundesministerium für Familie, Senioren, Frauen und Jugend (Ed.). (2021). *Freiwilliges Engagement in Deutschland [Volunteering in Germany]: Zentrale Ergebnisse des Fünften Deutschen Freiwilligensurveys (FWS 2019).*

Busseri, M. A., Rose-Krasnor, L., Willoughby, T., & Chalmers, H. (2006). A longitudinal examination of breadth and intensity of youth activity involvement and successful development. *Developmental Psychology*, *42*(6), 1313–1326. https://doi.org/10.1037/0012-1649.42.6.1313

Cabane, C. (2015). Childhood Sporting Activities and Adult Labour-Market Outcomes. *Annals of Economics and Statistics*, *119–120*, 123–148.

Cabane, C., Hille, A., & Lechner, M. (2016): Mozart or Pelé? The effects of adolescents' participation in music and sports. *Labour Economics, 41*, 90–103.

Colley, H., Hodkinson, P., & Malcolm, J. (2003). *Informality and formality in learning*. *LSRC reference*. Learning and Skills Research Centre.

Commission of the European Communities. (2000). *A Memorandum of Lifeong Learning* (SEC(2000) 1832). https://uil.unesco.org/i/doc/lifelong-learning/policies/european-communities-a-memorandum-on-lifelong-learning.pdf

Denault, A.-S., & Poulin, F. (2009). Intensity and breadth of participation in organized activities during the adolescent years: Multiple associations with youth outcomes. *Journal of Youth and Adolescence*, *38*(9), 1199–1213. https://doi.org/10.1007/s10964-009-9437-5

Denault, A.-S., Ratelle, C. F., Duchesne, S., & Guay, F. (2019). Extracurricular activities and career indecision: A look at the mediating role of vocational exploration. *Journal of Vocational Behavior*, *110*, 43–53. https://doi.org/10.1016/j.jvb.2018.11.006

Düx, W. (2009). *Kompetenzerwerb im freiwilligen Engagement [Acquisition of competences in voluntary engagement]: Eine empirische Studie zum informellen Lernen im Jugendalter* (2. Aufl.). Schriften des Deutschen Jugendinstituts Jugend. VS Verl. für Sozialwiss.

Düx, W., & Rauschenbach, T. (2013). Bildung im Jugendalter. [Education in adolescence]. In Y. Kaiser, M. Spenn, M. Freitag, T. Rauschenbach, & M. Corsa (Eds.), *Handbuch Jugend: Evangelische Perspektiven* (pp. 53–78). Verlag Barbara Budrich.

Düx, W., & Sass, E. (2005). Lernen in informellen Kontexten [Learning in informal contexts]: Lernpotenziale in Settings des freiwilligen Engagements. *Zeitschrift Für Erziehungswissenschaft*, *8*(3), 394–411.

Erlinghagen, M., Fauser, S., & Lübke, C. (2018). *Soziale Partizipation und arbeitsmarktrelevante Persönlichkeitsentwicklung von Jugendlichen mit und ohne Migrationshintergrund.* [Social participation and labour market-relevant personality development of young people with and without a migration background]. https://doi.org/10.13140/RG.2.2.10130.56000

Farb, A. F., & Matjasko, J. L. (2012). Recent advances in research on school-based extracurricular activities and adolescent development. *Developmental Review*, *32*(1), 1–48. https://doi.org/10.1016/j.dr.2011.10.001

Fend, H., Berger, F., & Grob, U. (2009). 1527 „Lebensgeschichten" von der späten Kindheit ins Erwachsenenalter [1527 „Life stories" from late childhood into adulthood]– Konzept und Durchführung der LifEStudie. In H. Fend, F. Berger, & U. Grob (Eds.), *Lebensverläufe, Lebensbewältigung, Lebensglück: Ergebnisse der LifE-Studie* (pp. 9–34). VS Verl. für Sozialwiss. https://doi.org/10.1007/978-3-531-91547-0_1

Finger, C. (2022). (Mis) Matched College Aspirations and Expectations: The Role of Social Background and Admission Barriers. *European Sociological Review*, *38*(3), 472–492.

Fink, C. (2010). *Der Übergang von der Schule in die berufliche Ausbildung [The transition from school to vocational training]*. VS Verlag für Sozialwissenschaften. https://doi.org/10.1007/978-3-531-93208-8

Fischer, N. (2020). Wirkungen außerunterrichtlicher Angebote an Ganztagsschulen. [Effects of extracurricular activities at all-day schools]. In P. Bollweg, J. Buchna, T. Coelen, & H.-U. Otto (Eds.), *Handbuch Ganztagsbildung* (2nd ed., pp. 1537–1547). VS. https://doi.org/10.1007/978-3-658-23230-6_113

Fischer, N., & Theis, D. (2014). Extracurricular participation and the development of school attachment and learning goal orientation. *Journal of Developmental Psychology*, *50*(17), 88–93.

Fischer, N., Holtappels, H.G., Stecher, L., & Züchner, I. (2011). Theoretisch-konzeptionelle Bezüge – ein Analyserahmen für die Entwicklung von Ganztagsschulen. [Theoretical-conceptual references – an analytical framework for the development of all-day schools]. In N. Fischer, H.G. Holtappels, E. Klieme, T. Rauschenbach, L. Stecher, & I. Züchner (Eds.), *Ganztagsschule: Entwicklung, Qualität, Wirkungen. Längsschnittliche Befunde der Studie zur Entwicklung von Ganztagsschulen (StEG)* (pp. 18–29). Juventa.

Furthmüller, P. (2016). Retrospective Measurement of Students' Extracurricular Activities with a Self-administered Calendar Instrument. *Methods, data, analyses, 10*(1), 73-96. https://doi.org/10.12758/mda.2016.004

Gardner, M., Roth, J., & Brooks-Gunn, J. (2008). Adolescents' participation in organized activities and developmental success 2 and 8 years after high school: Do sponsorship, duration, and intensity matter? *Developmental Psychology*, *44*(3), 814–830. https://doi.org/10.1037/0012-1649.44.3.814

Grunert, C. (2012). *Bildung und Kompetenz: Theoretische und empirische Perspektiven auf außerschulische Handlungsfelder. [Education and Competence: Theoretical and Empirical Perspectives on Extracurricular Contexts. Studien zur Schul- und Bildungsforschung: Vol. 44.* Springer VS. http://link.springer.com/book/10.1007/978-3-531-19395-3

Grunert, C. (2016). Informelles Lernen im Jugendalter. [Informal learning in adolescence]. In M. Harring, M.D. Witte, & T. Burger (Eds.), *Handbuch informelles Lernen* (pp. 331–343). Beltz Juventa.

Hansen, D.M., Larson, R. W [Reed W.], & Dworkin, J.B. (2003). What Adolescents Learn in Organized Youth Activities: A Survey of Self-Reported Developmental Experiences. *Journal of Research on Adolescence*, *13*(1), 25–55. https://doi.org/10.1111/1532-7795.1301006

Harring, M. (2011). *Das Potenzial der Freizeit*. [The potential of leisure time]. [Zugl.: Bremen, Univ., Diss., 2011] VS Verlag.

Harring, M. (2013). Freizeit, Peers und Musik. [Leisure, Peers and Music]. In R. Heyer, S. Wachs, & C. Palentien (Eds.), *Handbuch Jugend – Musik – Sozialisation* (pp. 293–322). Springer VS.

Hemming, K. (2019). *Organised leisure activities: A theoretical approach to positive effects on resources for coping with transition to tertiary education and work*. Poster presentation at the WERA-IRN Extended Education conference, Stockholm, Sweden.

Hemming, K., & Reißig, B. (2015). Freizeitaktivitäten jugendlicher Hauptschüler/- innen und ihr Einfluss auf berufliche Zielorientierungen und den Übergang in Ausbildung und Beruf. [Leisure activities of adolescent secondary school students and their influence on vocational goal orientations and the transition to training and employment]. *Diskurs Kindheits- Und Jugendforschung*, *10*(1), 81–97. https://doi.org/10.3224/diskurs.v10i1.17700

Hemming, K., & Tillmann, F. (2023). Selektive Freizeit – Soziale Herkunft und die Nutzung non-formaler Bildungsangebote im Jugendalter [Selective leisure time – social background and the use of non-formal education programmes in adolescence]. *ZSE Zeitschrift für Soziologie der Erziehung und Sozialisation*, *43*(1), 4–21. https://research.ebsco.com/linkprocessor/plink?id=026bb6c7-15db-3dc6-bcda-1ac3fa6909e3

Hemming, K., Albert, K., & Hofherr, S. (2020). Organsierte sportliche Aktivität und berufliche Zielorientierung von Hauptschüler*innen am Übergang von der Schule in die berufliche Ausbildung. [Organized sporting activity and vocational goal orien-

tation of secondary school pupils at the transition from school to vocational training]. *Sportunterricht*, *69*, 250–255.

Hemming, K., Hofherr, S., & Hartig, S. (2024). Patterns of Participation in Organized Leisure Activities of Young People in Low and Middle Secondary Educational Tracks in Germany. *International Journal for Research on Extended Education*, *12*(1–2023) 53–77. https://doi.org/10.3224/ijree.v11i1.06

Jacob, M., & Solga, H. (2015). Germany's Vocational Education and Training System in Transformation: Changes in the Participation of Low- and High-Achieving Youth Over Time. *European Sociological Review*, *31*(2), 161–171. https://doi.org/10.1093/esr/jcv016

Kleinert, C. (2015). Regionale Disparitäten beim Übergang in duale Ausbildung [Regional disparities in the transition to dual vocational training]: eine Typologie des IAB. *Chancen und Risiken aus der demografischen Entwicklung für die Berufsbildung in den Regionen*, 63–78.

Kreher, T. (2008). Jugendverbände, Kompetenzentwicklung und biografische Nachhaltigkeit. [Youth associations, competence development and biographical sustainability]. In W. Lindner (Ed.), *Kinder- und Jugendarbeit wirkt: Aktuelle und ausgewählte Evaluationsergebnisse der Kinder- und Jugendarbeit* (pp. 109–123). VS Verl. für Sozialwiss.

Larson, R. W [R.W.] (2000). Toward a psychology of positive youth development. *The American Psychologist*, *55*(1), 170–183. https://doi.org/10.1037//0003-066x.55.1.170

Lohmann, H., Spieß, C.K., Groh-Samberg, O., & Schupp, J. (2009). Analysepotenziale des Sozio-oekonomischen Panels (SOEP) für die empirische Bildungsforschung. [Analysis Potentials of the Socio-Economic Panel (SOEP) for Empirical Educational Research]. *Zeitschrift Für Erziehungswissenschaft*, *12*(2), 252–280. https://doi.org/10.1007/s11618-009-0069-z

Mahoney, J.L., & Cairns, R.B. (1997). Do extracurricular activities protect against early school dropout? *Developmental Psychology*, *33*, 241–253.

Mahoney, J.L., & Stattin, H. (2000). Leisure activities and adolescent antisocial behavior: The role of structure and social context. *Journal of Adolescence*, *23*(2), 113–127. https://doi.org/10.1006/jado.2000.0302

Mahoney, J.L., & Vest, A.E. (2012). The Over-Scheduling Hypothesis Revisited: Intensity of Organized Activity Participation During Adolescence and Young Adult Outcomes. *Journal of Research on Adolescence*, *22*(3), 409–418. https://doi.org/10.1111/j.1532-7795.2012.00808.x

Mahoney, J.L., Larson, R. W [Reed W.], & Eccles, J.S. (Eds.). (2005). *Organized activities as contexts of development: Extracurricular activities, after-school and community programs*. Erlbaum. http://www.loc.gov/catdir/enhancements/fy0709/2003062650-d.html

Metsäpelto, R.-L., & Pulkkinen, L. (2014). The benefits of extracurricular activities for socioemotional behavior andschool achievement in middle childhood: An overview of the research. *Journal for Education Research Online, 6*(3), 10–33. https://www.waxmann.com/artikelART102750.

Modecki, K.L., Blomfield Neira, C., & Barber, B.L. (2018). Finding what fits: breadth of participation at the transition to High School mitigates declines in self-concept. *American Psychological Association*, *54*(10), 1954–1970. https://doi.org/10.1037/dev0000570

Oberle, E., Ji, X.R., Guhn, M., Schonert-Reichl, K.A., & Gadermann, A.M. (2019). Benefits of Extracurricular Participation in Early Adolescence: Associations with Peer Belonging and Mental Health. *Journal of Youth and Adolescence*, *48*(11), 2255–2270. https://doi.org/10.1007/s10964-019-01110-2

Pollock, A., & Berge, E. (2018). How to do a systematic review. *International Journal of Stroke*, *13*(2), 138–156.

Prenzel, M., Sälzer, C., Klieme, E [E.], & Köller, O. (Eds.). (2013). *PISA 2012. Fortschritte und Herausforderungen in Deutschland. [PISA 2012. Progress and challenges in Germany]*. Waxmann.

Rauschenbach, T. (2011). Alltagsbildung – die andere Seite der Bildung. [Education in everyday life – the other side of education]. In M. Krüger, & N. Neuber (Eds.), *Bildung im Sport. Beiträge zu einer zeitgemäßen Bildungsdebatte* (pp. 35–52). VS.

Rohs, M. (2014). Konzeptioneller Rahmen zum Verhältnis formellen und informellen Lernens. [Conceptual framework on the relationship between formal and informal learning]. *Schweizerische Zeitschrift für Bildungswissenschaften*, *36*(3), 391–406.

Schmid, Martin (2020). Länderspezifische Disparitäten in der Anerkennung und Validierung von Bildungsleistungen – zur (un-)möglichen Vergleichbarkeit non-formal und informell erworbener Kompetenzen in der Berufsbildung [Country-specific disparities in the recognition and validation of educational achievements – on the (im)possible comparability of non-formally and informally acquired competences in vocational education and training]. Eine kontrastierende Analyse zwischen Deutschland, Österreich und der Schweiz. *Berufs- und Wirtschaftspädagogik Online 39,* Dezember 2020.

Schüpbach, M., & Lilla, N. (2019). *Extended Education from an International Comparative Point of View*. Springer Fachmedien. https://doi.org/10.1007/978-3-658-27172-5

Seeber, S. (2013). Der Übergang von der Schule in den Beruf: Rahmenbedingungen und aktuelle Herausforderungen [The transition from school to work: framework conditions and current challenges]. *Berufs- und Wirtschaftspädagogik Online* (Spezial 7: Erfahrungen und Impulse aus dem Schulversuch EARA), 1–30.

Simmons, C., Kan, E., Simpkins, S., Datta, S., Steinberg, L., Frick, P.J., & Cauffman, E. (2021). Assessing the Association between Participation in Extracurricular Activities and Delinquent Behavior among Justice-Involved Young Men. *Journal of Research on Adolescence*, *31*(2), 335–350. https://doi.org/10.1111/jora.12600

Sporer, T., & Noack, P. (2008). Partizipation in organisierten Jugendgruppen, Religiosität und psychosoziale Anpassung. [Participation in organised youth groups, religiosity and psychosocial adjustment]. *Diskurs Kindheits- und Jugendforschung, 2008*(4), 423–437.

Stecher, L., & Maschke, S. (2013). Research on Extended Education in Germany: A General Model with All-Day Schooling and Privat Tutoring as Two Examples. *International Journal for Research on Extended Education*, *1*(2013), 31–52. https://elibrary.utb.de/doi/epdf/10.3224/ijree.v1i1.05

Tully, C.J., & Wahler, P. (2004). Ergebnislinien zum außerschulischen Lernen. [Outcome lines on out-of-school learning]. In P. Wahler, C.J. Tully, & C. Preiß (Eds.), *Jugendliche in neuen Lernwelten* (pp. 189–211). VS Verlag für Sozialwissenschaften. https://doi.org/10.1007/978-3-322-93530-4_9

UNICEF. (2019). *Transition from School to Work*. UNICEF education section. https://www.unicef.org/media/60366/file/Transitions-from-school-to-work-2019.pdf

Appendix

Table 2: *List of Abbreviations*

Abbreviation	German title	English title	URL
NEPS	Nationales Bildungspanel	National Educational Panel Study	www.neps-data.de
SOEP	Sozio-oekonomisches Panel	Socio-Economic Panel	https://www.diw.de/en/diw_01.c.615551.en/research_infrastructure__socio-economic_panel__soep.html
GESIS	Leibniz-Institut für Sozial-wissenschaften	Leibniz Institute for Social Sciences	www.gesis.org
FDZ	Forschungs-datenzentrum	Research Data Center	www.forschungsdatenzentrum.de
IAB	Institut für Arbeitsmarkt- und Berufsforschung	Institute for Employment Research	https://iab.de/
BIJU	Bildungsverläufe und psychosoziale Entwicklung im Jugend- und jungen Erwachsenenalter	Learning Processes, Educational Careers, and Psychosocial Development in Adolescence and Young Adulthood Study	www.dipf.de/de/forschung/aktuelle-projekte/bildungsverlaeufe-und-psychosoziale-entwicklung-im-jugend-und-jungen-erwachsenenalter-biju#0
BiKS	Bildungsprozesse, Kompetenzentwick-lung und Selektion-sentscheidungen im Vorschul- und Schulalter	Educational processes, competence development and selection decisions in preschool and school age	www.uni-bamberg.de/biks/
BIBB-Übergangsstudie	Bundesinstitut für Berufsbildung- Übergangstudien	Federal Institute for Vocational Education and Training- Transition Studies	www.bibb.de/de/62973.php
PASS	Panel Arbeitsmarkt und Soziale Sicherung	Panel Study Labor Market and Social Security	https://iab.de/das-iab/befragungen/iab-haushaltspanel-pass/
TOSCA	Transformation des Sekundarschul-systems und akademische Karrieren	Transformation of the secondary school system and academic careers	https://uni-tuebingen.de/en/faculties/faculty-of-economics-and-social-sciences/subjects/department-of-social-sciences/education-sciences-and-psychology/research/current-studies/tosca/
DJI-Übergangspanel	Deutsches Jugendinstitut-Übergangspanel	DJI Transition Panel	www.dji.de/uebergangspanel/phase1
LAU	Aspekte der Lernausgangslage und der Lernentwicklung	Aspects of the learning situation and learning development	https://bildungsserver.hamburg.de/lau/

Abbreviation	German title	English title	URL
ULME I, II, III	Untersuchung von Leistungen, Motivation und Einstellungen der Schülerinnen und Schüler in den Abschlussklassen der Berufsschulen	Investigation of performance, motivation and attitudes of students in the final classes of vocational schools	http://www.gaebler.info/hamburg/ulme-1.pdf https://www.erziehungswissenschaften.hu-berlin.de/de/intern_alt/ebf/document/ulme2pdf/@@download/file/ULME2.pdf https://www.fachportal-paedagogik.de/literatur/vollanzeige.html?FId=1046163
BerO	Berufliche Orientierung: Berufswahl und Studienwahl	Professional orientation: career choice and choice of studies	www.infas.de/bero/
BerinA	Berufseinstieg von Akademikerinnen und Akademikern	Career entry of academics	https://preview.iab.de/teilnehmerinfo/berufseinstieg-von-akademikerinnen-und-akademikern-berina/
Mannheimer Bildungspanel	Mannheimer Bildungspanel	Mannheim Education Panel	https://www.mzes.uni-mannheim.de/d7/de/projects/bildungsaspirationen-und-bezugsgruppen
Shell-Study	Shell Jugendstudie	Shell Youth Study	https://www.shell.de/ueber-uns/initiativen/shell-jugendstudie.html
FWS	Deutsche Freiwilligen Survey	German Survey on Volunteering	https://www.dza.de/forschung/fws
AES	Datenerhebung über die Beteiligung und Nichtbeteiligung Erwachsener am lebenslangen Lernen	Data collection on adult participation and non-participation in lifelong learning	https://www.bibb.de/de/1656.php