

STUDY PROFILE

Zurich Longitudinal Study ‘From School to Middle Adulthood’

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(Received November 2014 Revised April 2015)

<http://dx.doi.org/10.14301/llcs.v6i4.330>

Abstract

The Zurich Longitudinal Study ‘From School to Middle Adulthood’ (ZLSE) is a longitudinal study which, to date, encompasses ten surveys from various projects. The study covers a life span from the age of 15th to the 49th year of life and started in 1978 when the participants attended their last compulsory school year; another survey is planned for spring 2015 at the age of 52. The focus lies, on the one hand, on a broad coverage of various personality dimensions supplemented by sociobiographical information in adolescence, and, on the other hand, on the professional and non-professional development from adolescence to adulthood. At this moment, data of 485 people representative of the German-speaking part of Switzerland are available. The aim of this article is to give an overview of the study and to explain in detail the individual surveys.

Keywords

Professional development, longitudinal study, career, personality, adolescence, adulthood, Switzerland

Introduction

The transition from school to work has received much attention over the last few decades, not only on the practical but also on the scientific level (OECD, 2000; Schoon et al., 2009). In countries with a Vocational and Education Training (VET) system this transition starts much earlier and is more strongly related to the economy and the enterprise system than in countries relying on a general education system with a strong academic track. In the dual VET system as it is practiced in countries such as Switzerland, Germany or Austria, a strong emphasis on training in a company is supplemented by teaching in a vocational school which usually lasts three or four years. Therefore a process of matching the interests of an adolescent with a company starts to take place at around age 15-16. This first phase

of the transition from school to work, which began in the 1970s for ZLSE participants, marks the start of the study to be presented here. Although not planned, favourable circumstances made it possible to continue the study at irregular intervals to track career development through the ages of 20, 36 and up until 49, from adolescence to middle adulthood. This provides the chance to analyse how this generation of late babyboomers born in around 1963 has dealt with the economic, societal and political developments of the past few decades. Among other things, a shift from an industry-based to a service-based economy took place, along with advancing economic globalization, changes in traditional gender roles and changes in demography. How did today’s middle-aged generation (approximately 50 years old) cope with these developments? This generation is now mostly active in

professional and family life, and many have children in the educational system. This cohort completed vocational education and training or academic education at the end of the 1970s or the beginning of the 1980s and had, in the following decades, to cope in an active or passive way with many of the aforementioned changes (Leemann & Keck, 2005; Sheldon, 2005).

Study objectives

The Zurich Longitudinal Study 'From School to Middle Adulthood' (ZLSE), which began in 1977, was initially only planned as a short longitudinal study on vocational choice of adolescents. It was later expanded to include a study on personality development during apprenticeship and continued into early and now middle adulthood (Schallberger & Spiess Huldi, 2001). In the meantime ten survey waves (B1-B10, B11 is planned) were carried out in Switzerland at irregular intervals. At this moment the survey spans more than 30 years and covers a life span from age 15 to age 49. The last survey was carried out in summer 2012, and provides data for 485 people. In the following section the study objectives of the main phases are briefly described and summarised in figure 1.

Phase 1: Vocational choice

In the 1970s there was a shortage of qualified young people in Switzerland aiming for an apprenticeship, even though this was still the most popular choice. However, increasing numbers of young people (and their parents) aspired to the gymnasium and the academic track. This was of great concern for the Swiss Trade and Crafts Association and so a research project was initiated. The two universities of Lausanne and Zurich were asked to conceptualize a study "Vocational and professional choice and training of apprentices in Switzerland". It was led by Francis Gendre and Jean-Blaise Dupont from the University of Lausanne and François Stoll from the University of Zurich and was financed by the Swiss Ministry of Economic Affairs. The main goal of the project (1977-1982) was to investigate the determinants and the course of the career choice process (Gendre, 1987; Gendre & Dupont, 1982; Häfeli, 1983). The research was based on the theories and empirical work of several authors and a broad conceptual framework was used (Blau, Gustad, Jessor, Parnes, & Wilcock, 1956; Holland, 1973; Super, 1980). The results demonstrate the importance of the individual (with cognitive, affective and evaluative characteristics), the family, the socio-cultural environment and working environment in predicting

the vocational choices of adolescents (Gendre & Dupont, 1982).

Phase 2: Vocational education and training and personality development

Following the studies of Kohn and Schooler (1983) on reciprocal effects of job conditions and personality, the question was if and in what way personality development between the ages 15 and 19 is connected with the working and training situation of the adolescents. The results show a complex interaction of selection and socialisation influences on personality traits such as intelligence, self-esteem and masculinity/femininity, thus supporting Kohn and Schooler's position of reciprocal effects (Häfeli, Kraft, & Schallberger, 1988; Schallberger, 1987; Schallberger, Häfeli, & Kraft, 1984). This research, conducted between 1980 and 1984 was under the leadership of Urs Schallberger (Psychological Institute, University of Zurich) and was financed by the Swiss National Foundation.

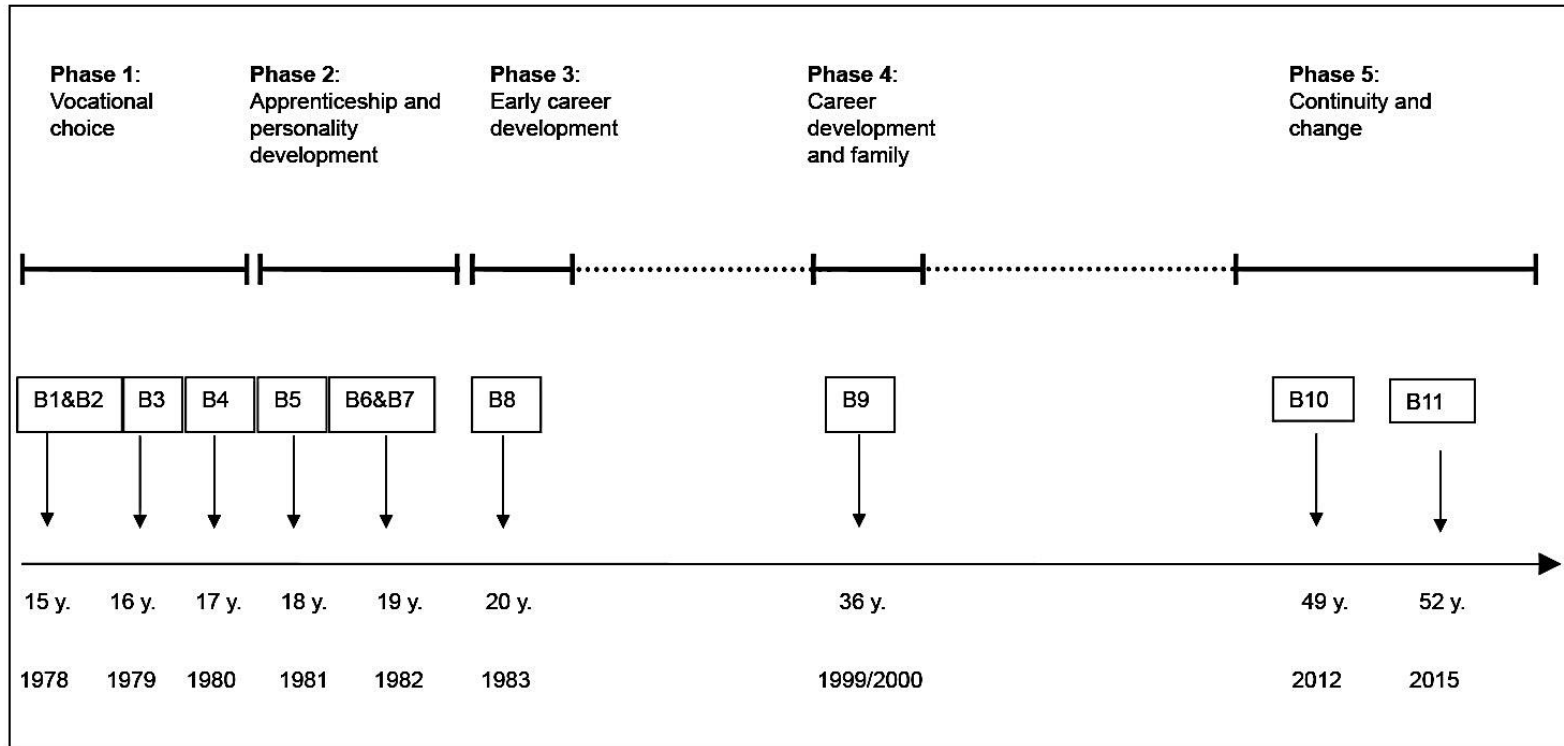
Phase 3: Early career development

The subject of this phase of the survey was the first career steps and adaptation processes of the young adult participants after finishing their vocational training or their next steps after finishing a general education in a gymnasium. The results support the developmental theory of occupational aspirations by Gottfredson (1971) whereby gender roles and social class restrict, to a large degree, the range of acceptable occupations for young people (Gendre, 1987; Gottfredson, 1971). This project (1982-1985) was again conducted by Francis Gendre of the University of Lausanne and financed by the Swiss National Foundation.

Phase 4: Career development and family

The aim was to consult the now 36-year-old participants of phase 2 about their professional career development and their actual situations. This information could then be related to adolescent factors, e.g. the influence of risk and protective factors in youth on satisfaction and success in young adulthood thus supporting Werner's work on resilience (Spiess Huldi, Häfeli, & Rüesch, 2006; Werner & Smith, 2001). In another analysis titled "The power of personality" (Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007) traits such as conscientiousness or emotional stability could be demonstrated for the attainment of occupational status in adulthood (Spiess Huldi, 2009). This study (1998-2002) was under the leadership of Urs Schallberger and Claudia Spiess Huldi of the University of Zurich (Schallberger & Spiess Huldi, 2001).

Figure 1. Synopsis of the five phases



Phase 5: Continuity and change

Following the research of Super (1980) and Holland (1973) on career development and Schoon et al. (2009) on life-span development, we are interested in this phase to investigate the career and personality development from adolescence into middle adulthood. How much change and continuity can be observed? What are possible influences on horizontal and vertical career mobility? How can persistent gender segregation be explained? To answer these questions the participants of the last survey were questioned 13 years later, shortly before reaching the age of 50 (B10). Our findings show that wide-spread vertical gender segregation (Charles & Bradley, 2009) is a result not only of personality dimensions (measured in adolescence) but also of traditional gender roles in adulthood (Häfeli, Hättich, Schellenberg, & Schmaeh, 2015). We also find much continuity in career development during more than 30 years, as the majority of the sample is still in the same occupational field (using Holland's typology) – despite the massive economic changes during this period (Schellenberg, Schmaeh, Häfeli, & Hättich, 2015). An additional, expanded survey (B11) is planned in 2015 at the age of 52 (see "Outlook"). The project (conducted between 2011 and 2017) is financed by the Swiss State Secretariat for Education, Research and Innovation (SERI) and is directed by Kurt Häfeli and Claudia Schellenberg (University of Applied Sciences of Special Needs Education Zurich) and Alexander Grob (Psychological Institute, University Basel).

Survey content

Next we present the main topics and dimensions that were covered in each phase (see also table 1).

Phase 1: Vocational choice

The main goal of the first phase was to investigate in a broad terms the determinants and the course of the vocational and professional choice process. Therefore sociobiographical indicators, such as gender, age, and family background, were included. Standardized methods to measure cognitive abilities come from the intelligence structure test IST-70 (Amthauer, 1970) and the vocational and professional ability test BET (Schmale & Schmidtke, 1967). For the measurement of the 'Big Five' (extraversion, neuroticism, agreeableness, conscientiousness, openness to experience) and other personality dimensions a

short version with 155 items of the Adjective Check List / ACL (Gough & Heilbrun, 1980) was used. Other dimensions (see table 1) included locus of control (Reid & Ware, 1974), attitudes toward gender roles (Häfeli, 1983), personal and professional values, occupational interests, achievement motivation, self-esteem (Gendreau & Dupont, 1982), leisure time activities and parent-child relations (Roe & Siegelman, 1963). Finally, the adolescents in B1 and the first and second follow-up (B3, B4) were asked in detail about their career search activities.

An outside perspective was gained by asking the classroom teachers (B2) to rate their students individually on 19 different aspects (personality, work attitudes, school grades and abilities, career prognosis).

Phase 2: VET and personality development

To investigate the reciprocal effects of training conditions and personality development from the 15th to the 19th years of life, study participants were questioned about their occupational histories in the fifth and sixth survey. As a central part, a repeated measurement of the most important personality dimensions from B1 was carried out in B6 (intelligence, personality, values, gender roles etc.). Different aspects of the work and training conditions were also measured, such as content and complexity of the work task (Kohn & Schooler, 1983), motivational work dimensions (Hackman & Oldham, 1975) and social climate (Moos, 1979). In the seventh round of data collection, experts with a broad occupational knowledge were asked to assess the 44 professions and schools represented in the sample survey with regard to 20 dimensions relevant for personality development (Häfeli & Schallberger, 1983).

Phase 3: Early career development

The aim of the eighth survey was to record the actual life and working situation as well as the wellbeing of the now 20-year-old young adults. To do this, information about the study participants' activity since schooldays and their actual living situation (including how they spent their leisure time) was collected. In addition, questions were asked about the following areas: mental and physical health, self-concepts and satisfaction with the various aspects of life. Finally, the young adults were asked about their professional plans.

Table 1. Summary of study variables

Topics	Constructs/dimensions	Surveys										
		B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11
Sociodemo- graphic aspects	age, gender	X							X	X		
	family of origin (structure, family climate)	X	X				X					
	partnership/family	X					X		X	X	X	X
Abilities and skills	cognitive skills	X					X					
	career adaptability											X
Values, attitudes, interests	personal values	X					X		X			X
	occupational values	X					X		X			X
	self-esteem	X					X		X			
	achievement motivation	X		X			X		X			
	sex-role attitudes	X					X					X
	locus of control/self-efficacy	X					X					X
Personality in a narrow sense	occupational interests	X										
	personality ("Big Five")	X	X				X				X	X
Career search and finding	masculinity, femininity	X					X					X
	career plans	X		X	X	X	X		X			X
	procedure in first career choice	X		X								
Professional activities and trainings	assessment of first career choice			X	X	X	X					
	professional activities, training, continuing education and training CET, professional development	X			X	X	X	X	X	X	X	X
Work and training characteristics	work and training contents					X	X	X	X			
	working conditions					X	X	X	X			X
	commitment to household, family									X	X	X
Well-being, life satisfaction	health	X					X		X		X	X
	satisfaction	X			X	X	X		X	X	X	X
Answering behaviour	request to get a feedback	X								X	X	X
	readiness for future participation									X	X	X

Phase 4: Career development and family

The main focus of the ninth survey centered upon career development and actual life situation. In this context, the on-average 36-year-old cohort members were questioned about their occupational histories since their 18th year of life (a listing of all activities). Also included were details about the degree of employment, their particular function in the company and their actual wages. The interaction between the professional and the private (partnership, children) areas of life was also explored in this survey, as well as details about leisure time activities. In order to record satisfaction levels, the participants were invited to describe their degree of satisfaction with regard to profession, family and so on.

Phase 5: Continuity and change

In the tenth survey, all data relevant to job-related and non job-related development from the 36th to the 49th years of life were of interest. For this reason, the occupational histories, since the last survey, were questioned. Moreover, participants were asked, as in B9, about their employment situation (wages, function etc.), activities in leisure time, partnership and children. In the tenth survey, some personality dimensions were also investigated (Rammstedt & John, 2007). Since wellbeing was an important topic, satisfaction at work was recorded in a detailed way, as was general satisfaction with life (Diener, Emmons, Larsen, & Griffin, 1985). Furthermore, some questions regarding mental and physical health were added. Finally, participants were invited to give some information about their vocational or personal intentions in the years to come.

Reference population, sample and data collection

The target group for this study was students in their last compulsory school year (ninth grade, approximately age 15) in Switzerland. As the first data collection took place in 1978, a large part of the sample was born in the year 1963. In order to get a representative sample and to make interregional comparisons possible, Switzerland was split up in to 88 regions according to geographical (urban / middle land / mountain) areas and economic (primary / secondary / tertiary economic) sectors (Werczberger, 1964; Wronksy, 1967). Based on these criteria, 18 representative regions were chosen in ten (out of 25) cantons. In the German-

speaking part of Switzerland these were Basel (representing the urban region), various regions in Central Switzerland (from the cantons Aargau, Berne, Glarus and Saint Gallen) and the mountain region (Bernese Oberland). For the French speaking part of Switzerland regions from the cantons Geneva, Vaud, Valais and Neuchatel were selected. The small Italian- and Romansch-speaking parts of Switzerland (6%), however, were excluded.

Within the selected regions communities, and within these communities classes, of the ninth grade were chosen on a random basis. This resulted in 2,357 students from 123 classes, namely 1,706 from the German-speaking and 651 from the French-speaking parts of Switzerland (see table 2). This sample was used for phase 1 (vocational choice) and 3 (early career development). For economic reasons, from phase 2 onwards, only the participants from the German-speaking part of Switzerland (N=1706) were contacted. In phase 2 the sample was also further reduced for practical reasons (N=504) as personality development was the focus and this required extensive testing and questioning in small groups (see phase 2 below). The same smaller sample was kept for phase 4. However, in the latest phase 5, at middle adulthood, we tried to expand the sample by going back to the original broader Swiss-German speaking sample (see table 1). For the last survey (B10), addresses of 84% of the target sample could be found and data of 485 people (76%) was collected. This sample is a good representation of the original sample B1, and therefore the age group born around 1963, in terms of gender, social background and type of secondary school visited. During their 36th year of life, 76% were employed (40% of the women interrupted their career because of children/family. At 49 years, 92% of the participants reported being employed (men mostly full-time, women mostly part-time).

Phase 1: Vocational choice

For the first survey (B1) in summer 1978 - at the beginning of their last compulsory school year (ninth grade, age 15) - the participants were questioned and tested in class (see table 2). This lasted for one school day (or six hours). The testing was administered and supervised by advanced psychology students. For the second survey (B2) which took place one month after B1, the teachers received a one-page questionnaire in order to be able to rate their respective students individually.

Shortly before the end of the ninth school year in February/March 1979 the third survey (B3) took place. During this process the students received a questionnaire of seven pages which had been sent to the class teachers and was distributed in class (87% response rate). The fourth survey (B4) took place in September/October 1979, six months after the end of the ninth school year. The participants received a questionnaire of three pages sent to their home address (72% response rate).

Phase 2: VET and personality development

The fifth survey (B5, see table 2) took place in March 1981. The 12-page questionnaire was sent by post to the 1,706 former ninth graders from the German-speaking part of Switzerland (return rate 75%, 1,284 people). For the sixth survey (B6), a repeated measuring of the distinctive features of the people from B1 was sought. This called for tests and questionnaires with standardized conditions which could not be handled by post. For economic reasons the random sample had, therefore, to be reduced. In this context, 691 adolescents were chosen from the initial random sample, who could present a fairly stable career pattern and who came from the most popular 36 occupations. In addition two groups were chosen: full-time students from the Gymnasium or Teachers College as well as adolescents without further education. The adolescents were asked by telephone to take part in survey sessions in small groups (seven – 12

people) lasting 2.5 hours. Finally, 504 adolescents at the end of their upper secondary level (average age 19) agreed to participate. The seventh survey (B7) consisted of an expert rating of 20 aspects of the 44 most frequent occupational professions/schools. For this, 28 experts with a broad professional knowledge were contacted in order to rate each occupation and the schools in the form of a Q-sort. For this task the experts needed on average half a day.

Phase 3: Early career development

The eighth survey (B8) took place in October 1983. A questionnaire of 19 pages was sent by post to the 2,357 people from the initial random sample. The return rate was 65% of the total group.

Phase 4: Career development and family

The ninth survey took place in the autumn 1999 (see table 2). The 504 adolescents selected in phase 2 (B6) were once more asked to participate after a gap of 16 years. The on-average 36-year-old participants received a questionnaire of four pages by post, after their addresses had been updated. This updating was quite successful as 443 (88%) addresses could be verified after such a long time (for 54 (11%) people no address could be found; 7 (1%) people had died). 394 people answered the questionnaire which corresponds to a return rate of 89% (Schallberger & Spiess Huldi, 2001).

Table 2. Data collection and sample

Survey	Time	Age	Method	Length	Target group	Particip	% Return
Phase 1 Vocational choice							
B1	1978 May/June 1978	15 (9 th grade)	Classroom (survey, tests)	6 hrs /26 quest./tests	2357 (a.1706 German; b. 651 French)	2357	100%
B2	1978 June/July	15	Teacher rating	1 page	Teachers rated students B1	2048	87%
B3 1st follow-up	1979 Febr/March	15;10	Classroom survey	7 pages	B1 2357	2168	92%
B4 2 nd follow-up	1979 Fall	16;6	Postal survey	3 pages	B1 2357	1704	72%
Phase 2 Vocational education and training and personality development							
B5	1981 March	18	Postal survey (telephone)	12 pages	B1a German speaking	1284	75%
B6	1982 Spring-Fall	19	Small groups (face-to-face)	2.5 hr, 25 quest./tests	Selected group of B5: 691	504	73%
B7	1982 Fall	-	Postal survey/Q-sort	4 hours	31 Professional experts	28	90%
Phase 3 Early career development							
B8	1983 October	20	Postal survey	19 pages	B1 2357>>2205 Addresses found (94%)	1428	65% of 2205 (61% of 2357)
Phase 4 Career development and family							
B9	1999/2000 Sept-March	36	Postal survey (telephone)	4 pages	B6: 504 >>443 Addresses found (88%)	394	89% of 443 (78% of 504)
Phase 5 Continuity and change							
B10	2012 April-July	49	Postal survey (telephone)	8 pages	B6 (504) plus target sample B1a (250) >>637 Addresses found (84%)	485	76% of 637 (64% of 754)
B11	2015 May-July	52	Postal survey (telepone)	Appr. 20 p.	B10 plus rest of B5 (N=1284)		

Phase 5: Continuity and change

The last survey (B10) so far took place in 2012 (see table 2). As the sample of the ninth survey was not representative in all points, an under-represented subsample of 125 people from the initial random sample was drawn in order to counteract this. For this subsample, women with lower educational levels from the German-speaking parts of Switzerland were selected. In addition, another random sample was drawn out of the initial sample (B1) in order to increase the sample size. Altogether 754 persons were chosen to participate in the tenth survey. After a time-consuming search, the addresses of 637 (84%) former participants were found (Schmaeh, Hättich, Häfeli, & Schellenberg, 2013). The search for these addresses was carried out with the help of an online program specializing in looking for addresses by making inquiries at the last known municipality. Nevertheless, 117 cases could not be contacted: 21 people (3%) had died and for 96 people (13%) the current address could not be found. The survey was carried out, in most cases, by a six-page questionnaire. Altogether 485 out of the 637 people contacted completed the questionnaire, which equates to return rate of 76%.

Panel maintenance and incentives

With two exceptions the participants asked did not receive any remuneration for their participation in the study. Nevertheless, a considerable response rate (see table 2) was achieved thanks to repeated enquiries (for the most part after two written reminders and additional phone calls). With return rates of 89% for the ninth survey and 76% for the tenth survey, it can be spoken of as a success in the maintenance of the sample. Despite the fact that, in the case of the tenth survey, some of the participants had not taken part in the study for 30 years, many were still motivated to take part in a further survey. A monetary remuneration for participation only took place for the fifth and sixth survey. In B5 the young participants could win three rewards of CSF 200 (approximately \$ 200) in a lottery. In B6 the adolescents who participated received an amount of CSF 50 (approximately \$ 50), because the questioning lasted half a day and took place in leisure time, sometimes necessitating a journey.

The success may also be partly due to the fact that before and after each survey all participants were informed in short letters (several times in the

form of comics when the participants were adolescents) about the goals of the study and some selected results. At B5 the adolescents received personalized ability and interest scores. For the last two surveys (B9 and B10), the participants were informed about the new survey and its aims before participating. In addition, the importance of the participation of every single person was emphasized. The questionnaire was then sent to them, and after the deadline had expired, the participants received two reminders requesting that they complete the questionnaire. If after that, no response was forthcoming, they were contacted by the phone and a short version of the questionnaire was filled out.

Following the survey, all people whose addresses could be found received an informative booklet detailing the initial results. In addition, the participants were constantly referred to the homepage of the study (www.zlse-hfh.ch) which informed them about the latest results.

Outlook and data availability

To sum up, the Zurich Longitudinal Study 'From School to Middle Adulthood' is in many ways successful. Thanks to the longitudinal character of the study, determinants for the vocational course of a life span of over 30 years can be identified which is unique for Switzerland. With the help of the broad gathering of personality variables and sociobiographical indicators in adolescence, the predictors which influenced the further vocational course and status can be identified. In contrast to many countries with a system of general education at the secondary level, this study is situated in the context of an apprenticeship system with early vocational choices. Thanks to the meticulous gathering of the occupational histories between the 15th and the 49th year of life, statements regarding continuity and discontinuity of vocational careers can be made (Häfeli et al., 2015; Schellenberg, Häfeli, Schmaeh, & Hättich, 2013; Schellenberg et al., 2015). In addition, a stronger focus on health aspects (physical and mental health, exercise behaviour, substance abuse), in the more recent surveys also helps to investigate the influence of risk and protection factors in the vocational and personal development on health aspects in adulthood.

Due to the representative sampling of Swiss school classes in the ninth grade, there are data of approximately 2,400 young people available that

capture their vocational start, abilities and personality in the broader sense as well as their sociobiographical background. Thanks to the additional surveys in adulthood (B9 and B10), important supplementary data for the further vocational development and the private situation of a selected random sample exist. Above all, detailed information about the careers of individuals over a life span of 30 years answer many exciting questions. Consequently, at present there is a sample of 485 people each with altogether approximately 3,500 variables covering the whole period of time on hand.

As a result of limited funding the data has not been as fully analysed or published as widely as we would have hoped to date. Due to its complexity, the data set has not yet been described and prepared in a way that it can be made available for other researchers. A proposal to finance this work is planned for 2016 whereby the data would be made available via FORS, the Swiss Centre of Expertise in the Social Sciences.

The planned eleventh survey will serve to widen the random sample in order to facilitate more specific investigation of careers in different occupational groups. Furthermore, with the

planned questioning in the year 2015, another important life stage will be highlighted. On reaching the age of 50, questions about any career development still possible and future retirement become particularly relevant for the participants. It will be interesting to find out how they will respond to these topics. The 2015 survey will also repeat some of the personality measurement from adolescence to study the reciprocal effects of job conditions and personality over a long period. In addition, information regarding partners and children will be collected. Through this, statements regarding the co-development of careers will also become possible.

Even though the ZLSE study concerns a representative random sample, it is about a specific cohort born in the year 1963 in the context of Switzerland. For this reason, explicit comparisons with other cohorts must be made in order to be able to judge the relevance of the results. In Switzerland comparable projects, such as TREE or the COCON study, started a few years ago with similar questions and will make comparisons possible with younger cohorts (Bergman, Hupka-Brunner, Keller, Meyer, & Stalder, 2011; Buchmann & Kriesi, 2009, 2012).

References

- Amthauer, R. (1970). *Intelligenz-Struktur-Test IST-70*. Göttingen: Hogrefe.
- Bergman, M. M., Hupka-Brunner, S., Keller, A., Meyer, T., & Stalder, B. E. (Eds.). (2011). *Transitionen im Jugendalter. Ergebnisse der Schweizer Längsschnittstudie TREE*. Zürich: Seismo.
- Blau, P. M., Gustad, J. W., Jessor, R., Parnes, H. S., & Wilcock, R. C. (1956). Occupational choice: a conceptual framework. *Industrial Labor Relations*, 9, 531-543. <http://dx.doi.org/10.1177/001979395600900401>
- Buchmann, M., & Kriesi, I. (2009). Escaping the gender trap: young women's transition into non-traditional occupations. In I. Schoon & R. K. Silbereisen (Eds.), *Transition from School to Work* (pp. 193-215). Cambridge/New York: Cambridge University Press. <http://dx.doi.org/10.1017/CBO9780511605369.009>
- Buchmann, M., & Kriesi, I. (2012). Geschlechtstypische Berufswahl Jugendlicher. Begabungszuschreibungen, Aspirationen und Institutionen. *Kölner Zeitschrift für Soziologie und Sozialpsychologie* (Sonderheft), 256-280. http://dx.doi.org/10.1007/978-3-658-00120-9_11
- Charles, M., & Bradley, K. (2009). Indulging our gendered selves? Sex segregation by field of study in 44 countries. *American Journal of Sociology*, 114, 927-976. <http://dx.doi.org/10.1086/595942>
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment* 49, 71-75. http://dx.doi.org/10.1207/s15327752jpa4901_13
- Gendre, F. (1987). L'orientation et le devenir des apprentis: dix ans de recherches à l'IPAUL. *Schweizerische Zeitschrift für Psychologie*, 46(3/4), 155-172.
- Gendre, F., & Dupont, J.-B. (1982). Structures de l'individu et choix professionnel *Rapport de recherche* (pp. 627). Lausanne: Université de Lausanne, Institut de Psychologie Appliquée.

- Gottfredson, L. D. (1971). Circumscription and compromise: A developmental theory of occupational aspirations. *Journal of Counseling Psychology, Monograph* 28(6), 545-579.
<http://dx.doi.org/10.1037/0022-0167.28.6.545>
- Gough, H. C., & Heilbrun, A. B. (1980). *The Adjective Check List Manual*. Palo Alto: Consulting Psychologists Press.
- Hackman, J. R., & Oldham, G. R. (1975). Development of the Job Diagnostic Survey. *Journal of Applied Psychology, 60*, 159-170. <http://dx.doi.org/10.1037/h0076546>
- Häfeli, K. (1983). *Die Berufsfindung von Mädchen: zwischen Familie und Beruf*. Frankfurt, Bern, New York, Paris, Wien: Peter Lang.
- Häfeli, K., Hättich, A., Schellenberg, C., & Schmaeh, N. (2015). Gründe für zunehmende vertikale Geschlechtersegregation im Erwachsenenalter. *Schweizerische Zeitschrift für Bildungswissenschaften* 37(2).
- Häfeli, K., Kraft, U., & Schallberger, U. (1988). *Berufsausbildung und Persönlichkeitsentwicklung. Eine Längsschnittstudie*. Bern, Stuttgart, Toronto: Huber.
- Häfeli, K., & Schallberger, U. (1983). Merkmale von Berufen. Eine Befragung von berufskundlichen Experten. *Berufsberatung und Berufsbildung, 68*, 281-294.
- Holland, J. L. (1973). *Making Vocational Choices. A Theory of Careers*. New York: Englewood Cliffs.
- Kohn, M. L., & Schooler, C. (1983). *Work and Personality. A inquiry into the impact of social satisfaction*. Norwood, NY: Ablex.
- Leemann, R. J., & Keck, A. (2005). *Der Übergang von der Ausbildung in den Beruf. Die Bedeutung von Qualifikation, Generation und Geschlecht*. Neuchâtel: Bundesamt für Statistik.
- Moos, R. H. (1979). *Evaluating educational climates*. San Francisco: Jossey-Bass.
- OECD. (2000). *From Initial Education to Working Life. Making Transitions Work*. Paris: OECD.
- Rammstedt, B., & John, O. P. (2007). Measuring personality in one minute or less: A 10-item short version of the Big Five Inventory in English and German. *Journal of Research in Personality, 41*, 203-212.
<http://dx.doi.org/10.1016/j.jrp.2006.02.001>
- Reid, D., & Ware, E. E. (1974). Multidimensionality of internal versus external control: Addition of a third dimension and non-distinction of self versus others. *Canadian Journal of Behavioral Science, 6*(131-142). <http://dx.doi.org/10.1037/h0081862>
- Roberts, B. W., Kuncel, N., Shiner, R., Caspi, A., & Goldberg, L. (2007). The power of personality. The comparative validity of personality traits, socioeconomic status, and cognitive ability for predicting important life outcomes. *Perspectives in Psychological Science, 2*, 313-345.
<http://dx.doi.org/10.1111/j.1745-6916.2007.00047.x>
- Roe, A., & Siegelman, M. (1963). A parent-child relations questionnaire. *Child Development, 34*, 355-369.
- Schallberger, U. (1987). Berufsarbeit und Persönlichkeit - Aspekte einer komplexen ökologischen Problemstellung. *Schweizerische Zeitschrift für Psychologie, 46*(1/2), 91-104.
- Schallberger, U., Häfeli, K., & Kraft, U. (1984). Zur reziproken Beziehung zwischen Berufsausbildung und Persönlichkeitsentwicklung. *Zeitschrift für Sozialisationsforschung und Erziehungssoziologie, 4*, 197-210.
- Schallberger, U., & Spiess Huld, C. (2001). Die Zürcher Längsschnittstudie "Von der Schulzeit bis zum mittleren Erwachsenenalter". *Zeitschrift für Soziologie der Erziehung und Sozialisation, 21*(1), 80-89.
- Schellenberg, C., Häfeli, K., Schmaeh, N., & Hättich, A. (2013). Auswirkungen von erschwerten Startchancen auf den beruflichen Erfolg im mittleren Erwachsenenalter: ein Längsschnitt über 34 Jahre. *Schweizerische Zeitschrift für Heilpädagogik, 19*(11-12), 26-35.
- Schellenberg, C., Schmaeh, N., Häfeli, K., & Hättich, A. (2015). Horizontale und vertikale Mobilität in Berufsverläufen vom Jugendalter bis zum 49. Lebensjahr: Ergebnisse einer Längsschnittstudie. In K. Häfeli, M. P. Neuenschwander & S. Schumann (Eds.), *Berufliche Passagen im Lebenslauf* (pp. 305-333). Wiesbaden: VS Verlag für Sozialwissenschaften. http://dx.doi.org/10.1007/978-3-658-10094-0_12
- Schmaeh, N., Hättich, A., Häfeli, K., & Schellenberg, C. (2013). *Technischer Bericht zu Adressrecherche, Rücklauf und Fragebogen. Bericht Nr. 1 aus dem Projekt "Kontinuität und Wandel: Determinanten*

- der beruflichen und persönlichen Entwicklung*". Zürich: Interkantonale Hochschule für Heilpädagogik (HfH).
- Schmale, H., & Schmidtke, H. (1967). *Berufseignungstest - BET*. Bern: Huber.
- Schoon, I., Salmela-Aro, K., Silbereisen, R. K., Eccles, J., Schneider, B., Trautwein, U., & Bergman, L. (2009). *Pathways to adulthood: Towards a unifying framework*. London: Institute of Education, University of London.
- Sheldon, G. (2005). *Der berufsstrukturelle Wandel der Beschäftigung in der Schweiz 1970-2000. Ausmass, Ursachen und Folgen*. Neuchâtel: Bundesamt für Statistik.
- Spiess Huldi, C. (2009). *Erfolg im Beruf. Zum Einfluss von Persönlichkeit und psychosozialem Umfeld auf die berufliche Entwicklung Jugendlicher*. Zürich/Chur: Rüegger.
- Spiess Huldi, C., Häfeli, K., & Rüesch, P. (2006). *Risikofaktoren bei Jugendlichen und ihre Auswirkungen auf das Leben im Erwachsenenalter. Eine Sekundäranalyse der Zürcher Längsschnittstudie "Von der Schulzeit bis zum mittleren Erwachsenenalter" (ZLSE)*. Luzern: Edition SZH/CSPS.
- Super, D. E. (1980). A life-span, life-space approach to career development. *Journal of Vocational Behavior*, 16, 282-298. [http://dx.doi.org/10.1016/0001-8791\(80\)90056-1](http://dx.doi.org/10.1016/0001-8791(80)90056-1)
- Werczberger, E. (1964). Untersuchung über die Pendlerregionen und die Einteilung der Schweiz in Arbeitsmarktregionen. Zürich: ORL-Institut der ETH.
- Werner, E. E., & Smith, R. S. (2001). *Journeys from Childhood to Midlife. Risk, Resilience and Recovery*. Ithaca, N.Y.: Cornell University Press.
- Wronsky, D. (1967). *Industriestandorte*. Zürich: ORL-Institut der ETH.