



Transitionen von der Erstausbildung ins Erwerbsleben  
Transitions de l'Ecole à l'Emploi  
Transitions from Education to Employment



## TREE PROJECT DOCUMENTATION 2000-2008

TREE  
Berne/Basel

Proposal for citation: TREE (ed.) (2008). Project Documentation 2000-2008. Berne/Basel: TREE

# CONTENTS

Introduction .....	4
Project Overview and Context .....	5
Project objectives .....	6
Theoretical and conceptual framework .....	6
Project structure, organisation and funding.....	9
Survey Design and Sample .....	10
Return rates .....	12
Instruments and Measures .....	14
Structure of TREE Data and Documentation.....	15
Recommendation for Data Source Citation.....	18
Contacts.....	18
TREE Collaborators 1999-2008 .....	19
References.....	20

# INTRODUCTION

The present document describes the framework of the TREE project (Transitions from Education to Employment) and provides a technical documentation in summary fashion. It is intended for those interested in the theoretical and conceptual details of the TREE youth panel survey as well as specific methodological and technical aspects of the survey design. We would like to call to mind that TREE is designed as a social science infrastructure project providing an open platform to make data available to the scientific community.

With this in mind, the following document should be of particular interest to researchers with intentions of using TREE data for scientific analysis. It seeks to provide orientation as well as to serve as a guide to the structure of the primary data and its technical documentation. A diagram illustrating the structure of TREE data is given in the chapter *Structure of TREE Data and Documentation* (p. 15) to assist users in navigating their way through the complex makeup of the database(s).

The documentation refers to data as it has been collected, processed and prepared for further use as of November 2008. Of course, in an ongoing panel study, collection, processing and preparation of data by definition is always *work in progress* and of preliminary nature. TREE has been and will continue to be committed to providing users with the most current data, information and documentations. The goal is to facilitate access to the rich pool of data for best possible use and sophisticated academic analyses.

Basel, November 2008

Prof. Dr. Max Bergman  
Dr. Sandra Hupka-Brunner  
Thomas Meyer  
Barbara E. Stalder

# PROJECT OVERVIEW AND CONTEXT

TREE is the first and so far only longitudinal study in Switzerland to comprehensively survey the post-compulsory educational pathways of young people and their entry into the labour market. TREE is based on a sample of approximately 6,000 youths who participated in the PISA survey (Programme for International Student Assessment) in 2000 and left compulsory school the same year. The sample has been followed up in yearly surveys from 2001 to 2007. It is representative both nationally and for the Swiss language regions. Apart from the Canadian *Youth in Transition Survey*, TREE is the only other panel survey worldwide based on the PISA 2000 sample.

In the first phase up to 2003, education and employment transition patterns at the interface of compulsory school to upper secondary education (also referred to as *first threshold* in the German context) were at the centre of attention. During this first stage, the main focus was on reasons for, typical trajectories as well as consequences of irregular or critical educational careers, particularly with regard to premature dropout (young people who fail to graduate from a post-compulsory education or training programme).

*Figure 1: TREE project overview and survey design*

year Ø age of sample	2000 16	2001 17	2002 18	2003 19	2004 20	2005 21	2006 22	2007 23	2008 24	2009 25	2010 26	2011 27	2012 28
<i>Transition progress of sample</i>	End of compulsory school			Transitions from lower sec. to upper sec.					Transitions from upper sec. to tertiary level or labour market				
<i>Surveys</i>	PISA 2000	TREE panel 1	TREE panel 2	TREE panel 3	TREE panel 4	TREE panel 5	TREE panel 6	TREE panel 7			TREE panel 8		
<i>Project organisation</i>		TREE phase 1			TREE phase 2			TREE phase 3					

In the second stage of TREE (four more annual follow-up survey panels between 2004 and 2007), the study centred on what is referred to in German as the *second threshold*, that is, the transition from upper secondary level education (be it vocational or general) to working life or tertiary education tracks.

In a third, ongoing phase (2008-2012), another survey is scheduled for 2010. By then, the cohort under study will have been out of compulsory school for ten years. In-depth analysis of the survey data from the panel waves from 2001 to 2007 is another key objective in this phase.

## Project objectives

TREE was launched on the basis of a recommendation the OECD made for Switzerland after its international review of transitions from initial education to working life (TIEW). Looking at the country report for Switzerland (Galley & Meyer 1999), which revealed substantial research gaps on the subject matter, the OECD expert committee in charge noted:

*"The opportunity should not be missed to equip Switzerland with a longitudinal survey of transitions at national level [...]. Transition pathways to employment are becoming increasingly complex. To understand young people's decisions and options, and to take them into account in policy decisions, appropriate analytical instruments are needed."* (OECD 1999:53)

TREE is the empirical answer to this recommendation.

TREE aims at analysing youth transition from school to working life in Switzerland. Special attention is paid to the "critical" transitions referred to above, for instance, young people who have failed to enter any post-compulsory education at all or have dropped out prematurely. PISA 2000, providing the basis for TREE, was primarily engaged in the study of reading literacy. The measured literacy scores were supplemented by a wide range of data on students' social environment and the schools they had been attending at the time of the survey.

Wherever possible, the TREE survey instruments have employed the same analytical categories as PISA 2000 and have complemented them by introducing some additional ones. This enabled TREE to check for relationships between socio-economic and socio-cultural factors, competencies, personality traits, career ambitions as well as features of the school environments at the end of compulsory education and the actual education and employment careers pursued thereafter. The longitudinal design allows to determine changes in the relationships among the various factors over time.

The insights gained into the circumstances and mechanisms of transitions from initial education to employment lay the academic groundwork for specific education, labour market, and social policy measures.

## Theoretical and conceptual framework

Today, school-to-work transition takes place in a less straightforward fashion as had been the case for previous generations of school leavers (Raab 1996, Bowers, Sonnet & Bardone 2000, OECD 2000, Solga & Trappe 2000, Troltsch & László 2000). Nowadays, the first step into vocational education and training (VET) is often characterised by makeshift decisions, delays and detours (Bernath, Wirthensohn & Löhrer 1989, Sheldon 1995, Galley & Meyer 1999, Donati 1999, Meyer, Stalder & Matter 2003).

Prospective longitudinal transition surveys that take into account all types of transitions from school to adult life are an exception even on international level. Existing surveys are either restricted to specific groups of youths or regions, or they limit themselves to very specific research questions/dimensions. Moreover, it is difficult to compare Switzerland's transition system internationally, as the country's most common form of VET is only similarly widespread in Germany and Austria<sup>1</sup>. TREE for the first time in Switzerland has carried out a panel survey that is representative for an entire national school leavers cohort.

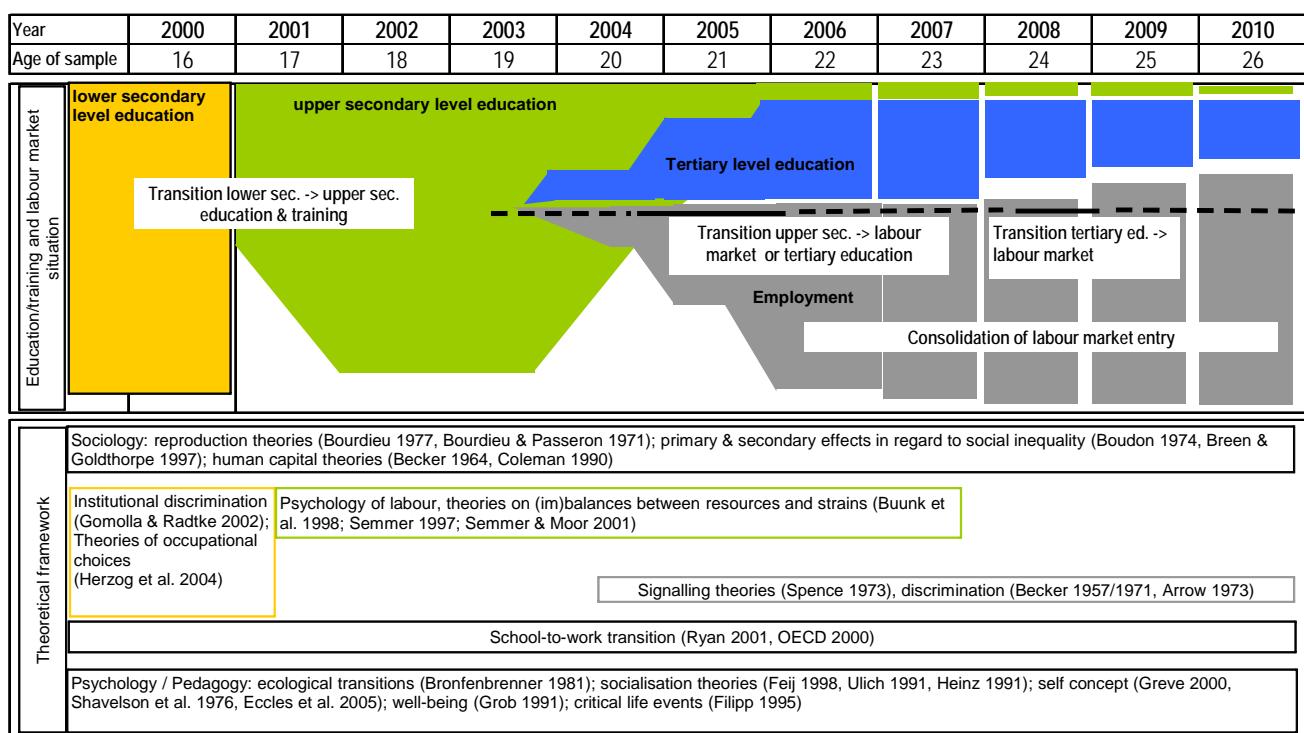
TREE results so far clearly confirm the trend also observed internationally of delayed and discontinuous transitional pathways. Only slightly more than half of the school leavers cohort of 2000 surveyed by TREE had managed to enter and pass through (certifying) upper secondary education and training without experiencing any delays and interruptions (BFS/TREE 2003). Accordingly, the number of youths graduating

---

<sup>1</sup> A two-track VET system is common in these countries, where on-the-job training is supplemented by vocational curricula taught at cooperating public schools.

from upper secondary level education has increased at a substantially slower pace than expected. Further TREE analyses show that transitions from upper secondary (VET) education and training to the labour market are also marked by considerable discontinuities (Meyer 2005; Stalder, Meyer, & Hupka, 2008). Such analyses exemplify the merits of the TREE data based on a survey design that adequately reflects the dynamics of *all* types of transitions, including those not accounted for in official statistics (i.e. youths in intermediate, non-education activities or work placements, or who are not economically active, or unemployed and not registered as such, etc.). Owing to rich data on the context conditions of these dynamic processes (see the section "Instruments and measures", p.14), TREE data is not only able to describe the pathways in question, but also to provide information on the factors at work in determining a given (critical) event or pathway.

*Figure 2: Theoretical frameworks*



There is no overarching theoretical model to aptly account for transition processes and their determinants in all their complexity (Feij 1998). Assuming that in a meritocratic education system achievement should be the key factor for status attainment, it can be held plausible that differences in social status are perceived as justified as long as they can be attributed to individual performance. In such a system, schools (i.e. institutions of formal education) play an eminent role inasmuch as they are looked upon to provide and certify skills and competencies (Fend 1981, Titze 2000). Thus, (compulsory) school becomes a "distributor of life chances" (Schelsky 1956), as it signals to the institutions of further education and training (by means of grades, certificates etc.) the skills a given individual has acquired. Based on this, TREE employs an extended strains and resources approach to account for education and employment careers in terms of the complex interaction of factors at the individual, organisational/institutional and societal level (see for instance Vondracek, 1990). This makes TREE attractive to researchers from a wide range of academic fields (sociology, psychology, educational sciences, economics etc.).

The concepts and scales applied in the TREE surveys so far refer to sociological theories of status reproduction, on one hand (Bourdieu 1977, 1982, Büchner 2003; for an overview on the current state of research see Maaz, Hausen, McElvany et al. 2006). These theories model the effects of social origin on educational decisions at each interface of the education system. On the other hand, there is the distinction

introduced by Boudon between primary and secondary inequality (Boudon 1974, Blossfeld & Shavit 1993, Breen & Goldthorpe 1997, Baumert & Schümer 2002, Ramseier & Brühwiler 2003). According to this concept, every curricular decision along an educational pathway tends to reinforce existing social inequalities.

In the fields of psychology and educational sciences, TREE draws on developmental theories that deal with educational and occupational socialisation (Heinz 1984, Ulich 1991) as well as with the ways youths cope with, in Bronfenbrenner (1979) words, "ecological transitions". Other concepts used to explain educational pathways derive from theories of self-concept (Greve 2000, Eccles, Vida & Barber 2004), stress (Semmer 1997), well-being (Hascher 2004, Fischer 2006) and critical life events (Filipp 1995).

In regard to the transition from lower to upper secondary education, TREE also leans on theories of occupational choice (Herzog, Neuenschwander & Wannack 2004). Analysis of upper secondary level education (VET) pathways draws on theories from work psychology (Buunk, de Jonge, Ybema et al. 1998, Semmer & Dauwalder 1999, Semmer & Udris 2004). These theories are also employed for the analysis of post-compulsory certification, for the purpose of which we have added further dimensions. When it comes to analysing labour market entry, TREE relies on concepts and instruments used by classical human capital theory (Becker 1964), signal(ling) theory (Spence 1973), theory of discrimination (Becker 1957/1971, Arrow 1994) as well as school-to-work transition models based on labour market economics (OECD 2000, Ryan 2001).

## Project structure, organisation and funding

As of 2008, TREE is located at the Institute of Sociology at the University of Basel in spring 2008. The Swiss National Science Foundation has adopted TREE as one of its major social science infrastructure projects and has offered to provide substantial co-funding until 2012. The University of Basel and other project partners have also made significant financial commitments to the project for the same period.

From 2000 to 2007 TREE has been led by a consortium consisting of the departments of education of the cantons Berne, Geneva and Ticino (*Ufficio studi e ricerche*, Emanuele Berger). In this period, the project was located at the Berne Canton Department of Education, and various partners participated in funding TREE (the members of the consortium, the Swiss National Science Foundation, the Swiss Federal Statistical Office (FSO), the Federal Office for Professional Education and Technology (OPET)).

In 2007, the TREE research network was established as an open platform for coordination and academic exchange among researchers using TREE data and those planning to do so, the majority of which are currently involved in the network.

Overall responsibility for TREE at the University of Basel lies with Prof. Dr. Max Bergman at the Institute of Sociology. He is head of the project together with Thomas Meyer, education sociologist and project initiator, and educational scientist Dr. Sandra Hupka-Brunner – together the three form the project management team. For a complete list of academic personnel involved in TREE, see the section "TREE collaborators 1999-2008" (p. 19).

An internationally composed academic advisory board provides assistance in matters relating to methodology and strategies of research and analysis.

# SURVEY DESIGN AND SAMPLE

As mentioned above, TREE is based on the sample of youths who participated in the Swiss PISA survey of 2000. The TREE sample includes all participants who

- had attended a regular public school at the lower secondary level at the time of the PISA survey<sup>2</sup>;
- and had finished compulsory education at the end of the 1999/2000 school year.

The TREE sample is representative for Switzerland as a whole, the Swiss language regions (German, French, and Italian-speaking Switzerland) and for selected cantons (Berne, Geneva, Ticino, St. Gallen).

## *ADDRESS SURVEY 2000*

PISA participants in Switzerland were guaranteed anonymity. For TREE they were asked to give their express consent to participate in follow-up surveys and to volunteer a contact address. For this purpose, an address and information sheet was added as a supplement to the PISA documents.

## *TREE SURVEYS 2001-2004*

The first four TREE panel waves mostly used standardised written questionnaires.<sup>3</sup> Youths who failed to return the questionnaire in time were again contacted and asked to complete the questionnaire, first by mail and then by phone (see survey flow chart in Figure 3). Respondents unable or unwilling to complete the questionnaire were asked to answer the questions by phone. The detailed questionnaire used for the telephone interview was largely identical to the one used in the written survey; a short version contained only the key questions referring to the education and employment situation.

## *TREE SURVEYS 2005-2007*

The TREE panel waves 5-7 relied on a combination of computer-assisted telephone interviewing (CATI) and individualised written questionnaires tailored to specific situations. In 2005, the survey design was changed to accommodate the growing diversity of individual education and employment careers, which had increasingly rendered the uniform written questionnaire inadequate (questionnaire too lengthy, filtering process too complex). The CATI interview was used to collect key data on education and employment. In acquiring information on respondents' education and employment situation, the telephone interview also served as a filter mechanism to determine which supplementary questionnaire they would be sent. Youths that could not be reached or refused to answer questions by phone were sent a written questionnaire containing the same questions. In this case, too, the answers to the (basic) questionnaire were used to determine which supplementary questionnaire attuned to the individual education or employment situation would be sent to respondents.<sup>4</sup> At each stage of the survey, delayed responses were followed-up by at least one reminder.

---

<sup>2</sup> In Italian-speaking Switzerland, unlike in French and German-speaking Switzerland, school leavers from private schools were also included in the sample.

<sup>3</sup> Computer-assisted telephone interviewing(CATI) would have been the method of choice. However, due to insufficient funding in the early stage of the project, TREE was forced to switch to standardized written questionnaires as the less costly means of surveying.

<sup>4</sup> In the (for the time being) last panel wave (2007), we refrained from using the individualised, two-step procedure in case of the written interview because of the considerable time and logistics involved. Instead, the respondents received a standard questionnaire not differentiated by education and employment situation containing the complete set of TREE questions.

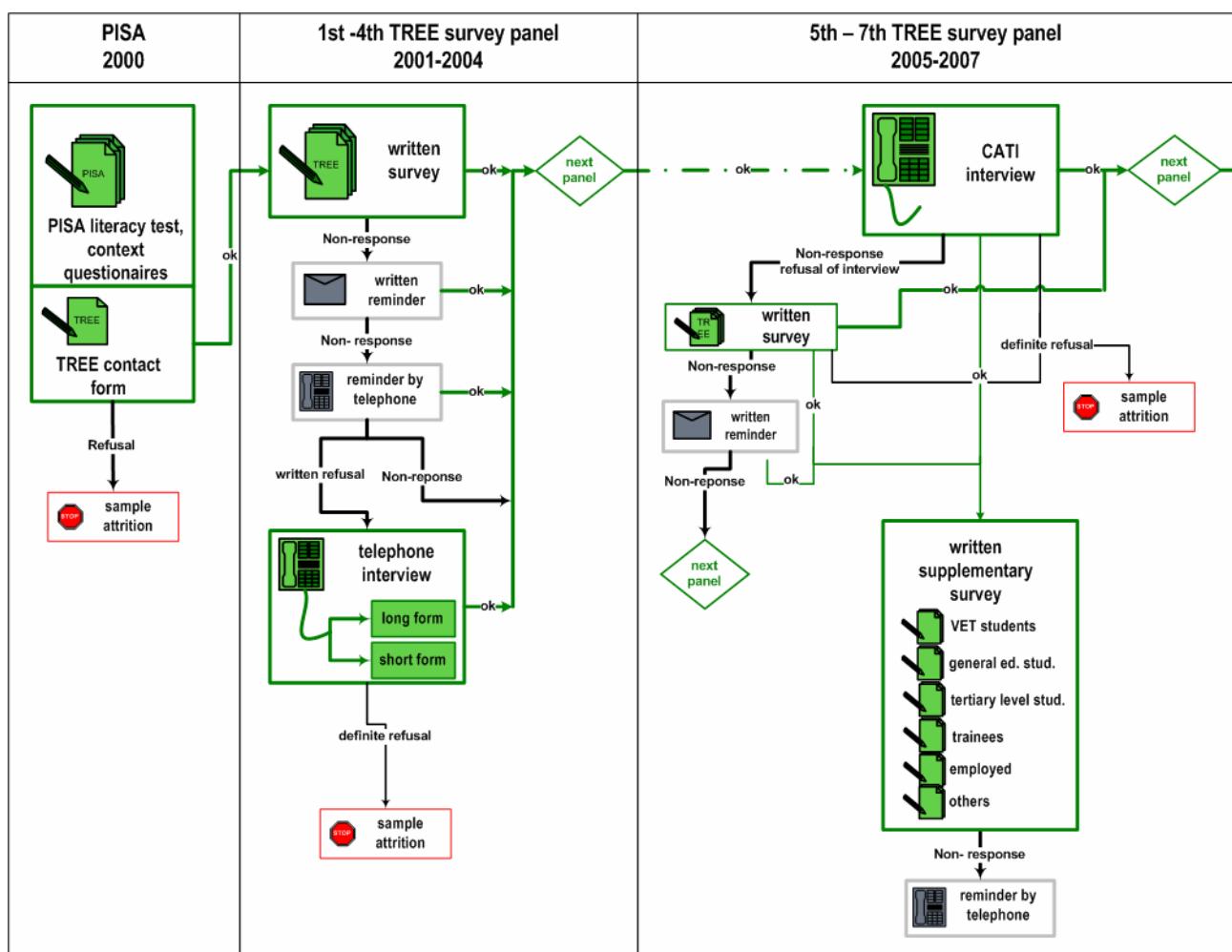
## WAVE-SPECIFIC SAMPLING AND SAMPLE ATTRITION

For part of the initial PISA sample, it was not clear at the outset whether the criteria for inclusion in TREE would be satisfied. In approximately 700 cases, respondents were later excluded from the TREE sample even though they had participated in the TREE panel surveys.

The following criteria for inclusion in the TREE sample were defined:

- The respondent had not stated express refusal to participate in the TREE panel (or the future follow-ups).
- Contacting of the respondent was possible.
- The respondent had not left Switzerland for good.

*Figure 3: Survey design, 2000-2007*



## SURVEY IMPLEMENTATION

The TREE surveys took place on a yearly basis between February and June. TREE conducted the first four panel waves 2001-2004 without any outside assistance, mainly from project headquarters (at the time) in Berne. TREE trained and supervised survey administrators and interviewers, who were put in charge of distributing, keeping track of, and following up on questionnaires, and were responsible for conducting telephone interviews and for address management. For the subsequent three panel waves 2005-2007 the LINK survey institute was commissioned to develop the software for the telephone survey instrument designed by TREE and carry out the computer-assisted telephone interviewing (CATI). The interviewers were recruited by LINK, and TREE and LINK jointly trained them. The surveys were conducted

from Lucerne (German) and Lausanne (French and Italian). LINK was also responsible for distributing the supplementary questionnaires and for the telephone reminders. Distribution of the basic questionnaires remained with TREE. Data entry was partly carried out optically (by OCR), partly manually by research assistants from TREE and LINK.

#### *SAMPLE MAINTENANCE*

For longitudinal panel studies, such as TREE, taking great care in maintaining the sample is a crucial requirement. TREE has adopted various measures to prevent sample attrition. Alternative response channels were provided (written questionnaire, telephone interview, short and extended version) to lower the barrier for participation, thus also facilitating participation of youths uncomfortable with extended reading and writing activities. In three of the seven waves, ballpoint pens were included with the questionnaires (as a small gesture of thanks and for the practical purpose of completing them). Hotlines were installed for all three national languages, which respondents could contact anytime during the interview period. Intensive follow-up activities played a significant role in individually encouraging non-responding youths to participate in the survey.

Regular updates of the TREE address database and extensive address research prior to the surveys were to ensure that respondents could be contacted. A few weeks before each survey, the members of our sample received a newsletter tailored to the young target group informing them about new results, publications and news related to the project. In addition, all publications and project information is made publicly available on the TREE website ([www.tree-ch.ch](http://www.tree-ch.ch)). Moreover, TREE has provided respondents with additional information on project results and other aspects of the project upon request. Quite a few have made use of the possibility to obtain such information. And finally, TREE has regularly made an effort to communicate to the interviewees that their participation is not only of great importance but indeed indispensable to the project. With this in mind, TREE always has made a point of immediately responding to suggestions, criticism and questions voiced by the respondents and to take their feedback seriously by adjusting the surveys and reporting accordingly.

## **Return rates**

Across all seven panel waves from 2001 to 2007, TREE has achieved wave-specific return rates of 85-89% (Fig. 4)<sup>5</sup>. With 4,000 persons remaining in the sample population across the whole period (63% of the initial TREE sample), the retention rate is remarkably high considering the heterogeneous sample structure and sophisticated survey design. The rather low willingness to participate in TREE observed at the time of the PISA survey (TREE address survey) resulted from the regionally varying integration of the TREE module into the PISA survey administration. Thus, while in Italian-speaking Switzerland 81% of the PISA sample participated in TREE, return rates were much lower in other cantons at that time (e.g. 32% in Zurich; Sacchi, forthcoming).

---

<sup>5</sup> Completion of final data cleansing in summer 2008 may have resulted in slight changes compared to figures published earlier.

Figure 4: TREE return rates, 2000-2007

Survey year	2000	2001	2002	2003	2004	2005	2006	2007
Gross sample	* 11,710	6,343	5,944	5,609	5,345	5,060	4,852	4,659
Responses (N)	** 6,343	5,528	5,206	4,877	4,679	4,506	4,133	3,979
<i>Return rate</i>								
% of wave	54%	87%	88%	87%	88%	89%	85%	85%
% of 2001 survey			82%	77%	74%	71%	65%	63%

\* Sample base \*\* Address survey: willingness to participate in TREE panel survey

In the first two years, 80% of the respondents completed the written questionnaire (Fig. 5). The proportion of returned questionnaires dropped to roughly 70% during the third and fourth panel survey while participation by way of short telephone interviews rose sharply. After changes in survey design, the share of the sample that responded to the full survey (CATI or basic plus supplementary questionnaire) remained at 70%. Between one fifth and one sixth participated by phone only.

Figure 5: Return rate from 2001 to 2007 by type of response

Survey year	2001	2002	2003	2004	2005	2006	2007
Written questionnaire	80%	80%	71%	71%			
Telephone questionnaire, long	6%	4%	3%	5%			
Telephone questionnaire, short	2%	3%	13%	12%			
CATI/ basic questionnaire <u>and</u> supplementary questionnaire					71%	69%	68%
CATI/ basic questionnaire only					19%	16%	17%
No response, refusal to participate in a single wave	7%	8%	10%	8%	9%	13%	13%
Final refusal, left Switzerland, invalid address etc.	6%	5%	3%	4%	2%	2%	2%
Total N (=100%; gross sample)	6,343	5,944	5,609	5,345	5,060	4,852	4,659

\* 2007 panel survey: basic and supplementary questionnaire were merged into one questionnaire

The high overall return rate has confirmed the importance TREE has given to panel maintenance. Yet a critical note is in order here. All efforts notwithstanding, there were notable differences in levels of participation between different groups of respondents. The return rate among the well-educated, women, and Swiss natives was substantially higher compared to respondents with low reading proficiency, men or respondents with migration background. Panel weights were calculated to compensate for sample bias, which is a common problem in panel surveys, and to maintain the representative nature of the sample over the entire observation period (Sacchi, forthcoming).

## INSTRUMENTS AND MEASURES

The main purpose of the TREE surveys is to obtain data on young people's education and employment careers, including factors that affect them and are affected by them. Figure 6 gives a rough overview of concepts employed by TREE and the sources they are derived from. A separate document titled *Concepts & Scales* specifies in detail the concepts used in the seven panel waves, and which group of respondents received which set of questions. Codebooks for the data collected in each of the seven TREE panel waves provide detailed information on each item. A complete list of all relevant documents can be found in the chapter Structure of TREE Data and Documentation, p. 15.

*Figure 6: Concepts and scales, 2001-2007*

Concept	Source
Description of education and employment situation and pathways	TREE, based on Swiss Federal Statistical Office data
Strains and resources in education and work	TREE, based on Prümper, Hartmannsgruber & Frese (1995); Semmer, Zapf & Dunckel (1999); Rosenstiel, Falkenberg, Hehn, Henschel & Warns (1982)
Social support in schools and companies providing VET	TREE, based on Frese (Frese 1983, 1999); Schulz & Schwarzer (2003)
Equal opportunity in schools and companies providing VET	TREE
Competence of trainers, teachers and supervisors	TREE, based on Neuenschwander (1998); Neuenschwander, Herzog & Holder (2001)
Job search and application strategies	TREE, based on Swiss Labour Force Survey SLFS (BFS 2004)
Personal traits, aspirations and plans (in regard to education; for instance, persistence, self-efficacy, coping ability, ambition, value orientation)	TREE, based on Schwarzer (1999); Schwarzer & Jerusalem (2000); Grob & Maag Merki (2001); Endler & Parker (1990); short version according to Kälin (1995); Moser, Ramseier, Keller & Huber (1997); Moser (1997); Schulz & Schwarzer (2003); Watermann (2000) adjusted; TREE (aspirations and plans)
Critical life events (in regard to education, work and private life)	TREE, based on Neuenschwander (1998), Neuenschwander, Herzog & Holder (2001)
Satisfaction with education and employment	TREE, based on Baillod (1992), Bruggemann, Groskurth & Ulich (1975); Neuenschwander (1998), Neuenschwander, Herzog & Holder (2001)
Well-being	Grob, Lüthi, Kaiser, Flammer, Mackinnon & Wearing (1991); Rosenberg (1979); Krohne, Egloff, Kohlmann & Tausch (1996);
Health behaviour	Grob & Maag Merki (2001)
Fluctuation/dropout tendency (education/training and job)	TREE, based on Baillod (1992)
Achievement and academic success	TREE
Financial situation	TREE, based on Swiss Labour Force Survey SLFS (FSO 2004)
Family situation/status	TREE

# STRUCTURE OF TREE DATA AND DOCUMENTATION

This documentation refers to TREE data obtained and edited as of November 2008. A plausibility check has been performed on most of the variables contained in the datasets. Unchecked data are indicated in the respective codebooks. For reasons of data protection, sensitive personal data (for instance, information identifying the company providing training, the school attended, or place of residence) has been omitted from the datasets to guard against disclosure of individual respondents.

Primary data and datasets containing variable and value labels are available in SPSS format. Interested users not equipped for processing this format may contact the TREE project administration or the FORS Data archive in Lausanne for assistance (see Contacts p. 18).

*Figure 7: Overview of primary data and documentations*

<i>Dataset</i>	<i>Documentation</i>
<b>PISA 2000</b>	
PISA_2000_Data_original-variables.sav	<ul style="list-style-type: none"><li>- PISA_2000_manual_original-variables.pdf</li><li>- PISA_2000_Technical_Report_original-variables</li><li>- PISA_2000_Questionnaire_School_English.pdf</li><li>- PISA_2000_Questionnaire_Student_English.pdf</li><li>- <a href="http://pisa2000.acer.edu.au/downloads.php">http://pisa2000.acer.edu.au/downloads.php</a></li></ul>
PISA_2000_Data_modified-variables.sav	PISA_2000_Codebook_modified-variables.pdf
<b>TREE 2001-2007</b>	
TREE_data_wave-1-2001_version_xxxx-xx.sav	TREE_codebook_wave-1-2001_version_xxxx-xx_en.pdf
TREE_data_wave-2-2002_version_xxxx-xx.sav	TREE_codebook_wave-2-2002_version_xxxx-xx_en.pdf
TREE_data_wave-3-2003_version_xxxx-xx.sav	TREE_codebook_wave-3-2003_version_xxxx-xx_en.pdf
TREE_data_wave-4-2004_version_xxxx-xx.sav	TREE_codebook_wave-4-2004_version_xxxx-xx_en.pdf
TREE_data_wave-5-2005_version_xxxx-xx.sav	TREE_codebook_wave-5-2005_version_xxxx-xx_en.pdf
TREE_data_wave-6-2006_version_xxxx-xx.sav	TREE_codebook_wave-6-2006_version_xxxx-xx_en.pdf
TREE_data_wave-7-2007_version_xxxx-xx.sav	TREE_codebook_wave-7-2007_version_xxxx-xx_en.pdf
<b>TREE datasets covering several waves</b>	
TREE_data_certificates_2001-2007_version_xxxx-xx.sav	TREE_codebook_certificates_2001-2007_version_xxxx-xx.pdf
TREE_data_weights_wave1-7_version_xxxx-xx.sav	<ul style="list-style-type: none"><li>- TREE_codebook_weights_wave1-7_version_xxxx-xx.pdf</li><li>- Sacchi_2008_TREE_longitudinal_weights.pdf</li><li>- Sacchi_2008_TREE_longitudinal_weights_short.pdf</li></ul>

The part '...version\_xxxx-xx' of the file names indicated above marks the date of the release to which the file refers/belongs (four digits for the year, two digits for the month). There may be additional letters behind the release date. These indicate patches or sub-releases following a main release.

Example: The file 'TREE\_data\_wave-1-2001\_version\_2008-11.sav' belongs to the November 2008 data release.

All primary datasets contain the complete data for the 6,343 cases constituting the valid TREE sample. They are sorted by identification number "ID" (this variable is contained in all data sets) in ascending order. The identification number can also be used to match two or more datasets.

### *PISA DATASETS*

The dataset *PISA\_2000\_Data\_original-variables.sav* contains all variables assessed in PISA 2000 for the entire TREE sample. The datasets are named according to variables in the following manner:

- Variables beginning with "st..." refer to data collected using the student questionnaire.
- Variables beginning with "sc..." refer to data collected using the school questionnaire.
- The third and fourth character of the variable name are digits indicating the number of the question in the questionnaire, the sixth and seventh character represent the item number of the question.
- Variables containing the letter "n" are "national" variables that were assessed in Switzerland only (see below).

Names of variables that do not follow these rules of nomenclature indicate special constructs and scales (see below). The following documentations are provided for the datasets:

- *PISA\_2000\_manual\_original-variables.pdf* contains the international description of the PISA variables in English.
- *PISA\_2000\_Technical\_Report\_original-variables* contains, inter alia, the description of the constructs and scales derived from the original variables (Adams & Wu 2002, chapter 17).
- *PISA\_2000\_Questionnaire\_School\_English.pdf* and *PISA\_2000\_Questionnaire\_Student\_English.pdf* contain the German school and student questionnaires for the Swiss PISA 2000 survey. They provide information on the so-called "national" PISA variables, that is variables specifically defined for Switzerland that were not standardly assessed internationally. Those variables are distinguished by the letter "n" in the place of the fifth character of the variable name (for instance, st17n01 as the national code for the language spoken at home).
- All international documentations, including the codebooks for the datasets, are available at the website <http://pisa2000.acer.edu.au/downloads.php>

The dataset *PISA\_2000\_Data\_modified-variables.sav* contains a selection of PISA variables that TREE has checked for plausibility beyond the checks performed by PISA. Detailed descriptions and explanations are found in the respective codebook *PISA\_2000\_Codebook\_modified-variables*.

### *WAVE-SPECIFIC TREE DATASETS*

The wave-specific datasets containing the primary data from the seven TREE panel surveys 2001-2007 are named *TREE\_data\_wave-x-200x\_version\_xxxx-xx.sav*. They are described in codebooks named *TREE\_codebook\_wave-x-200x\_version\_xxxx-xx\_en.pdf*.

### *TREE DATASETS COVERING SEVERAL WAVES*

*TREE\_data\_certificates\_2001-2007\_version\_xxxx-xx.sav* contains information on certification status at the time of the latest valid survey participation. Certificates and diplomas were assessed in each wave from 2002 on. In the seventh panel wave in 2007, graduation status was retrospectively verified and corrected if necessary (see the codebook *TREE\_codebook\_certificates\_2001-2007\_version\_xxxx-xx* for details).

Dataset *TREE\_data\_weights\_wave1-7\_version\_xxxx-xx.sav* comprises the weighting variables needed for weighted analyses and, for documentation purposes, all the variables that went into the calculation of weights. Weighting models are described at length in *Sacchi\_2008\_TREE\_longitudinal\_weights.pdf*. A comprehensive English translation of the original German document is presently under preparation. Practical information on the use of weights is to be found in *Sacchi\_2008\_TREE\_longitudinal\_weights\_short.pdf*. Additional important information is provided in the respective codebook *TREE\_codebook\_weights\_wave1-7\_version\_xxxx-xx.pdf*.

Provision of data does not end with this publication. We will continue to prepare TREE data collected but not yet released and make it available for public use. This involves, for instance, additional information on the employment situation of respondents. For more information on progress of this endeavour, please contact the TREE project management.

# RECOMMENDATION FOR DATA SOURCE CITATION

Academic publications based on TREE data are kindly requested to quote the data source as follows:

*The Swiss youth panel study TREE (Transitions from Education to Employment; [www.tree-ch.ch](http://www.tree-ch.ch)) runs since 2000 and has since been funded by the Swiss National Science Foundation, the University of Basel, the Swiss Federal Office of Statistics, the Federal Office of Professional Education and Technology, and the cantons of Berne, Geneva and Ticino.*

## CONTACTS

TREE (Transitions from Education to Employment)

Institut für Soziologie der Universität Basel

Petersgraben 27

4051 Basel

Phone: ++41 (0)61 267 28 28

Mail: [tree@unibas.ch](mailto:tree@unibas.ch)

Web: [www.tree-ch.ch](http://www.tree-ch.ch)

FORS Data Archive

c/o Université de Lausanne

Bâtiment Vidy

CH-1015 Lausanne

Phone: ++41 (0)21 692 37 44

Web: [www.fors.unil.ch](http://www.fors.unil.ch)

# TREE COLLABORATORS 1999-2008

Since the beginning of the project, the following persons have been or currently still are employed by TREE (in alphabetical order):

<i>Name</i>	<i>Institution</i>	<i>Area of responsibility</i>	<i>Employment period</i>
<b>Amos, Jacques</b>	Service de recherche en éducation (SRED), Geneva	Regional coordinator for French-speaking Switzerland	2000-2008
<b>Bergman, Max, Prof. Dr.</b>	Institute of Sociology, University of Basel	Member of project management team	2008--
<b>Bertschy, Kathrin</b>	TREE	Research assistant	2007
<b>Böni, Edi</b>	TREE	Data management	2003-2008
<b>Dellenbach, Myriam</b>	TREE	Survey and data management	2003-2004
<b>Donati, Mario</b>	Ufficio studi e ricerche (USR), Bellinzona	Research assistant, regional coordinator for Italian-speaking Switzerland	1999-2004
<b>Hupka, Sandra, Dr.</b>	TREE	Member of project management team (since 2008)	2003--
<b>Keller, Anita</b>	TREE	Research assistant	2008--
<b>Lieberherr, Renaud</b>	TREE	Research assistant	2000-2002
<b>Matter, Monika</b>	TREE	Research assistant	2002
<b>Meyer, Thomas</b>	TREE	Member of project management team	1999--
<b>Origoni, Pau</b>	Ufficio studi e ricerche (USR), Bellinzona	Research assistant	2005-2007
<b>Pedrazzini-Pesce, Francesca</b>	Ufficio studi e ricerche (USR), Bellinzona	Research assistant, regional coordinator for Italian-speaking Switzerland	2003-2007
<b>von Rotz, Christina</b>	TREE	Computer specialist, data management	2008--
<b>Sacchi, Stefan, Dr.</b>	cue Sozialforschung, Zurich and University of Zurich	Methodology consultant, weighting	2003--
<b>Silver, Ruth</b>	Service de recherche en éducation (SRED), Geneva	Research assistant	2003--
<b>Stalder, Barbara E.</b>	TREE, Department of Education, Canton Berne	Assistant project manager (until 2008)	1999--
<b>Tocchetto, Feliciana</b>	Ufficio studi e ricerche (USR), Bellinzona	Research assistant	2002-2003

## REFERENCES

- Adams, R., & Wu, M. (2002). *PISA 2000 Technical Report*. Paris: OECD Publications
- Arrow, K. J. (1994). The theory of discrimination. In D. B. Grusky (Ed.), *Social stratification* (pp. 604-606). Boulder: Westview Press.
- Baillod, J. (1992). *Fluktuation bei Computerfachleuten. Eine Längsschnittuntersuchung über die Beziehungen zwischen Arbeitssituation und Berufsverläufen*. Bern: Peter Lang.
- Baumert, J., & Schümer, G. (2002). Familiäre Lebensverhältnisse, Bildungsbeteiligung und Kompetenzerwerb im nationalen Vergleich. In J. Baumert, C. Artelt, E. Klieme & et al. (Eds.), *PISA 2000 - Die Länder der Bundesrepublik Deutschland im Vergleich* (p. 159-202). Opladen: Leske + Budrich.
- Becker, G. S. (1964). *Human capital: a theoretical and empirical analysis with special reference to education*. New York/London, Columbia University Press.
- Becker, G. S. (1957/1971). *The economics of discrimination*. Chicago: University of Chicago Press.
- Bernath, W.; Wirthensohn, M. & Löhrer, E. (1989). *Jugendliche auf ihrem Weg ins Berufsleben*. Bern: Haupt Verlag.
- Blossfeld, H.-P., & Shavit, Y. (1993). Persisting barriers. Changes in educational opportunities in thirteen countries. In Y. Shavit & H.-P. Blossfeld (Eds.), *Persistent inequality: Changing educational attainment in thirteen Countries* (pp. 1-23). San Francisco: Westview-Press.
- Boudon, R. (1974). *Education, opportunity, and social inequality: changing prospects in western society*. New York: John Wiley.
- Bourdieu, P., & Passeron, J.-C. (1990). *Reproduction in Education, Society and Culture*. London: Sage.
- Bourdieu, P. (1977). Cultural reproduction and social reproduction. In J. Karabel (Ed.), *Power and ideology in education* (pp. 487-511). New York: Oxford University Press.
- Bourdieu, P. (1984). *Distinction: a Social Critique of the Judgment of Taste*. Cambridge MA: Harward University Press.
- Bowers, N., Sonnet, A. & Bardone, L. (2000). *Background Report – Giving Young People a Good Start: The Experience for OECD Countries*. Paris: OECD.
- Breen, R. & Goldthorpe, J. H. (1997). Explaining educational differentials: Towards a formal rational action theory. *Rationality and Society* 9(3), 275-305.
- Büchner, P. (2003). Stichwort: Bildung und soziale Ungleichheit. *Zeitschrift für Erziehungswissenschaft*, 6(1), 5-24.
- Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge, MA: Harvard University Press
- Bruggemann, A., Groskurth, A. & Ulich, E. (1975). *Arbeitszufriedenheit*. Bern: Hans-Huber Verlag.
- Buunk, B. P., de Jonge, J., Ybema, J. F., & de Wolff, C. J. (1998). Psychosocial aspects of occupational stress. In P. J. D. Drenth, H. Thierry & C. J. de Wolff (Eds.), *Handbook of work and organizational psychology. Volume 2: Work psychology* (2nd ed., pp. 145-182). Hove: Psychology press.
- Coleman, J. (1988). Social capital in the generation of human capital. *American Journal of Sociology* 94(suppl.), 95-120.
- Donati, M. (1999). "Volevi veramente diventare quello che sei?" *La formazione dei giovani dopo la scuola media. Carriere scolastiche e professionali attraverso l'analisi di 1400 biografie formative. Studio longitudinale*. Bellinzona: Ufficio studi e ricerche.
- Eccles, J. S.; Vida, M. N. & Barber, B. (2004). The relation of early adolescents' college plans and both academic ability and task-vale beliefs to subsequent college enrollment. *Journal of Early Adolescence* 24(1), 63-77.

- Eccles, J. S. (2005). Subjective task value and the Eccles et al. model of achievement-related choices. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 105-121). New York, London: The Guilford Press.
- Endler, N. S., & Parker, J. D. A. (1990). *Coping Inventory for Stressful Situations (CISS)*. Toronto: Multi Health Systems, Inc.
- Feij, J. A. (1998). Work socialization of young people. In P. J. D. Drenth, H. Thierry & C. J. de Wolff (Eds.), *Handbook of work and organizational psychology. Volume 3: Personnel psychology* (2nd ed., pp. 207-256). Hove: Psychology press.
- Fend, H. (1981). *Theorie der Schule*. München, Wien, Baltimore, Urban & Schwarzenberg.
- Filipp, S.-H. (Ed.). (1995). *Kritische Lebensereignisse* (3. Auflage). Weinheim: Psychologie Verlags Union.
- Fischer, L. (Ed.). (2006). *Arbeitszufriedenheit. Konzepte und empirische Befunde* (2. Auflage). Göttingen: Hogrefe.
- Frese, M. (1983). Soziale Unterstützung. In D. Zapf, E. Bamberg, H. Dunckel, M. Frese, S. Greif, G. Mohr, D. Rueckert & N. Semmer (Eds.), *Dokumentation der Skalen des Forschungsprojekts "Psychischer Stress am Arbeitsplatz - Hemmende und fördernde Bedingungen für humanere Arbeitsplätze"*, Unveröffentlichter Forschungsbericht. Osnabrück: Universität, Fachbereich Psychologie.
- Frese, M. (1999). Social support as a moderator of the relationship between work stressors and psychological dysfunctioning: A longitudinal study with objective measures. *Journal of Occupational Health Psychology*, 4(3), 179-192.
- FSO/TREE. (2003). *Wege in die nachobligatorische Ausbildung. Die ersten zwei Jahre nach Austritt aus der obligatorischen Schule. Zwischenergebnisse des Jugendlängsschnitts TREE*. Reihe "Bildungsmonitoring Schweiz". Neuchâtel: Swiss Federal Statistical Office.
- FSO (Eds.) (2004). *Die Schweizerische Arbeitskräfteerhebung (SAKE) Konzepte - Methodische Grundlagen - Praktische Ausführung*. Neuchâtel: Swiss Federal Statistical Office.
- Galley, F. & Meyer, T. (1999). Thematic Review of the Transition from initial Education to Working Life. Switzerland, Country Note OECD. Bern: The Ministers for the Economy and the Interior of Switzerland and the Swiss Conference of Cantonal Directors of Education.
- Gomolla, M., & Radtke, F.-O. (2002). *Institutionelle Diskriminierung. Die Herstellung ethnischer Differenz in der Schule*. Opladen: Leske + Budrich.
- Greve, W. (2000). *Psychologie des Selbst*. Weinheim: Psychologie Verlags Union.
- Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: update, moderator tests, and research implications for the next millennium. *Journal of Management*, 26(3), 463-488.
- Grob, A., Lüthi, R., Kaiser, F. G., Flammer, A., Mackinnon, A., & Wearing, A. J. (1991). Berner Fragebogen zum Wohlbefinden Jugendlicher (BFW). *Diagnostica*, 37(1), 66-75.
- Grob, U., & Maag Merki, K. (2001). *Überfachliche Kompetenzen. Theoretische Grundlegung und empirische Erprobung eines Indikatorensystems*. Bern: Lang.
- Gümüs, A., Gömlekisiz, M., Glöckner-Rist, A., & Balke, D. (2006). Itembatterie für kulturvergleichende Untersuchungen zur Anomie. In A. Glöckner-Rist (Ed.), *ZUMA-Informationssystem. Elektronisches Handbuch sozialwissenschaftlicher Erhebungsinstrumente. Version 10.00.* . Mannheim: Zentrum für Umfragen, Methoden und Analysen.
- Hascher, T. (2003). *Wohlbefinden in der Schule*. Münster: Waxman.
- Heinz, W. R. (1984). *Der Übergang von der Schule in den Beruf als Selbstsozialisation*. Bremen: Universität.
- Heinz, W. R. (1991). Berufliche und betriebliche Sozialisation. In K. Hurrelmann & D. Ulich (Eds.), *Neues Handbuch der Sozialisationsforschung* (4. Ausgabe, pp. 397-415). Weinheim: Beltz.
- Herzog, W., Neuenschwander, M. P., & Wannack, E. (2004). *Berufswahlprozess bei Jugendlichen*. Bern: Universität Bern, Institut für Pädagogik und Schulpädagogik, Abteilung Pädagogische Psychologie.

- Kälin, W. (1995). *Deutsche 12-Item Kurzform des "Coping Inventory for Stressful Situations" (CISS) von N. S. Endler, & J. D. A. Parker*. Basierend auf der Übersetzung von N. Semmer, F. Tschan, & V. Schade (unveröffentlichter Fragebogen). Bern: Universität, Institut für Psychologie.
- Krohne, H. W., Egloff, B., Kohlmann, C.-W., & Tausch, A. (1996). Untersuchungen mit einer deutschen Version der "Positive and Negative Affect Schedule" (PANAS). *Diagnostica*, 42(2), 139-156.
- Maaz, K., Hausen, C., McElvany, N., & Baumert, J. (2006). Stichwort: Übergänge im Bildungssystem. *Zeitschrift für Erziehungswissenschaft*, 9(3), 299-327.
- Meyer, T., Stalder, B. E., & Matter, M. (2003). *Bildungswunsch und Wirklichkeit. Thematischer Bericht der Erhebung PISA 2000*. Neuchâtel: OFS/CDIP.
- Meyer, T. (2005): School-to-work transition in Switzerland. Results as of 2004 from the TREE panel survey. Bern, TREE.
- Moser, U. (1997). *Messinstrumente zu Unterricht und Leistungsbereitschaft in TIMSS+*. Projektdokumentation. Bern: Amt für Bildungsforschung der Erziehungsdirektion.
- Moser, U., Ramseier, E., Keller, C., & Huber, M. (1997). *Schule auf dem Prüfstand. Eine Evaluation der Sekundarstufe I auf der Grundlage der "Third International Mathematics and Science Study"*. Chur: Rüegger.
- Neuenschwander, M. P. (1998). *Schule und Identität im Jugendalter I. Kurzdokumentation der Skalen und Stichproben* (Forschungsbericht Nr. 18). Bern: Universität Bern, Abteilung Pädagogische Psychologie.
- Neuenschwander, M. P., Herzog, W., & Holder, M. (2001). *Schulkontext und Identitätsentwicklung im Jugendalter*. Schlussbericht z.Hd. des Schweizerischen Nationalfonds, Projekt Nr. 11-52730.97. (Forschungsbericht Nr. 22). Universität Bern: Institut für Pädagogik, Abteilung Pädagogische Psychologie.
- OECD (1999). *Thematic Review of The Transition From Initial Education to Working Life. Switzerland. Country Note*. Paris: OECD.
- OECD (Ed.) (2000). *From Initial Education to Working Life. Making Transitions Work*. Paris: OECD.
- Podsakoff, N. P., Le Pine, J. A., & LePine, M. A. (2007). Differential challenge stressor-hindrance stressor relationships with job attitudes, turnover intentions, turnover, and withdrawal behavior: a meta-analysis. *Journal of Applied Psychology*, 92(2), 438-454.
- Prümper, J., Hartmannsgruber, K., & Frese, M. (1995). KFZA. Kurz-Fragebogen zur Arbeitsanalyse. Zeitschrift für Arbeits- und Organisationspsychologie, 39(3), 125-131.
- Raab, E. (1996). *Jugend sucht Arbeit. Eine Längsschnittuntersuchung zum Berufseinstieg Jugendlicher*. München: DJI Verlag Deutsches Jugendinstitut.
- Raffe, D. (2008). The concept of transition system. *Journal of education and work*, 21(4), 277 – 296.
- Ramseier, E. & Brühwiler, C. (2003). Herkunft, Leistung und Bildungschancen im gegliederten Bildungssystem: Vertiefte PISA-Analyse unter Einbezug der kognitiven Grundfähigkeiten. *Schweizerische Zeitschrift für Bildungswissenschaften* 25(1), 23-58.
- Rosenberg, M. (1979). *Conceiving the self*. New York: Basic Books.
- Rosenstiel, L. v., Falkenberg, T., Hehn, W., Henschel, E., & Warns, I. (1982). *Betriebsklima heute*. München: Bayerisches Staatsministerium für Arbeit und Sozialordnung.
- Ryan, P. (2001). The school-to-work transition: A cross-national perspective. *Journal of Economic Literature* 39(1): 34-92.
- Sacchi, S. (forthcoming). *Documentation on the longitudinal weighting of the TREE sample, 2000 – 2007*. Bern/Zürich: TREE und cue sozialforschung.
- Schelsky, H. (1956). Soziologische Bemerkungen zur Rolle der Schule in unserer Gesellschaftsverfassung. In H. Schelsky (Ed.), *Schule und Erziehung in der industriellen Gesellschaft* (5. Auflage 1965., pp. 9-50). Würzburg: Werkbund-Verlag.
- Schulz, U., & Schwarzer, R. (2003). Soziale Unterstützung bei der Krankheitsbewältigung: Die Berliner Social Support Skalen (BSSS). *Diagnostica*, 29(2), pp. 73-82.

- Schwarzer, R. (2000). General Perceived Self-Efficacy in 14 Cultures. Retrieved 21.11.2000, 2000, from <http://userpage.fu-berlin.de/~health/world14.htm>
- Schwarzer, R., & Jerusalem, M. (Eds.). (1999). *Skalen zur Erfassung von Lehrer- und Schülermerkmalen. Dokumentation der psychometrischen Verfahren im Rahmen der Wissenschaftlichen Begleitung des Modellversuchs Selbstwirksame Schulen*. Berlin: Freie Universität Berlin und Humboldt-Universität zu Berlin.
- Shavelson, R. J., Hubner, J. J., & Stanton, G. C. (1976). Self-concept: Validation of construct interpretations. *Review of Educational Research*, 46(3), 407-441.
- Sheldon, G. (1995). *Die berufliche Flexibilität im Spiegel der Zeit*. Bern: Bundesamt für Statistik.
- Semmer, N. K., & Mohr, G. (2001). Arbeit und Gesundheit: Konzepte und Ergebnisse der arbeitspsychologischen Stressforschung. *Psychologische Rundschau*, 52(3), 150-158.
- Semmer, N. (1997). Stress. In H. Luczak & W. Volper (Eds.), *Handbuch Arbeitswissenschaft*. Stuttgart: Schäffer-Pöschel Verlag.
- Semmer, N., Zapf, D., & Dunckel, H. (1999). Instrument zur Stressbezogenen Tätigkeitsanalyse (ISTA). In H. Dunckel (Ed.), *Handbuch psychologischer Arbeitsanalyseverfahren* (pp. 179-205). Zürich: vdf Hochschulverlag an der ETH.
- Semmer, N., & Udris, I. (2004). Bedeutung und Wirkung von Arbeit. In H. Schuler (Ed.), *Lehrbuch Organisationspsychologie* (3., vollständig überarbeitete und erweiterte Auflage, pp. 157-195). Huber: Bern.
- Solga, H. & Trappe, H. (2000). Die duale Ausbildung: Ambivalenzen veränderter Übergangsbiographien. *Zeitschrift für Berufs- und Wirtschaftspädagogik* 96(2): 244-260.
- Spence, M. (1973). Job market signalling. *Quarterly Journal of Economics* 87(355-379).
- Stalder, B. E., Meyer, T., & Hupka-Brunner, S. (2008). Leistungsschwach - Bildungsarm? Ergebnisse der TREE-Studie zu den PISA-Kompetenzen als Prädiktoren für Bildungschancen in der Sekundarstufe II (Are low achievers necessarily dropouts? PISA scores as predictors of upper secondary graduation. Findings from the Swiss PISA follow-up TREE). *Die Deutsche Schule*, 100(4), 436-448.
- Titze, H. (2000). Zensuren der modernen Gesellschaft. Zur Selbstbeurteilung und Fremdbeurteilung schulischer Leistungsdifferenzen. *Die Deutsche Schule*, 6, 49-62.
- Troltsch, K., & László, A. (2000). Veränderungen der Ausbildungschancen an der ersten Schwelle seit Ende der achtziger Jahre. In Bundesinstitut für Berufsbildung (Ed.), *Ausbildungschancen Jugendlicher ausländischer Herkunft. Ergebnisse, Veröffentlichungen und Materialien aus dem BIBB. Stand: Mai 2000* (pp. 49-52). Bonn.
- Ulich, K. (1991). Schulische Sozialisation. In K. Hurrelmann & D. Ulich (Eds.), *Neues Handbuch der Sozialisationsforschung* (4. Auflage, pp. 378-396). Weinheim: Beltz.
- Vondracek, F. W. (1990). A developmental-contextual approach to career development research. In R. A. Young & W. A. Borgen (Eds.), *Methodological approaches to the study of career* (pp. 37-56). New York: Praeger.
- Watermann, R. (2000). *Berufliche Wertorientierungen im Wandel. Eine Kohortenanalyse zur Dynamik arbeitsbezogener Einstellungen anhand von ALLBUS-Umfragedaten*. Münster: Institut für sozialwissenschaftliche Forschung e.V.