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Social Science Literacy II: In Search for Basic Competences and Basic Concepts for Testing and Diagnosing Political and Economic Literacy

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Birgit Weber

Testing and Diagnosing Social Science Literacy

A year ago the Journal of Social Science Education 4/2010 invites to debate the foundation of social science literacy. What are the competences, and 'what are' the contents, and individual needs to understand the relations, systems and orders of society, economy and politics? What helps to make autonomously found decisions and responsible judgements in individual and social life? What kind of abilities are needed for autonomous action within ones own life in order to participate within the given frames of society, economy and politics, in shaping them or in creating new rules. Search and discussion of the relevant concepts and competences in the domain of social science education are going on. Nevertheless the research on testing and diagnosing social science literacy is carried as well – despite the absence of a consensus on content.

Aiming at establishing a content consensus brings about controversial and vivid debates. On the one hand a minimum of agreed standards is the foundation of professionalism and relevance of a subject. On the other hand a domain based on controversial issues, on autonomous decisions for creating ones own life, on judgement of societal problems and responsible solutions, could fail in its own aims if it used instruments unsuitable to diagnose and test these core abilities.

Testing and diagnosing social science literacy is also facing the problem that the subject social science literacy is characterised by high variety. In many European Countries, secondary schools do not have an obligatory subject in this domain like, for instance, social sciences or social studies. In Germany, we face a variety of subjects like politics or economics, politics-economics, social science education, society education – sometimes also combined with history or geography. Against this manifold background, it is not only difficult to design tests for carefully constructed international comparison. But we have also to take into account that the social background as well as internal beliefs and attitudes influence the understanding of social phenomena, problems and possible solutions.

Despite missing common concepts and competences and despite of the structural, domain specific problems, in the era of Educational Olympic Games the requirements of testing and diagnosing political literacy or economical literacy are still increasing. Thus, the domain of Social Science is faced with a curious dilemma. By taking part in the games, the external relevance of the domain would be boosted while its very 'specific' characteristics and principles would be weakened. By not joining in the game, the social science domain would give away relevance and resources to other subjects. Therefore, the journal's second issue on social science literacy is both focussing on more concrete attempts of diagnosing and testing and taking a critical stance on comparative testing. Furthermore, it is discussing criteria and methods which may be appropriate for diagnosing and testing in this specific domain whose competences currently seem to be not testable. But despite all criticism of

educational Olympics and the culture of teaching to the test, it is beyond every doubt that a diagnosing of learning conditions and of the results of learning are necessary in order to develop students' concepts and competences.

The first two contributions remind us to be careful about testing. Before we look at results, models and methods for testing social science literacy *Bettina Zurstrassen* gives us a critical warning concerning the construction of competitive quantitative research. That we also need a look on the significance of learning *KimMarie McGoldrick* and *Janice L. Peterson* recommend us at the case of the financial crisis. The contribution of *Carolin Kölzer* analyses the influence of the understanding of a very common concept dependent on the social background. A new framework for testing economic competences is introduced by *Klaas Macha* and *Michael Schuhen* combining different concepts of didactics in order to overcome present shortcomings. While a lot of questions on testing and diagnosing the judgment of controversial issues, internal beliefs and attitudes in the social sciences remain open, *Felix Fenske*, *Andreas Lutter* and *Andreas Klee* offer concept cartoons as an instrument to gain information about the mental conceptions and the individual political judgement strategies. *Andrea Szukala* shows how metaphor analysis could help to discover deep beliefs about teaching and learning in social science education.

From a critical perspective on current competitive quantitative research in the field of citizenship education, **Bettina Zurstrassen** sensitises for relevant test problems. Against the background of the particularism within 38 EU Countries and a missing proficiency model in citizenship education, Bettina Zurstrassen analyses the difficulties of testing judgement competence with quantitative methods. With impressive examples and results of studies she shows that tests tend to oversimplify, if they ignore that different values and affective concerns, the use of terminology depending on the scientific background and differences in political culture, social structure and approaches of education influence the judgements. This paper shows how much tests are dependent on the individu-



al solutions of the respective test designer. Thus, Bettina Zurstrassen issues are a warning of ill-considered handling of research results, particularly because they could be instrumented for scandalising. A lot of work has to be done before an adequate measurement of citizenship competence can take place.

Apart from discussing possibilities, chances and risks of diagnosing and testing, it may be useful to remind of the main aim of social science education. **KimMarie Goldrick** and **Janice Peterson** take a critical stance toward a narrow search for concepts only within a single scientific discipline. For them, traditional economic approaches fall short to develop deep learning, because they focus too much on foundational knowledge and ignore the real world context and the human dimension. They discover an interesting gap: Although the general interest in economics rises, models of traditional economics fall short of grasping dynamics and instability, leaving students alone with their attempts to understand what is actually happening with the crisis. In order to ensure significant learning, the authors are demanding tools which help students to think critically about the world they live in and to commit themselves to improve it. With interesting examples they show how economic learning could be combined with a human dimension, using service learning and blending economic and civic education. This experience should be related to scientific results in order to get a deeper understanding of the limitations of economic theory and to motivate to search for alternative concepts of dynamics and complexity. Context-bound committed learning offers students a chance to confront themselves with their own misconceptions instead of perpetuating them.

Carolin Kölzer investigates work, labour and unemployment as important concepts of social science according to the social background of a special group of students. She interviewed 24 students of the German Hauptschule ("Hauptschüler"), half by half boys and girls as well as half by half those with and without migration background. Illustrating empirical tendencies by diagnosing the pupils' concepts of work she concludes, *"if school education fails to extend and to differentiate these conceptions (...) Hauptschüler will enter the labour market with a mainly fordistic-orientated, rather one-dimensional, negative, institutionally and socially generated view on work"* and they will be *"not in line with job requirements with a higher flexibility and subjectivization"*, so they are *"even more lowly-qualified, a disadvantage which leads to displacement"*. Therefore, further research is necessary to find out how social science education can differentiate student conceptions, deeply rooted in their every-day world, within the institutional frame of *"a type of school that is founded to be a mechanism of social reproduction."*

In order to get a broader understanding of students' competence **Klaas Macha** and **Michael Schuhen** offer a multidimensional framework to diagnose economic literacy as the *"application of economic concepts or knowledge in situations relevant to a person's life"*. Based on the results of psychologist competence research and economic education they found eight dimensions to construct a framework measuring competences. This framework is used to analyse empiric studies – and shows that the existing tests either fail in measuring competences or do not give economic literacy enough weight. These desiderata in mind, they enrich their framework with those abilities and define a new definition of economic competency as *"the ability in verbally and mathematically orientated situations, roles and contexts to (1) recognise economic questions, (2) describe economic phenomena and arrive at economic conclusions, (3) apply economic knowledge in different situative actions, (4) occupy oneself with economic thoughts and ideas and deal with them in a way that is adequate to all current and future tasks of one's life as a constructive, dedicated and reflective citizen"*. Accordingly, they put their dimensions in concrete terms like content, requirement, aspects of action, problem solving, situations, roles, task design and motivation/volition.

As Bettina Zurstrassen has shown, testing political judgement in quantitative research induces problems, **Felix Fenske**, **Andreas Klee** and **Andreas Lutter** offer concept cartoons as a qualitative method of research on mental conceptions and individual political judgement strategies. They work out the contradiction between stable individual concepts and scientific knowledge which is not used in *"rational, reasonable decision-making processes"*. Concept cartoons, starting with everyday life and other existing concepts, are used as instruments to create dissonances by offering different statements of specific scientific ideas and controversial values related to personal experience, in order to close the mentioned gap between student and scientific perspectives. The example of a "party ban" shows the potential to start the classroom discussion and to identify the various judgement strategies. Analysing three different groups of learners they found that pupils discuss rather close to the respective situational content, the thematic statements of the actors as well as to the underlying political controversy. The results encourage using concept cartoons not only as a tool for starting the learning process, but also as a diagnostic tool.

Although the important role of epistemological beliefs influencing the learning of students is a long discussed topic in education sciences, the discussion within the subject didactics of social science education is still at its starting point. The research of **Andrea Szukala** enters this *"terra incognita"*. She wants to know how the epistemological beliefs of so-



cial science interfere with the concepts of teaching. Referring to the discussion in psychology about beliefs, she asks for the domain of social sciences how the epistemological beliefs of its teachers could actually be analysed, taking into account the very broad definition of the domain and its characteristic uncertainty and controversy. How can the certain domain specific epistemological beliefs be connected to beliefs about teaching and learning the school subject? How are the prevailing beliefs influencing teachers' cognitions and behaviours? Facing the problem that the popular psychological test does not differentiate between domain specific beliefs and the problem that students use the terms and definitions taught with different meaning(s), she is looking for an instrument allowing a differentiated diagnosis of the deeper understanding. Metaphor analyses seem to be appropriate for making aware of implicit beliefs and tacit knowledge giving support in understanding abstract and unstructured concepts in concrete terms. The paper presents first results of two cases, proving the power of metaphor analysis to illuminate beliefs and attitudes which usually remain undetected. The case study shows first results about the different character and change of epistemological beliefs about science and teaching.

Although **Irena Zaleskene** wants to show the situation of Citizenship Education in transforming Lithuania in her country report, she gives also answers to our questions. Forcing the change of society by globalization she asks for concepts and competences of citizenship education in a transforming society as well. This is much more a crucial point, when the relationship between individuals and society are changing dynamically and education plays an important role for social cohesion or social exclusion. Zaleskene requires a positive citizenship to manage one's own life in society, much more, when the constitution ensures equal rights for all, but the state is not able to provide all of the needs of everyone. Viewing literature and empiric studies Irena Zaleskene describes citizen competencies, and also necessary concepts within political, social, economic and cultural dimensions, cognitive and ethical competences as well as capacities for actions. As positive socialization affords political, value, identity and social competence Zaleskene recommends – like McGoldrick/Peterson – service learning as a chance to deal with important issues of society. This should encourage participation needs and consumer citizenship fostering daily life skills as well as responsibility for society.



Bettina Zurstrassen

A Sceptical Look at the Quantitative Education Research in Civic and Citizenship Education

At the latest since the PISA study, the international comparability of educational system performance is called for. Little discussion takes place on the research problems occurring in the course of internationally comparative educational systems in the social societal teaching subjects. Research, however, finds itself confronted with methodical, scientific-theoretic and test-ethical problems. These problem areas are to be outlined in this paper. The focus will be on quantitatively comparative education studies. Essentially the analysis consists of an examination of the ICCS Study (International Civic and Citizenship Education Study) of the biggest internationally comparative political education study in existence.

Keywords

Civic and citizenship education, test ethics, Gender

Introduction

At the latest since the PISA study, the international comparability of educational system performance is called for. Little discussion takes place on the research problems occurring in the course of internationally comparative educational systems in the social societal teaching subjects.

It is true that the initial, if only tentative, steps have been taken for several years towards (international) comparative quantitative education research in the field of civic and citizen education. Research, however, finds itself confronted with methodical, scientific-theoretic and test-ethical problems, whose range has until now only been discussed “superficially” (cf. Hahn 2010, Schulz 2009, 115).

These problem areas are to be outlined in this paper. The focus will be on quantitatively comparative education studies. Essentially the analysis consists of an examination of the ICCS Study (International Civic and Citizenship Education Study) of the biggest internationally comparative political education study in existence.

Four aspects are thereby of central significance:

1. The problem of particularism in civic and citizenship education.
2. There is no existing educational-theoretic and empirically verified model of proficiency, suitable internationally for making deductions.
- 2.1. The dilemma of domain-specific diagnostics.
3. Scientific-theoretical problems of interdisciplinary-oriented civic and citizenship education research.
4. Test ethics for quantitative education studies in the field of civic and citizenship education.

Regarding the statistically methodical debate being held in comparative social research and comparative psychology, I shall only treat this in the paper in a cursory manner.

1 Because of the negative experience in Nazi Germany, education and cultural policy is subject to regulation by the individual federal states. This means to avoid enforced conformity of the education system

1. The Problem of Particularism in Civic and Citizenship Education

In civic and citizenship education considerable particularism exists. The subject structure, the curricula and the concepts for civic and citizenship education vary considerably in individual national and federal states. In the Federal Republic of Germany, by reason of cultural sovereignty¹, we can even consider it a patchwork system, since each of the 16 federal states has its own curriculum, which partially vary in objectives and choice of content considerably. The problem of international particularism in civic and citizenship education is extensively thematised in the ICCS study and in the Eurydice study² and empirically reviewed (cf. Schulz et al. 2010a; 2010b; Eurydice 2005). The aspect of particularism in civic and citizenship education is therefore presented only superficially in this article.

1.1. Particular Subject Structure and curricular Particularism

Contrary to the teaching subjects of mathematics or teaching the country's language, in many states there is no teaching subject distinctly for civic and citizenship education. In the 38 countries that took part in the ICCS (International Civic and Citizenship Education Study), for instance, there are three organizational forms at the curricular level for lower secondary education: 1. Civic and citizenship education as a specific, stand-alone subject (either compulsory or optional). 2. Civic and citizenship education integrated into other subjects. 3. Civic and citizenship education as a cross-curricular theme” (cf. Schulz et al. 2010 a, 22). Many countries use two or three of these curricular approaches simultaneously. In 18 of the 38 participating countries, there is no stand-alone subject known as ‘Civic Education’ (ibid., 23). This particularisation is further differentiated due to the wide thematic distribution in the national syllabuses and the fact that in those states which have their own teaching subject for civic education, the

2 The position “civic education” in the member states was examined in the Eurydice Study by order of the European Union.



subject is often not taught in all class grades (cf. *ibid.*; Eurydice 2005, 20 a). The test contents of the ICCS study are therefore often not coextensive with the contents actually taught. The deficient curricular validity warns us to be careful when deriving judgements from the study to apply them to the teaching quality. In order to enhance the curricular validity, the ICCS research group developed regional modules for the survey in 2008/09 (cf. Schulz et al. 2010, 15).

1.2 Competing Programmatic Subject Concepts?

The ICCS study differentiates between two subject-didactical, conceptual approaches which are described as follows: "Civic education focuses on knowledge and understanding of formal institutions and processes of civic life (such as voting in elections)" (cf. Schulz et al. 2010 a, 14). Conversely, the concept of citizenship education focuses on "knowledge and understanding and on opportunities for participation and engagement in both civic and society" (*ibid.*). This differentiation is superficial. The theoretical concepts and debates about Civic Education, Citizenship Education, Political Education and Democratic Education vary internationally. Supporters of civic education will complain that the practice of political active skills is not a stand-alone characteristic of citizenship education. No empirically valid data are available which permit serious statements of how far the various conceptual notions affect the specific lesson and learning success of the students. Due to the limited page number the debate will not be reintroduced (Georgi, 2008; May 2008). The debate is chiefly concerned with educational and research-political questions of authority, since research funding, personnel resources and definition responsibility are involved in the denomination of professorship appointments.

2. No Education-Theoretical and Empirically Proven, Internationally Adaptable Proficiency Model

The circumstances described above complicate the development of an internationally adaptable education test. They are complicate above all because no internationally adaptable education-theoretically founded and empirically proven proficiency model for civic and citizenship education is available (cf. Himmelmann 2005).

If we look at the test item for the ICCS Study 2009 (Schulz et al. 2010 b), we see a melange of topic complexes which are questioned. There is, however, no subject-didactical and education-theoretical foundation for the knowledge test. It is not clear on which proficiency model the knowledge test of the ICCS study is based. A proficiency model giving education-theoretical accountability for which skills and special

knowledge the student should possess in order to become politically and socially capable of action is not available for the research group. Not even specialised didactic categories for the choice of test items are defined. Instead we have the choice based on specialised categories: „Civic society and systems“, „civic principles“, „civic participation“, „civic identities“ (*ibid.*, 60). The research group of the ICCS study defines three proficiency levels (*ibid.* 61); their empirical discrimination and verification, however, remain unclear. The result is that the entire knowledge test floats in a vacuum, above all since the educational relevance of the test item is unclear. To be fair, however, it must be emphasised that the domain-specific diagnostic is still in the beginning stages. Based on the present status of research, central target setting for civic and citizenship education by means of quantitative test procedures cannot be empirically realised, if indeed they can be adopted at all for quantitative studies. This is exemplified below, demonstrated by the example "political judgement capability".

2.1 The Dilemma of Domain Specific Diagnostics

In the course of the ISSC study, 63,000 teachers from 38 states taking part were asked "how they conceptualized civic and citizenship education, what they saw as objectives, and how this subject area was being delivered in their school" (cf. Schulz et al. 2010a, 3, 64). From 10 given categories of "civic and citizenship education study" they were required to select the three most important ones. One of these categories was "promoting students' critical and independent thinking", which was defined by teachers from Cyprus, Finland, Latvia, Liechtenstein, Lithuania, Slovenia, Spain, Sweden as most important aim (*ibid.* 68). This item represents the proficiency field "political judgement capability" for civic and citizenship education also in Germany.

This article utilises the following definition of the term 'political judgement': Political judgements are based on expertise. This distinguishes them from judgements and anticipatory judgements. They are developed in a process of consideration and are justifiable; categories of value rationality and purposive rationality are enlisted in the process. They can be elaborated through dialogue. Makers of judgements are aware of the perspective nature of their own positions. Political judgements must be accessible to reflection (cf. Berliner 2009; Massing 2006, 157; Weinbrenner 1997, 75 ff; Harwood, Hahn 1990). The emphasis of presentation is upon the problems that arise in quantitative methods for the measurement of judgement competence within the framework of achievement tests. Because teaching subjects in the social sciences are among the interpretive subjects, the domain-specific diagnostic approach works chiefly with qualitative



methods in empirical social research. Given the complex structure of the process whereby political judgements are formed, some experts of teaching methodologies take a sceptical view of approaches that attempt to identify political judgement competence on the basis of diagnostic testing. Weinbrenner points to the model and variable formation required if the process of judgement formation is to be discussable at all from a research point of view (cf. Weinbrenner 1997, 81). Along with theories of developmental and cognitive psychology, efforts to identify judgement competence must also take the structural characteristics of the discipline into account. In this article, the problem can only be pointed up by way of example: In a test designed to identify the structures of political judgements, respondents are asked the following question, for instance: 'What could the consequences of more direct democracy be?' Respondents may tick these answer categories:

- a) Direct democracy can help remedy the overwhelming power of the parties.
- b) Direct democracy can reduce disenchantment with politics.
- c) Direct democracy is cheaper.
- d) More democracy can lead to decisions based on political mood.
- e) The people cannot cope with difficult decisions (Massing, Schattschneider 2005, 23).

There are arguments for and against all five answer categories. Even answer category 'c' can be justified in reference to the costs of citizens' protests, the many years consumed by proceedings before administrative law courts or the macroeconomic cost of increases in acts of violence by political-extremist groups as a result of disenchantment with politics. Because all of the answer categories are discursive in nature, it is unclear just how one should decide which criteria should be viewed as companion to a higher degree of sophistication of political judgement competence. If the political judgement of a test's designers were set as the applicable standard, this would represent a violation of the requirement that empirical quality criteria must be objective. The diagnostic identification of political judgement competence confronts the didactics of civic and citizenship education with additional problems, which for the most part are not limited to quantitative survey methods:

- There is no appropriate definition of what constitutes a political judgement, and of the characteristics inherent to a political judgement (cf. Berliner 2006; Bourke, Geuss 2006; Weinbrenner 1997, 73 f)
- The process of human development towards the formation of judgements and the stages of this development are, despite the structuralist-cognitive

theory of development of Jean Piaget and Kohlberg's stage model of moral development and recent studies in developmental research (Colby, Kohlberg 1987; Fend et al. 2009), still inadequately explained, both empirically and theoretically.

- Because political judgements are syntheses of judgements of fact and judgements of value, they cannot be assigned to dichotomous answer categories such as 'right' and 'wrong' (see the test item shown above).
- Political topics have different degrees of affective concern, and this could have an impact on the sophistication of the political judgement form. As a result, a multiplicity of measurement values is required to neutralise this factor of influence mathematically.
- There are no clearly defined principles for the construction of political judgements (of the form seen, for instance in Latin instruction for the construction of the gerund). Test items for reliability review or repeat measurements cannot be reproduced merely by making slight variations in the items themselves (e.g. modifying numerical values).

What We Need to Do

Before the domain enters into quantitative learning status research, we need an internationally adaptable, educational-theoretically based proficiency model be conceptualised by an internationally composed research team. In the second phase, test items and diagnostic instruments for checking the proficiency model must be developed and tested. Only then, based on this, can a test for internationally comparative education studies (learning status investigation) be constructed and implemented. Implementation of such a procedure could take a long time to develop and use up financial resources.

3. Scientific Theoretical Problems of Interdisciplinary Civic and Citizenship Education Research

The question of how democratic proficiency can be acquired and how political judgement and activity proficiency develop are of vital significance for democratic systems. Answers to these questions are being sought by various specialised disciplines, for example by psychology, educational sciences, political ethnology, political philosophy, political science and political didactics. They all examine sections of the complex research material from their own specific expertise perspectives. With regard to the research fields, there is considerable differentiation, e.g. political socialisation research, political attitude research, political culture research, research on teaching of a specific expertise, research in the teaching profession, learning diagnostics as well as curriculum and school book research, whereby the list could easily be ex-



tended. Political education and socialisation research is a domain – and here it differs from many other teaching subjects – which cannot be classified into only one subject discipline. Interdisciplinary cooperation as applied to international research projects is almost unavoidable in order to cope with the complexity of the research topic. Furthermore, it must be taken into account that test values from internationally comparative education studies can be distorted, since participants of the test interpret the items according to their own culture. The conceptuality, the concepts and the feasibility of interdisciplinary research are contentious. In the scientific theoretical debate there is, in the meanwhile, an extensive and long-lasting discussion on the concepts of what is multi-, inter- and transdisciplinary (cf. Jantsch 1970, Heckhausen 1972, Klein 1990; Moran 2002; Mittelstraß 2003; Jungert et. al 2010), which cannot be comprehensively presented here. Heckhausen differentiates in his category system between six grades of interdisciplinarity. These range from “indiscriminate interdisciplinarity”, i.e. various teaching subjects are presented “adjacent to each other” up to “unifying interdisciplinarity”, whereby a merging of theory approaches and methods of different subjects takes place in the research process (cf. Heckhausen 1972, 87-89).

The requirement of “interdisciplinarity” is easier said than done. Interdisciplinary research in the field of civic and citizenship education is confronted with a number of problems which must be reflected in the research process. Firstly, a variety of faculty cultures exists, e.g. disciplinary discussion cultures, paradigms, publication strategies (c.f. Surkopp 2010, 14). Secondly, in civic and citizenship education, various grammatical conceptual approaches exist with regard to content, methods and objectives of the particular subject (see Chap. 1) and thirdly, various expert scientific theories and terminology concepts exist. The latter aspect will be considered below.

3.1 Various Scientific Disciplinary Terminology and Theory Concepts

Heckhausen measures the degree of interdisciplinarity based on indicators of theoretical integration. The problem is illustrated through examples of use of terminology and theory concepts. Behind scientific specialised terminology there are theory concepts which are interpreted differently, e.g. terms for politics, terms for democracy, terms for justice, the controversy of a narrow or wider term for violence in sociology, psychology and education science or the term “environmental awareness” (c.f. Rippel 2004, 16). The “battle of words” is waged within disciplines as well as interdisciplinarily.

The use of terminology has an impact on research results. The degree of women’s political activation is,

for example, within the narrow political sense often meagre, whereas when a wide political term is applied it takes on more significance (see Chap. 4). The fact that for the subject matter of an examination often extremely heterogenic data exist is often explained by the different applications of the terminology concepts.

What We Need to Do

The item development for education studies is guided in theory as a rule by education studies. In order to avoid severe distortion of the test values (see chapter 3, 4), terminology and theory concepts in the case of interdisciplinary education studies, when optimising the items, must be made known and coordinated. Furthermore the research design, the survey method and the individual steps of the research process must be made transparent, to provide sequential compliance of the research process and its results among the personnel.

4. Test Ethics in the Case of Quantitative Education Studies in the Field of Civic and Citizenship Education

The aspect of test ethics for education studies in civic and citizenship education has been little thematised until now. In the USA there is, in the meanwhile, a wide debate on the research methods used for test ethics (cf. www.fairtest.org; Nichols, Berliner 2007; McNeil 2001; Sacks 2000; Gipps, Murphy 1994). Test ethics in education studies examine to what extent those questioned who were from different social groups and cultural socialisation have unequal chances of success because of the test construction. It examines, furthermore, the problems of normative overcoming by item formulation and the operationalisation of answer categories. In this chapter, three aspects of test ethics are outlined which possess great relevance in quantitative education studies of civic and citizenship education: “political culture and test ethics”, “social structure and test ethics” and thirdly, “political-didactical test ethics”.

4.1 Political Culture and Test Ethics

In comparative social scientific culture research and in comparative psychology there is a wide, statistical discussion on methods regarding the comparability of data expressed in terms of the concept of equivalence. Van de Vijver defines the term “equivalence” as follows: “Equivalence refers to the question whether there is any difference in measurement level of within- and between-group comparisons. If the measure is biased against some cultural group, individual differences within a cultural population and across cultural populations are not measured at the same scale” (1998, 43). Contrary to education research in mathematics, social scientific education research must



examine very closely the culturally specific dimension of social structures and terminology in order to avoid measurement errors. Van der Vijver and Hambleton differentiate between three distinct types of bias that may affect the validity of tests that have been adapted for different cultural contexts:

Construct bias: A measuring tool is made operational for a survey group, e.g. the construct "Attitude towards the social state." Using this measuring tool in a different culture can lead to a distortion of data, if the construct is defined otherwise in this culture.

Item bias: Distortion of compiled data due to inaccurate translation. But even in the correct translation distortion can arise if, for example, within one culture there are different reactions on the answer scale.

Method bias: In one culture, individuals react systematically to a survey instrument in a different way to those questioned from a different culture (cf. Van der Vijver, Hambleton 1999, 89-99).

In the ICCS study, politically cultural differences, above all in the context of methodological discussion (e.g. translation and re-translation of the questionnaire, national pre-tests) are thematised. Furthermore, social structural aspects are touched on which lead to unequal chances of success in the education test. A discussion with culturally different interpretation patterns of social and political terminology and theory constructs does not take place. Furthermore, "culture specific" political behaviour patterns such as Carol Hahn presents in her study are not thematised. Hahn, Professor of Education at Emory University, performed ethnologically oriented observations of teaching in six industrialised countries (Great Britain, the US, Germany, Denmark, Netherlands and Australia) (Hahn 1999). She verified her observations through interviews with pupils and instructors, and through a quantitative survey. Hahn describes the classroom teaching and the impact it has on the pupils' patterns of political attitudes (ibid. 241). While 76 percent of the Danish pupils surveyed expressed a high willingness to discuss politics with other people, this willingness was echoed by only 23 percent of Dutch participants in the survey. Hahn attributes the difference to civics instruction in Denmark, where a highly developed culture of political discussion was cultivated. In the Netherlands, she observed, where there is no self-contained instruction in 'Citizenship Education', these experiences are missing (ibid. 243; see also Maiello et al. 2003, 393). Her analysis is focused upon the culture of instruction. Hahn does not attempt to embed the results of her research in the political culture of the individual countries examined. This would be required for international comparative civic and citizenship educational studies of educational achievement. How does political culture affect response behaviour if, for instance, a study is to formulate political judgements even though in a par-

ticular participant country it is taboo to discuss one's political opinion in a public setting?

4.2 Social Structure and Test Ethics

For many years, there has been a debate in empirical methodology about the language style used, which in surveys and tests is often middle-class-oriented (cf. www.fairtest.org). When taking performance tests, pupils from 'language-poor' families or pupils from families with a migration background thus must not only demonstrate their expertise in the subject but also encode the test items in their own language. Conceivably, some test items will go unanswered for reasons of language hurdles – even though the relevant expertise exists (cf. Bartnitzky 2008). This problem must also be taken into consideration in tests in civic education.

4.2.1 Gender and Test Design

Is there a gender gap in political specialised knowledge? The empirical data status is considerably more heterogenic than scientific discourse would have us believe, which is aimed at discrimination against women. Whereas Wolak and McDevitt in their study detect a lower political specialised knowledge among young women (2010, 2), girls in the ICCS study in the vast majority of the states involved (31) on average achieved considerably higher test values than young men (cf. Schulz et al. 2010a, 39-40). The long term comparison of the ICCS study (including the CIVIC study) indicates that the female respondents in the surveys of 1971 and 1999 came off even worse than the male respondents, but the values have progressively converged (cf. Schulz et al. 2010b, 80). How can the heterogenic data status be explained? An analysis of the test designs is unavoidable. This, however, is conditional to the test tools being accessible for the public, something, however, which is often not the case. A positive example is given by Wolak and McDevitt, who have listed the test items in the attachment to their article (Wolak, McDevitt 2010). Based on analysis of their survey instrument, an attempt at explanation for the poor results from women in their study can be developed. The authors explain their research results with the "theory of risk aversion", which implies that women mark the answer category "don't know", whereas, if men do not know a result will make a guess (ibid. 3). Lizotte and Sidman arrive at similar results in their study: "We argue that it is this propensity to guess under conditions of uncertainty that consistently produces political knowledge scales that underestimate the ability of women" (2009, 128). There is no category "don't know" in the ICCS study. It should be examined how far the construction of the item and answer categories distort the test value. It must be examined in general, to what extent the test construction generates gender-specific differences.



Important results concerning test construction and the gender gap in political knowledge are discussed in the article "Stereotype Threat and the Gender Gap in Political Knowledge" by McGlone, Aromson and Kobrynowitz: "These results show that the gender gap in political knowledge narrowed substantially when two potentially stereotype-threatening elements of the survey context were eliminated. Specifically, when women (rather than men) were interviewed by female interviewers and the survey was portrayed as nondiagnostic (rather than diagnostic) of alleged gender differences in political knowledge, the gender gap closed (2006, 396)."

A further attempt at explanation exists in the range of topics of the questioned test knowledge. The political fields of interest of women and men are different. Whereas women are interested primarily in the politics of education, social matters and family, men show greater interest in the fields of party politics, societal institutions as well as business and foreign policy (cf. Noelle-Neumann, Köcher 2002, 395 f.). Wolak and McDevitt, however, in their study asked knowledge questions about party politics throughout. Setting a broad or narrow political terminology for the content choice of test items can lead to a distortion of the result valuation. I would like to formulate this here as a hypothesis. An investigation of this hypothesis calls for a more in-depth evaluation of the selection of items in previous studies of achievements in civic education; this evaluation is still in progress.

4.3 Political-Didactical Test Ethics

The prohibition of political indoctrination and all other indoctrination on the one hand and the decree of objectivity on the other hand are in many states central paradigms of civic and citizenship education. Infraction of these political didactical principles in quantitative studies is to be exemplified by an illustration on the basis of a test item from the ICCS study. I shall merely formulate theses which would need to be confirmed through systematic analysis of quantitative test material for the domain. The 14-year-old pupils taking part are to resolve the following task: A pupil has bought new shoes; then he discovers that these "were made by a company that employs young children to make the shoes in a factory and pays them very little money for their work" (Schulz et al. 2010b, 67). The respondent is to mark how the pupil can convince other consumers not to buy shoes when the production involves child workers. The following answer categories are offered:

How can he best try to do this?

- Buy all of the shoes himself so no one else can buy them
- Return the shoes to the shop and ask for his money back
- Block the entrance to the shop so people cannot enter it

- Inform other people about how shoes are made
- The last answer is considered to be the right answer. From a political didactical viewpoint, this example illustrates the following ethical conflict situations

Necessitation of Oversimplified Political Judgements

Ostensibly open explanation of child labour and the suggested boycott of products in this category receive the widest political acceptance. In social science research, the boycott of goods produced by children, however, is seen in the meanwhile in very differing ways (cf. Liebel 2001, 9). The morally congenial behaviour of boycotting the goods can be contra-productive for the child workers. By boycotting the goods the child workers lose their essential source of income, if simultaneously compensation measures are not taken. In particular in national economies, where child workers are a significant economic factor, wage levels of the parents must be increased, orphans would need to receive transfer benefits, so that they don't need to work. Consumer behaviour is of considerable relevance in the industrialised states. Are they – including the test participants – willing to pay higher prices for goods in order that the wage levels in the so-called emerging countries and the working conditions can be improved? The test respondents are not given the chance of developing alternative solution strategies. My first hypothesis is: In the case of quantitative education studies in the field of "civic and citizenship education" the test respondents are forced to make oversimplified judgements of a political and economic nature.

Adoption of the Valuation Structure of the Test Designers

The sociologist Liebel discusses in his publication also the positive effects of child labour, since this is connected to the chance of improving the standard of living or gaining professional experience (ibid.). His explanations are not a plea for exploitation of child labour, yet it becomes clear that the normative borders of interpretation are outside those given in the test. The test respondents are not, however, given the chance to formulate their own normative judgement. Instead, the survey respondents in quantitative education studies on civic and citizenship education, according to my second hypothesis, have the valuation structure of the test designers forced upon them. In order to conclude the test successfully, the respondents have to try and follow and adopt the interpreting pattern of the test designers.

Definition Sovereignty over the Concept of the Politically Active Citizen

The test item presented above describes four political courses of action. „Inform other people about how

shoes are made” is defined as the correct answer. With this, however, a high standard of political, responsibly active citizen is formulated, which assumes a very high level of participation. Other forms of political protest are defined as “wrong” (see answer categories 1, 2 and 3) or are not offered. Many consumers will not accept that the answer category “Return the shoes to the shop and ask for his money back” as being wrong, since in this way they are making use of their power as consumers. The political activation level and the political scope with regard to educating other consumers is indeed less than with answer “d”, but it is not wrong. The test designers, according to my third hypothesis, force their interpretation pattern of the politically responsible, active citizens and legitimate political forms of action onto the test participants. These problems could occur systematically, especially in test items which are aimed at testing action proficiency.

What We Need to Do

In civic and citizenship education, there is a necessity for more intensive research and more intense sensitisation for “test design errors” which lead to a systematic, socially structured, cultural and normative distortion of test results. This applies not only with respect to the design of survey instruments, the content choice for the education tests, but also for interpretation of the data.

Conclusion

Education tests have a considerable scandalisation as well as a dramatisation potential and therefore influence political performers greatly. Social reality is designed on the basis of empirical data. The danger of

instrumentalisation of education studies by imposing political aims is immense. Critical analysis of the empirical data in science and politics is consequently fundamental. I have illustrated in the article that in the case of quantitative education studies in civic and citizenship education, significant distortion can occur which arise from the complexity and distinctiveness of the research field. These aspects were analysed superficially in the article. Further, in-depth examinations of the individual, partial aspects are required. Quantitative political education research must be unpretentious, since:

1. No education-theoretical and empirically assured proficiency model for civic and citizenship education exists which is internationally adoptable.
2. Even at the level of testing specialised knowledge, distortion of valuation can occur, due to variations in culturally specific, socially structural or interdisciplinary interpretations of terminology and theory concepts.
3. Numerous aims of civic and citizenship education, by reason of their complexity and normativity, mean that quantitative surveys cannot provide the necessary ability to operate. Thus, for example, the educational aim of “promoting students’ critical and independent thinking”, is beyond quantitative measurability, since in education tests, no scientifically objective categories of “right answer” or “wrong answer” can be defined.

My discourse in this article does not oppose comparative (international) quantitative education research in principle, but it points out the research problems and advises caution against unconsidered handling of research results.

References

- Abs, Josef, eds. 2009. *Introducing Quality Assurance of Education for Democratic Citizenship in Schools*. Strasbourg.
- Bartnitzky, Horst. 2008. VERA Deutsch 2008: Wie Kinder durch Vergleichsarbeiten Unrecht geschieht [How Children are wronged by Comparative Tests]. In: Grundschnulverband e.V. (http://www.grundschnulverband.de/fileadmin/Bildungspolitik/GS_103.Bartnitzky_Vera08_Deutsch.pdf).
- Berger, Guy. 1972. Introduction. In: Apostel, Léo; Berger, Guy; Briggs, Asa; Michaud, Guy, eds. *Interdisciplinarity. Problems of Teaching and Research in Universities*. Paris, 23–26.
- Berliner, Isaiah. 2006. *On Political Judgement*. New York.
- Böhm-Kasper, Oliver. 2006. Politische Partizipation von Jugendlichen. Der Einfluss von Gleichaltrigen, Familie und Schule auf die politische Teilhabe Heranwachsender [Political Participation of Adolescents. The Influence of Peers, Family and School on Youths' Political Participation]. In: Helsper, Werner u.a., eds. *Unpolitische Jugend? Eine Studie zum Verhältnis von Schule, Anerkennung und Politik [Unpolitical Youth? An Analysis of the Relation between School, Recognition and Politics]*. Wiesbaden, 53–74.
- Bourke, Richard; Geuss, Raymond, eds. 2009. *Political Judgement*. Cambridge.
- Bridges, David; Smeyers, Paul; Smith, Richard, eds. 2009. *Evidence-Based Education Policy*. Oxford.
- Büner, Markus. 2006. Einführung in die Test- und Fragebogenkonstruktion [Introduction to the Construction of Test- and Questionnaire]. München.
- Center for Civics Education. 2010. National Standards for Civic and Government. In: Center for Civics Education. (http://new.civiced.org/images/stories/PDFs/Publications/National_Standards/National_Standards_full_text.pdf).
- Colby, Anne; Kohlberg, Lawrence. 1987. *The Measurement of Moral Judgment. Volume I: Theoretical Foundations and Research Validation*. Cambridge.
- Colby, Anne; Kohlberg, Lawrence. 1987. *The Measurement of Moral Judgment. Volume II: Standard Issue Scoring Manual*. Cambridge.
- Dünnebieer, Katrin; Gräsel, Cornelia; Krolak-Schwerdt, Sabine. 2009. Urteilsverzerrung in der schulischen Leistungsbeurteilung. Eine experimentelle Studie zu Ankereffekten [Bias of Assessment in Educational Performance Appraisal. An Experimental Study about Anchor Effects]. In: *Zeitschrift für Pädagogische Psychologie*, Jg. 23 (3-4), 187–195.
- Eurydice 2005. *Citizenship Education at School in Europe*. (<http://www.moec.gov.cy/programs/eurydice/publication.pdf>).
- Farnen, Russel; German, Daniel; Dekker, Henk; De Landtsheer, Christl; ; Suenker, Hein. 2008. *Political Culture, Socialization, Democracy and Education*. Frankfurt.
- Fend, Helmut; Berger, Fred; Grob, Urs, eds. 2009. *Lebensläufe, Lebensbewältigung, Lebensglück. Ergebnisse der LIFE-Studie [Lifecourses, Coping with Life, Fortune. Results of the LIFE-Study]*. Wiesbaden.
- Fuchs, Gesine. 2008. Politik: verfasste politische Partizipation von Frauen [Politics: Constituted Political Participation of Women]. In: Becker, Ruth; Kortendieck, Beate, eds. *Handbuch Frauen- und Geschlechterforschung. Theorie, Methoden, Empirie [Compendium Women and Gender Studies. Theory, Methods, Empiricism]*. Wiesbaden, 539–546.
- Georgi, Viola B. 2008. *The Making of Citizenship in Europe: New Perspectives on Citizenship Education*. Bonn.
- Gill, Jungil. 2008. Gender Differences in a Pre-adult Learning of Participatory Orientations: Comparison of the US, Korea, and Japan. In: Farnen, Russell et al. eds. *Political Culture, Socialization, Democracy, and Education*. Frankfurt, 181–198.
- Gipps, Caroline; Murphy, Patricia, 1999. *A Fair Test: Assessment, Achievement and Equity*. Buckingham.
- Hahn, Carol L. 1999. Citizenship Education: An empirical study of policy, practices and outcomes. In: *Oxford Review of Education*, Vol. 25 (1/2), 231–250.
- Hahn, Carole. 2010. Comparative Civic Education Research: What we know and what we need to do. In: *Citizenship Teaching and Learning*, Vol. 6 (1), 5–23.
- Haste, Helen. 2007. What Is a “Competent Citizen” and How Do We Create Them? In: Biedermann, Horst; Oser, Fritz, Quessel, Carsten, eds. *Vom Gelingen und Scheitern Politischer Bildung. Studien und Entwürfe [About Success and Failure of Civic Education. Studies and Designs]*, 75–96.
- Harwood, Angela M.; Hahn, Carole L. 1990. *Controversial Issues in the Classroom*. ERIC Clearinghouse for Social Studies/Social Science Education Bloomington IN.
- Heckhausen, Heinz. 1972. “Discipline and Interdisciplinarity”. In: Apostel, Léo; Berger, Guy; Briggs, Asa; Michaud,



- Guy, eds. *Problems of Teaching and Research in Universities*. Paris, 83–89.
- Helmke, Andreas. 2007. Unterrichtsqualität erfassen, bewerten, verbessern [Diagnosing, Assessing and Improving Tuitional Quality]. Stuttgart.
- Himmelmann, Gerhard. 2005. Was ist Demokratiekompetenz? [What is Democracy Competence?] In: <http://blk-demokratie.de/fileadmin/public/dokumente/Himmelmann2.pdf>
- International Test Commission. 2010. Guidelines for Translating and Adapting Tests. (<http://www.intestcom.org/upload/sitefiles/40.pdf>).
- Jungert, Michael; Romfeld, Elsa; Sukopp, Thomas; Voigt, Uwe, eds. 2010. Interdisziplinarität. Theorie, Praxis, Probleme [Interdisciplinarity. Theory, Practice, Problems]. Darmstadt.
- Klein, Julie Thompson. 1990. *Interdisciplinarity. History, Theory and Practice*. Detroit.
- Langner, Frank. 2007. Diagnostik als Herausforderung für die Politikdidaktik [Diagnostics as an Challenge for Political Didactic]. In: Schattschneider, Jessica, eds. *Domänenspezifische Diagnostik. Wissenschaftliche Beiträge für die politische Bildung [Domain-Specific Diagnostics. Scientific Contributions to Education]*. Schwalbach/Taunus, 58–70.
- Leven, Ingo; Quenzel, Gudrun; Hurrelmann, Klaus. 2010. Familie, Schule, Freizeit: Kontinuität im Wandel [Family, School, Recreation: Continuum in Transition]. In: Shell Deutschland Holding, eds. *Jugend 2010. Eine pragmatische Generation behauptet sich [A Pragmatic Generation comes to stay]*. Frankfurt am Main, 53–128.
- Liebel, Manfred. 2001. *Kindheit und Arbeit [Childhood and Labour]*. Frankfurt.
- Lizotte, Kate-Mary; Sidman, H. Andrew. 2009. Explaining the Gender Gap in Political Knowledge. In: *Politics & Gender*, Vol. 5, 127–151.
- Logan, Sarah; Medford, Emma. 2010. Gender Differences in the Strength of Association between Motivation, Competency Beliefs and Reading Skills. In: *Educational Research*, Vol 53, 85–94.
- Lutter, Andreas. 2011. Methoden zur didaktischen Rekonstruktion der Konfliktlösungs- und Urteilskompetenz. [Methods for Didactic Reconstruction of the Competence in Conflict Resolution and in Decision]. In: Zurstrassen, Bettina, eds. *Was passiert im Klassenzimmer? Methoden zur Evaluation, Diagnostik und Erforschung des sozialwissenschaftlichen Unterrichts [What does happen in Classroom? Methods for Evaluating, Diagnostics and Investigation of Social Science Lessons]*. Schwalbach/Taunus.
- MacBeath, John; Moos, Leif, eds. 2004. *Democratic Learning. The Challenge to School Effectiveness*. London.
- Maiello, Camine; Oser, Fritz; Biedermann, Horst. 2003. Civic Knowledge, Civic Skills and Civic Engagement. In: *European Educational Research Journal*, Vol. 2 (3), 384–395.
- Massing, Peter; Schattschneider, Jessica Simone. 2005. Aufgaben zu den Standards der politischen Bildung. Ergebnisse einer Pilotstudie [Tasks for Standards in Political Education. Results from a Pilot Study]. In: GPJE, eds. *Testaufgaben und Evaluation in der politischen Bildung [Test Tasks and Evaluation in Civic Education]*. Schwalbach/Taunus, 23–40.
- Massing, Peter. 2006. Bildungsstandards als Diagnoseinstrument für den Politikunterricht [Standards of Education as an Instrument for Diagnosing Political Education]. In: Richter, Dagmar; Schelle, Carla, eds. *Politikunterricht evaluieren. Ein Leitfaden zur fachdidaktischen Unterrichtsanalyse [Evaluation Political Education. Compendium for the Subject-Didactic Analysis of Education]*. Baltmannsweiler, 141–160.
- May, Michael. 2008. *Demokratielernen oder Politiklernen? [Citizenship Education or Civic Education]* Schwalbach/Taunus.
- McNeil, Linda. 2001. *Contradictions of School Reform. Educational Costs of Standardized Testing*. New York.
- Mittelstraß, Jürgen. 2003. *Transdisziplinarität – wissenschaftliche Zukunft und institutionelle Wirklichkeit [Transdisciplinarity – Scientific Future and Institutional Reality]*. Konstanz.
- Moran, Joe. 2002. *Interdisciplinarity*. London.
- Murphy, James Bernard. 2007. Against Civic Education in Public Schools. In: *International Journal of Public Administration*, Vol. 30, 651–670.
- Nichols, Sharon L; Berliner, David C. 2007. *Collateral Damage: How High-Stakes Testing Corrupts America's Schools*. Cambridge.
- Noelle-Neumann, Elisabeth; Köcher, Renate. 2002. *Allensbacher Jahrbuch der Demoskopie 1998-2002 [Allensbacher Annual of Opinion Poll 1998 – 2002]*. München.
- Oancea, Alis; Pring, Richard. 2009. The Importance of Being Thorough: On Systematic Accumulations of 'What Works' in Education Research. In: Bridges, David; Smeyers, Paul; Smith Richard, eds. *Evidence-Based Education Policy. What Evidence? What Basis? Whose Policy?* Malden MA, 11–35.



- Oesterreich, Detlef. 2002. Politische Bildung von 14-Jährigen in Deutschland. Studie aus dem Projekt Civic Education [Civic Education of 14-years-old Youths in Germany. Studies of the Project Civic Education]. Opladen.
- Reinhardt, Sibylle. 2007. Politik-Didaktik. Praxishandbuch für die Sekundarstufe I und II [Political-Didactics. Practical Handbook for Secondary Education I and II]. Berlin.
- Rippel, Susanne. 2004. Umweltbewusstsein und Umweltverhalten. Ein empirischer Theorienvergleich aus kulturvergleichender Perspektive [Environmental Awareness and Environmental Behavior. An Empirical Comparison of Theories from a Cross-Cultural Perspective]. In: http://www.qucosa.de/fileadmin/data/qucosa/documents/6192/habil_rippel.pdf
- Sacks, Peter. 2000. Standardized minds: the high price of America's .testing culture and what we can do to change it. New York.
- Schattschneider, Jessica, eds. 2007. Domänenspezifische Diagnostik. Wissenschaftliche Beiträge für die politische Bildung [Domain-Specific Diagnostics. Scientific Contributions to Civic Education]. Schwalbach/Taunus.
- Schneekloth, Ulrich. 2010. Jugend und Politik. Aktuelle Entwicklungen und Perspektiven [Youth and Politics. Current Trends and Perspectives]. In: Shell Deutschland Holding, eds. Jugend 2010. Eine pragmatische Generation behauptet sich [A Pragmatic Generation comes to stay]. Frankfurt am Main, 129–164.
- Schulz, Wolfram; Ainley, John; Fraillon, Julian; Kerr, David, Losito Bruno. 2010a. Initial Findings from the IEA International Civic and Citizenship Education Study. (http://www.iea.nl/fileadmin/user_upload/ICCS/ICCS_2010_Initial_Findings.pdf).
- Schulz, Wolfram; Ainley, John; Fraillon, Julian; Kerr, David, Losito Bruno. 2010b. ICCS 2009 International Report: Civic Knowledge, Attitudes, and Engagement among lower-secondary School Students in 38 Countries. Amsterdam. (http://www.iea.nl/fileadmin/user_upload/ICCS/ICCS_InternationalReport.pdf).
- Schulz, Wolfram. 2009. Questionnaire construct Validation in the International Civic and Citizenship Education Study. (http://www.ierinstitute.org/IERI_Monograph_Volume_02_Chapter_05.pdf).
- Sukopp, Thomas. 2010. Interdisziplinarität und Transdisziplinarität. Definition und Konzepte [Interdisciplinarity and Transdisciplinarity. Definition and Concepts]. In: Jungert, Michael; Romfeld, Elsa; Sukopp, Thomas; Voigt, Uwe, eds. Interdisziplinarität. Theorie, Praxis, Probleme [Interdisciplinarity. Theory, Practice, Problems]. Darmstadt, 13–12.
- Van de Vijver F. J. R. 1998. Towards a Theory of Bias and Equivalence. In: Harkness, J.A., ed. Cross-Cultural Survey Equivalence, Zuma-Nachrichten, Spezial Band 3. Mannheim: ZUMA, 41–66.
- Van der Vijver, F. J. R.; Hambleton, R. K. 1996. Translating Tests: Some Practical Guidelines. In: European Psychologist, 1, 89–99.
- Verbeet, Markus; Leffers, Jochen 2009. Studenten-Pisa. Frauen patzen, 26 Neunmalkluger triumphieren [Studenten-Pisa. Women Blunder, 26 Smart-Alecks Triumph]. In: Spiegel Online (www.spiegel.de/unispiegel/studium/0,1518,625140,00.html) published 18.05.2009.
- Wolak, Jennifer; Mc Devitt, Michael. 2010. The Roots of the Gender Gap in Political Knowledge in Adolescence. In: Political Behavior, 6 October 2010, 1–29.
- Weinbrenner, Peter. 1997. Politische Urteilsbildung als Ziel und Inhalt des Politikunterrichts [Political Judgement as a Purpose and Substance in Political Education]. In: Bundeszentrale für politische Bildung [Federal Agency for Civic Education].

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Significant Learning and Civic Education: Shifting Frameworks for Teaching in Light of Learning about the Financial Crisis

The recent financial crisis has motivated economic educators to rethink what economics should be taught, acknowledging disconnects between classroom content and real world events. We introduce a learning theory approach that is broader, one that goes beyond such context specific discussions of foundational knowledge and application (i.e., teaching *about* this specific crisis) and provide a framework to address the broader issue of how teaching practices can, by their very nature, minimize such disconnects and provide more effective processes for teaching about current economic conditions. The theory of significant learning (Fink 2003) is presented as a model of how experiences can be used to develop a deep approach to learning, learning that lasts. Experiential learning pedagogies are timeless in that they can be readily modified to promote deeper understanding over a wide range of economic environments. Focusing on one category of significant learning, the human dimension, and one component of the financial crisis, unemployment, examples which modify existing experiential learning practices are described to demonstrate how such pedagogic practices can be readily adapted to teaching and learning about current economic conditions. In short, we demonstrate that incorporating student experiences into pedagogic practice provides a natural alignment of teaching content and real world events, regardless of how those change over time.

Keywords

pedagogy, service-learning, experiential education, financial crisis, unemployment

1. Introduction

Economic educators have struggled to find evidence that the learning we assume is occurring in our courses has any lasting effect.¹ Education literature provides insights into this “learning and forgetting” behaviour suggesting that “we can only learn from activities that are interesting and comprehensible to us, in other words, activities that are satisfying. If this is not the case, only inefficient rote learning, or memorization, is available to us and forgetting is inevitable” (Smith 1998, 87). Marton, et al. (1997, x) argue that the quality of learning is enhanced when the “student seeks a personal understanding” of the material, referred to as a deep approach to learning, as opposed to a desire to simply regurgitate material as exemplified by a surface approach to learning. In short, it is necessary to go beyond a simple transmission of knowledge and include broader objectives in the development of course goals.

The recent global financial crisis provides a unique opportunity to use the *experience of learning*² to move students beyond a surface understanding of economic systems. The crisis has fostered an increased interest in the study of economics among students, and drawn attention to broader discussions within the economics profession on what the study of economics should entail. For example, Peterson and McGol-

drick (2009) argue that a more pluralistic approach to both course content and pedagogy is fundamental for better preparing economics students for the world, and that learning theory is an integral component of understanding how to design practices to achieve desired outcomes. Fink (2003) provides one avenue for course development, identifying six categories associated with ‘significant learning’: foundational knowledge, learning how to learn, application, integration, human dimension and caring.

Traditional approaches to economic education focus primarily on foundational knowledge and application, falling short of the potential to develop deep learning, learning that lasts. Other categories of significant learning, the human dimension in particular, provide untapped opportunities to promote civic and economic education using the context of real world economic events, including the financial crisis. Addressing the human dimension necessitates informing “students about the human significance of what they are learning” (Fink 2003, 31-32). This may be facilitated through experiential pedagogies, such as service-learning, which promote “student engagement with the human condition” (Bowen 2005, 6). Through direct engagement with community problems – and taking an active role in trying to explain and find solutions for those problems – students confront the limits of a narrowly defined approach to economics and the importance of understanding the social and civic dimensions of economic problems.³

1 See for example, Saunders (1980), and Walstad and Allgood (1999).

2 A phrase coined by Marton, et al. (1997)

3 Examples of this in economics are provided by McGoldrick and Peterson (2009).



Some economists are already developing experiences consistent with the aspects of significant learning that move beyond foundational knowledge and application. For example, heterodox approaches have been shown to provide one avenue for developing experiences that promote a deep approach to learning (Peterson and McGoldrick, 2009). In this paper, we extend arguments that suggest learning could be further enhanced if instructors embraced the entirety of the tenets of significant learning. We focus specifically on how economic educators can use the category of human dimension through the utilization of experiential learning pedagogies to engage students, ultimately leading to a deeper understanding of economic conditions as demonstrated by one important outcome of the recent financial crisis – unemployment. In doing so, we demonstrate how experiential learning pedagogies are timeless, applicable and adaptable to a range of economic conditions and thus more readily able to minimize the disconnect between textbook driven pedagogies and the real world.

2. Current Discussions of the Crisis and Implications for Teaching

If there is a “silver lining” to the financial crisis for economic educators, it is the increased interest in economics the crisis has fostered.⁴ One measure of this interest is the number of articles in the popular press on what the crisis means for the way economics is practiced, studied, and taught.⁵ Even the “freshman economics course,” and how it might change in light of the crisis, has been discussed in *The New York Times* (Mankiw 2009). While a comprehensive review of how the financial crisis has led to discussions about how we teach economics is beyond the scope of the paper, we provide the following as representative of such discussions to illustrate our arguments for expanding pedagogic practices. We begin with a review of four articles appearing in the *Journal of Economic Education* as a symposium on teaching (primarily) the principles of macroeconomics, followed by an article focused on intermediate macroeconomic textbooks, and an additional four articles that represent broader perspectives.

Blinder (2010) notes the high level of interest in economics among students generated by the crisis – “This is truly a teaching moment ... The bad news is that the current curriculum fails to give students even imperfect answers” (p. 385). Although he views the basic framework of introductory macroeconomics as “solid” (p. 390), Blinder identifies several

“pedagogical choices” for reconsideration, including the relative emphasis placed on growth versus business cycles and Keynesian versus non-Keynesian analysis, as well as the assumption of a single interest rate (p. 386). Blinder calls for the introduction of more realistic – and complex – models into principles courses, offering several new topics for instructors to consider such as asset-market bubbles –applying the concepts typically used to discuss stock market bubbles to the “housing bubble” that preceded the crisis.

Questions including “What should we be telling our students ... that we are not now telling them?” and “More generally, what lessons should we draw about how we as economists should think about the world we are trying to analyze and about what economic policies might make it into a better place?” motivate Friedman’s perspective (2010, 391) He offers several propositions, all of which seek to shift the focus of economic analysis and teaching toward “the features of the economy in which we live, as opposed to some simpler alternative economy that we can readily imagine” (p. 396). This includes more explicitly recognizing the significance of living in a monetary economy, the role of credit, the role of institutions and irrationality in financial markets, and the importance of frictions in the economy.

Rajan (2010) also speaks to the importance of underlying institutional structures, which he refers to as the “plumbing.” He argues that prior to the crisis, macroeconomics assumed that that “the ‘plumbing’ works” and, therefore, “we do not have to focus on the plumbing in research or in teaching the macroeconomics of industrialized nations” (p. 398). As a result, questions concerning the evolution and adequacy of institutional structures fell to the field of development economics. The financial crisis, Rajan argues, “calls into question whether the industrialized countries have the plumbing problem solved” (p. 398), and illustrates the need to supplement macroeconomic analysis with work from “other areas of economics that look at the plumbing” (p. 401). That is, he calls for “blending development macroeconomics into standard macroeconomics” in order to better “integrate a consideration of the plumbing into our models and our teaching,” thus making standard economics “less parsimonious, but more useful” (p. 402).

The crucial link between questions about teaching economics and economic research – “We teach what we think we have learned” (2010, 403), is the basis for Shiller’s perspective. He argues that there is a crisis in economic research, and that: “The research and tea-

4 In this section, we focus on discussions occurring in the U.S. as this is the arena to which we are most exposed.

5 Popular critique of the economics profession in light of the financial crisis has come from non-economists as well as economists – see for example Epstein (2009) and Krugman (2009).



ching of macroeconomics both need to focus much more on what we don't know, and less on what we do know" (p. 405). To Shiller, this necessitates "respect[ing] alternative ways of understanding macroeconomics" (p. 407), incorporating the views "promoted by other social sciences: psychology, sociology, political science, and anthropology" (p. 407) as well as historical analysis. Further, he argues that "we must also keep in view the fundamental importance of institutions, our established organizations, practices, laws, and remind our students that these must be taken into account before judging any economic model" (p. 407).

Gray and Miller (2009) focus their analysis specifically on the content of intermediate macroeconomic textbooks, and ask: "How well would popular intermediate macro texts have prepared students for comprehending the economic crisis of 2008-2009 and the remarkable policy responses by the Federal Reserve, Treasury and Congress?" (p. 3). In particular, they examined the extent to which these texts prepared students to understand and critically evaluate the arguments for interventionist policy responses, as well the analyses of the crisis presented to the general public through *The New York Times*, *Wall Street Journal* and other sources. They conclude that "the overwhelming emphasis intermediate texts give to non-interventionist approaches would have, by and large, left students unprepared to either understand important historical precedents or fully comprehend the crisis, policy responses, and contemporary commentaries" (p. 21).

The financial crisis has also added urgency to on-going discussions and debates on the adequacy of current economic theories and methods for economic research and teaching more generally. Colander, et al. (2009), for example, argue that the financial crisis has "made clear a systemic failure of the economics profession" (p. 2), a failure that has "deep methodological roots" (p. 3). They further argue that economics, as currently defined and practiced, ignores the inherent and complex dynamics and instability of economic systems. As a result, economics has defined "away the most prevalent economic problems of modern economies" (p. 14).

Evaluating the implications of this failure for economic education, Colander and Rothschild (2010) argue that the continued presentation of "dynamically stable systems" as "the only intellectual frame we provide to our students – borders on professional mendacity" (p. 279). Colander and Rothschild call for the introduction and demonstration of "alternative complex visions *within* the supply-and-demand paradigm, so that vision of the universality of stability has less chance to become deeply ingrained in students" (p. 281). That is, they call for the introduction of new types of models, utilizing different mathemati-

cal tools (such as game theory), to better capture the complexity and instability of real-world economics.

For other economists, however, the problem is more deeply embedded in the neoclassical paradigm itself. Keen (2009), for example, argues that traditional economic frameworks promote the "false belief that all instability in the system can be traced to interventions in the market, rather than the market itself," thereby contributing to the developments in financial markets that increased the instability of the financial system (p. 2). Emerging approaches, such as behavioural economics and multi-agent modeling, provide "the beginnings of an alternative vision as to how individuals operate in a market environment" and the "foundations for understanding group dynamics in a complex society," and form the basis for replacing traditional economic frameworks (p. 5).

Still other economists question arguments that support the development and introduction of new models. Lawson (2009), for example, contends that the problem with economics as currently practiced is not "the use of specific inappropriate models, but the emphasis on mathematical deductivist modeling *per se*" (p. 760). He argues that the nature of social reality – composed of phenomena that are neither isolated nor constant – is "significantly at variance with the closed systems of isolated atoms that would guarantee the conditions of mathematical deductivist modeling" (p. 765). The financial crisis has, in Lawson's view, clearly revealed the interconnected nature of the world economy, and "is something that needs to be understood rather than modeled" (p. 774). The goal for economic analysis, then, should not be to mathematically model and predict crises, but to "understand the ever emerging relational structures and mechanisms that render them more or less feasible or likely" (p. 774).

The challenges described above focus on the content and method of economic analysis and evaluate current practices in ways that straddle both teaching and research techniques. The relationship between challenges to research in and the teaching of economics is demonstrated both in terms of calls to be more open about the limitations in economic research when teaching economics and to incorporate emerging insights and methods from the research into the classroom. The need to better and more accurately address the complexity of economic relationships is also a common theme, albeit one where the proposed solutions vary considerably. Addressing complexity in introductory-level courses provides a particular challenge, but practical suggestions – such as dropping the one interest rate assumption – provide a place to start. The need for economics, and its teaching, to be more reality-based is another common theme, calling on economists to study and model economies as they really are to emphasize usefulness over parsimony in economic explanations and prepare students to un-



derstand contemporary policy debates and popular economic commentary.

At the heart of much of the discussion of teaching and the financial crisis in the U.S. is an argument to revise the principles course and associated textbooks to include a more complex and realistic discussion of the structure of the economy. This would be a welcomed change given that “the principles textbook has deviated little from the Samuelsonian model of the 1950s in spite of significant changes in the economics it is purported to introduce (Colander 2005, 2006)” (McGoldrick 2009, 221). Recently, Grimes (2009) has argued “this textbook homogenization ... has also reduced the faculty’s discussion about what should be taught in the classroom” (p. 95). As authors react to the largest financial crisis since the Great Depression by changing the content of their textbooks, this dialog may once again come to life.

Despite the importance of these challenges to the economics that is currently taught, they fall short of challenging the status quo of students as passive receptors of textbook driven knowledge. Economics instructors have long relied on the lecture method as the dominant pedagogical classroom practice, regardless of course or institutional classification (Becker and Watts 2008), and there is evidence that reliance on this method of instruction is greater relative to instructors in other disciplines (Allgood, et al. 2004). While some may argue that demands on faculty time drive this reliance on lecture based methods, Becker and Watts (2000) suggest there is evidence that current practices are “established by convenience, custom and inertia rather than efficiency or, especially, by what represents effective teaching practices in today’s undergraduate curriculum” (p. 4).

In the sections that follow, we argue that educational practices should be advanced even further by using current discussions focusing primarily on content reform as a launching point to consider a more holistic framework of educational design, one that takes both content and practice into account.

3. A Framework for Expanding Current Pedagogic Practices

Pedagogy is more than content, it is also practice. We expand on current calls for reform by introducing an alternative framework to the discussion which reconsiders what *and* how we teach about the financial crisis. Fink (2003) presents a framework for developing courses in which the *experience of learning* motivates students to move beyond rote memorization, identifying six categories associated with “significant learning”:

- *Foundational knowledge*: Provides “the basic understanding that is necessary for other kinds of learning” (Fink 2003, 31). This encompasses understanding and remembering information and ideas.

- *Application*: Involves “using foundational knowledge” and encompasses the development of different skills and thinking (critical, creative, and practical), as well as the ability to manage complex projects (Fink 2003, 38).
- *Learning how to learn*: Learning about the learning process in a way that enables students to become better students, inquire about a subject and construct knowledge, and become “self-directing learners” (Fink 2003, 50-55).
- *Integration*: Involves making connections between ideas, people, and realms of life (Fink 2003, 31).
- *Human dimension*: Refers to the process of learning about oneself and others, to “inform students about the human significance of what they are learning” (Fink 2003, 31–32).
- *Caring*: Involves the “development of new feelings, interests and values” (Fink 2003, 74).

Even our abbreviated review of relevant literature reveals that the financial crisis has obliged economists to reconsider tenets that make up current *foundational knowledge*. This is manifested in recommendations for greater emphasis on Keynesian economics and business cycles, dropping the one interest rate assumption, promoting a better understanding of institutions and economic frictions, and the incorporation of new models. Similarly, calls for new *applications* with broader emphasis (such as including housing market bubbles in addition to those in stock markets) and introducing questions previously assumed away have also been prominent. *Integrating* insights from development economics, psychology, and history is also seen to be important for understanding macro-economic events. However, the categories of *learning how to learn*, the *human dimension* and *caring* are highlighted to a far lesser degree and often left implied rather than addressed explicitly. For example, although Lawson discusses the need to promote inductive, rather than deductive, reasoning it is presented as a “more fruitful approach in understanding the crisis” in terms of a research, not a teaching or learning how to learn, construct (p. 759).

Fink argues, and we agree, that *each* of the tenets of significant learning should be employed to achieve learning that lasts. Further, we have argued elsewhere as to the positive benefits of experiential learning approaches (McGoldrick and Peterson 2009 and Peterson and McGoldrick 2009). Here, we combine these two arguments, describing how experiential learning is a pedagogic method which can enhance the understanding of the current economics conditions, such as fallouts from the financial crisis, with a focus on the category of human dimension. Our goal is to demonstrate how adapting an existing (although perhaps not widely practiced) pedagogic method can further inform educational reform in light of the financial crisis.



4. Using the Experience of Learning to Educate Students via the Human Dimension of Significant Learning

Experiential education is both a practice and a process in which students learn through experience (McGoldrick and Ziegert, 2012). The practice is one in which students reflect on experiences as a way of developing discipline specific knowledge. The process of teaching engages students in a direct encounter to apply knowledge and skills in an educationally relevant setting. Although experiential learning can occur in or out of the classroom, we focus our discussion on practices that motivate students to engage with their own experiences and with the community beyond the classroom walls thereby promoting civic engagement.

The financial crisis has increased interest in economics among students, yet current literature on teaching about the crisis reveals disconnects between discussions in economics classrooms and the real world. We argue that experiential learning is well suited to bring these different realms together because much of the interest in the crisis is rooted in the human dimension – students are seeing job loss in their families, housing foreclosures in their neighborhoods, and loss of opportunities in their own futures. That is, students' human experiences are stimulating their interest, but economics courses that provide them only with abstract, theoretical discussions which are disconnected from such experiences leave them frustrated and do not meet their needs. Further, while students *react* to their experiences, they need tools that allow them to *understand* the crisis and challenge their assumptions and misperceptions. As economic educators, we want them to have tools to think critically about the world in which they live and passion to help improve it. The financial crisis is providing a unique opportunity to pursue these two objectives, as students arrive in economics classes with a stronger interest in the human dimension, and a stronger civic commitment, than in the past.

Experiential education can contribute to a better understanding of the financial crisis and provide scaffolding for student engagement by integrating civic and economic education. Service-learning provides a framework for understanding such connections and guiding students to realize "the human significance of what they are learning" (Fink 2003, 31–32). Service-learning is "an experiential learning pedagogy that enables students to integrate their study of economics in the classroom with service activities in their communities" (McGoldrick and Ziegert 2002, 1). It is a strategy that:

"[b]uilds character, spurs civic engagement, and applies content to abstract theories, allowing teachers to engage students as active participants in the learning process. Instead of simply asking students to open their

textbooks, teachers using service-learning engage students in a critical thinking exercise to examine their world. Students are guided to connect their interests and moral leadership to solve a problem, serve a need, or be of service to others" (Pearson 2002, 6).

Service-learning has a long history in many disciplines, and has been practiced in economics for over a decade (McGoldrick 1998).⁶ Service-learning builds bridges between constituencies, exposing the human dimension of economic issues and providing a framework for reforming education as connections are developed across the sanitized text and classroom and real world complexities. Such connections have already been developed in economics, through projects such as those focused on the living wage and child care. Banks, et al. (2005), for example, describe a service-learning exercise structured around a community based living wage research project which challenged students to "think differently about the world" (p. 354) and to question the absence of history, power and human agency in traditional economic theories of wage determination. By promoting "an alternative, ethically based vision of the world" that calls for wages sufficient to meet human needs (p. 354), the living wage project supported students' engagement with the human condition. Similarly, McGoldrick and Peterson (2009) describe projects in courses on women in the economy through which students were motivated to "apply their knowledge to making their community a better place" (p. 235). While analyzing results from a survey developed to measure the potential demand for a campus child care facility, for example, students gained a better understanding of why the needs of campus constituencies (faculty and staff) differed dramatically and implications for associated differences in policy recommendations. This brought a greater understanding of the human dimension to an application of otherwise "neutral" theoretic dimensions of the market (p. 243).

5. Experience, Human Dimension and Unemployment

Unemployment is a widely recognized outcome of the financial crisis, as well as a topic already included in a range of economics courses. And, for many, unemployment best reveals the human dimension of the crisis – a dimension where economists are not always seen to have much to offer. In a March 2009 essay, David Mas Masumoto exemplifies this shortcoming:

"Ailing and unstable. We hear these terms describing today's economy as if it were alive with emotions. Yet like the 1930s, behind the statistics and data, beyond the unemployment rates and job layoffs, real people are hur-

⁶ McGoldrick and Ziegert (2002) provide a detailed introduction to the theory and practice of service-learning in economics.



ting and suffering Economic reports cannot capture the tension and drama of hard times, only stories – captured by artists – can fully tell the human saga of today ... Photographers from the Great Depression forced America to confront the faces of despair, to see the invisible masses in hard times. As the 2009 depression unfolds, economists need to give way to artists who can reveal and explore the human landscape of loss” [“Faces of Hard Times,” *The Fresno Bee*, March 29, 2009].

While economic educators can not reveal the human face of the crisis in the same way artists can, we can utilize student experiences (past and present, distant and local) to add faces to the statistics, analyze ramifications for society, and better understand or challenge policy decisions.

Whether students have direct familial unemployment experience, or they observe it in their communities through interactions with various social groups (including classmates, church groups, etc.), it is likely few students come to economics classes today disconnected from this issue. This personal connection can be used to frame academic discussions of various aspects of unemployment that the crisis has drawn attention to, such as weaknesses of the official (U.S.) unemployment measure; differential impacts of the economic downturn by gender and racial/ethnic groups; the relationship between unemployment and poverty; deep psychological and social costs of unemployment; and long-term negative impacts of prolonged unemployment.

In the U.S., it is increasingly common for students to come to the university with more formal community engagement experiences providing a basis for experiential pedagogies to promote a deeper approach to learning (McGoldrick and Peterson 2009, 229). As such projects have been developed and implemented in economics courses, many have focused on unemployment and related problems. Although developed prior to the current crisis, many of these projects are easily adapted to, and thus remain relevant for, current economic conditions. Consequently, experiential projects provide a valuable starting point for faculty wishing to employ a consistent pedagogic approach while covering constantly changing economic conditions. In the examples that follow, we demonstrate the potential to enhance understanding of the financial crisis, incorporating the human dimension of unemployment, blending civic and economic education using service-learning.

5.1 Labor Economics Course

The following experiential learning project is detailed in the syllabus for an upper-division Labor Economics

taught by G. Monsma at Calvin College, in Spring 2000⁷, as posted on the Campus Compact⁸ website. It is a project consistent with service-learning as students learn about an economics issue in their community, contribute to a community organization addressing that issue and apply academic knowledge to understand their experiences. The human dimension is brought to the forefront through reflection assignments, as students evaluate what they have learned about the personal circumstances of those that the agency serves.

During the service-learning project, students volunteer to work “15-20 hours over the course of the semester for an organization [such as Goodwill Industries] helping the unemployed or underemployed find jobs that fit their needs.” The acceptable volunteer work for the project “can be varied in line with what would be helpful to the organization and the particular abilities of the student.” Consequently, it might involve working directly with clients, writing publicity materials or doing statistical analysis for the organization, or “work not directly related to economic knowledge, such as office work, if ... means were provided for the student to learn about the work of the agency.” In short, the experiences can be either directly or indirectly linked to the issue of unemployment, but either provides the opportunity for students to learn how the agency provides employment assistance.

Although students are required to broaden their foundational knowledge of unemployment by “learn[ing] about the organization and its activities,” they are also required to “learn about at least three people that the organization is working to help,” incorporating the human dimension of significant learning. Based on their service experience and other course work, students “write an organizational profile and keep a journal reflecting on their experiences and the relation of what they learned to labor economic theories. At the end of the semester they write a final paper relating what they have experienced and learned to concepts, models, and theories of labor economics.” Through their reflective assignments, Monsma finds that students “have come to understand the difficulties some have in becoming self-supporting, even in a booming economy, and the role of agencies such as Goodwill in helping them,” suggesting students move beyond misconceptions and stereotypes to a richer understanding of unemployment and the unemployed. Through their experiences, students learn about the education and employment histories of

7 <http://www.compact.org/syllabi/economics/labor-economics/3811>. Accessed 6/1/2010.

8 Campus Compact is a coalition of more than 1,100 U.S. college and university presidents “who are committed to fulfilling the civic purposes of higher education.” Campus Compact “pro-

motes public and community service that develops students’ citizenship skills, helps campuses forge effective community partnerships, and provides resources and training for faculty seeking to integrate civic and community-based learning into the curriculum” (www.compact.org).



those who are unemployed and underemployed, and effects (economic, social and psychological) of unemployment and underemployment on individuals and their families. Implemented today, in the context of a very weak economy, the specific insights to be drawn from the service experience might differ – with more emphasis on the negative psychological and social costs of long-term unemployment, for example.

This type of project provides a useful vehicle for exploring the challenges facing unemployed workers and the non-profit organizations many turn to for employment services. Students gain a deeper understanding of the impacts of the crisis through their own experience, far beyond that which simple textbooks stories can provide, and learn to apply standard theoretical explanations and understand their limitations. The project is designed so that experiences help inform student understanding of the current economic conditions, regardless of what those current conditions may be. This type of project is timeless; the pedagogic practice does not have to be modified as economic conditions change because the experiences of students are utilized to reveal the impact of those economic conditions.

5.2 Statistics/Econometrics Course

Another example of a service-learning project with the potential to reveal the human dimension of the crisis is described by G. Hoyt (2002). In this project, students in a second level statistics course (covering “the basics of sampling distributions, hypothesis testing, chi-squared tests, ANOVA, and regression analysis,” p. 138) were provided the opportunity develop their statistical analysis tools, answering a question for a community organization.

“One group worked with [God’s Pantry] to determine why and how the food allocated within Kentucky varies by county. Using data from God’s Pantry and the Kentucky Cabinet for Human Resources, the students examined the impact on food requests of transportation costs, other food service organizations in the county, and demographic characteristics of the county. The group presented its results at a meeting of the organization’s board, and the findings were to be incorporated in grant proposals” (p. 144).

This project can be easily modified for today’s economic environment by expanding the question of how demographic characteristics impact food requests to include unemployment. With this modification, this experiential project has the potential to not only strengthen student’s familiarity with the strengths and weaknesses of existing data, but to also provide them with a broader picture of the human costs and consequences of unemployment. For example, examining the relationship between poverty and unemployment, and how these variables explain differences in food requests across counties, illumi-

nates how the crisis is impacting this organization and the population it serves. It also provides a context for students to examine important questions concerning available data – for example, what do the official unemployment statistics measure and what do they leave out? Current discussions of unemployment at the national level also emphasize the long term nature of unemployment associated with the crisis. This too raises important questions for the students’ analysis – does the available data allow them to take this into consideration as they try to explain variations in food requests? National studies have also focused attention on differences by gender and racial/ethnic groups in the rising unemployment associated with the crisis, providing the motivation for students to explore this in their analyses as well.

The addition of a direct service component to the project could further emphasize the human dimension of the financial crisis. If the project is designed so that students volunteer at the pantry and work directly with those in need, they have an opportunity to connect with aspects of the crisis not captured in the formal data – such as the psychological and social costs of unemployment – and to consider the ramifications of these costs for their analyses. Incorporating this type of experiential activity into the project can engage students in a new way of looking at statistical analysis, allowing them to gaze beyond aggregate and average measures and see and/or interact with real people.

This type of project provides a vehicle for deepening students’ understanding of statistics and economics, as well illuminating the limits of applying statistical and economic concepts too narrowly. By bringing raw numbers to life, the underlying economic concepts have greater lasting meaning. And, by illustrating how the experiences of real people may or may not be reflected in aggregated statistics, students’ misconceptions of economic concepts may come to light and be re-evaluated. Students may be less likely to assume the individual is at fault when their experience reveals workers of all skills levels and economic backgrounds in need of services. Through assignments requiring reflection on service-learning experiences – such as a presentation to the organization’s board of directors– students have the opportunity to apply fundamental economic concepts to the question at hand, integrate their formal knowledge of economics with what they are learning from the community, and recognize the human significance of this knowledge. That is, through reflection, the service-learning experience can foster significant learning outcomes.

6. Conclusion

The financial crisis brings to light the need to overhaul economic education practices to provide students with a deeper understanding of the issues at



hand and the ability to respond as informed citizens. The emerging reform discussion focuses on significant learning categories *foundational knowledge* and *application*, calling for considerations of the limitations of economic theory, acknowledging alternative economic theories and methods, incorporating complexity into economic explanations, and making economics more reality based and useful. We argue that the discussion of reform should not stop here, and that other categories of significant learning, notably the *human dimension*, provide avenues to develop enhanced understanding of the financial crisis and, more broadly, help keep classroom context from lagging behind real world economics. Addressing the human dimension can build off existing, but perhaps neglected, structures of pedagogic practices, such as student experiences which serve as the basis for service-learning. This shift in pedagogic practices is important because “the broader educational debate, spurred in part by work on how people learn (Bransford, et al. 2000), suggests that context and engagement are key components of learning that lasts” (McGoldrick and Peterson 2009, 229).

The very nature of experiential learning is more holistic because it includes the opportunity to develop foundational knowledge first hand, challenges students to apply a broader understanding of economics, integrates knowledge across economics as well as other disciplinary courses, and develops the more personalized side of learning – the human dimension. Through direct engagement with community problems – and taking an active role in trying to explain and find solutions for those problems – students con-

front the limits of a narrowly defined approach to economics and the importance of understanding the social and civic dimensions of economic problems. Reflection activities teach students how to learn from their experiences, developing a more sophisticated and lasting understanding of the world in which they live.

Because students experience the financial crisis in different ways, it is impossible to generalize whether their conceptions of the causes and outcomes are accurate. By engaging students in a direct encounter to apply knowledge and skills in an educationally relevant setting, instructors can motivate students to go beyond their immediate, perhaps superficial, understanding of the financial crisis. Prompting students to evaluate their thinking in this way is important, because “If students are not deliberately guided to confront their misconceptions, they often revert to their pre-instruction, novice understanding” (Maier, McGoldrick, Simkins 2010).

The examples provided herein illustrate how experiential learning projects, even though developed prior to the financial crisis, would continue to provide important insights if utilized today. In this sense experiential learning is timeless. The financial crisis does not require the development of new pedagogical techniques to capture the civic and human dimensions, but rather the utilization of such approaches that capture the current reality. Utilizing students’ experiences to illuminate the human dimension of the crisis can reinforce proposed changes in course content, and allow instructors to fully take advantage of the “teaching moment” we have before us.



References

- Allgood, Sam; Bosshardt, William; van der Klaauw, Wilbert; Watts, Michael. 2004. What Students Remember and Say about College Economics Years Later. In: *American Economic Review*, 94, 259–265.
- Banks, Nina; Schneider, Geoff; Susman, Paul. 2005. Paying the Bills is Not Just Theory: Service Learning about a Living Wage. In: *Review of Radical Political Economics*, 37 (3), 346–356.
- Becker, William E.; Watts, Michael. 2008. A Little More than Chalk and Talk: Results from a Third National Survey of Teaching Methods in Undergraduate Economics Courses. In: *Journal of Economic Education*, 39 (3), 273–286.
- Becker, William E.; Watts, Michael. 2000. Teaching Economics: What it Was, Is and Could Be. In: Becker, William E.; Watts, Michael, eds. *Teaching Economics to Undergraduates: Alternatives to Chalk and Talk*. Aldershot: Edward Elgar Press, 1–10.
- Blinder, Allen. S. 2010. Teaching Macro Principles after the Financial Crisis. In: *Journal of Economic Education*, 41 (2), 385–390.
- Bowen, Stephen. 2005. Engaged Learning: Are We All on the Same Page? In: *Peer Review*, 7 (2), 4–7.
- Bransford, J.; Brown, A. L.; Cocking, R. R. 2000. *How People Learn: Brain, Mind, Experience, and School*. National Research Council. Washington, DC: National Academy Press.
- Colander, David. 2005. What Economics Teach and What Economists Do. In: *Journal of Economic Education*, 36 (3), 249–260.
- Colander, David. 2006. Caveat Lector: Living with the 15% Rule. In: Colander, David, ed. *The Stories Economists Tell: Essays on the Art of Teaching Economics*. New York, NY: McGraw-Hill, 33–43.
- Colander, David, et al. 2009. *The Financial Crisis and the Systematic Failure of Academic Economics*. Kiel Institute Working Paper No. 1489 (February).
- Colander, David; Rothschild, Casey. 2010. Sins of the Sons of Samuelson: Vision, Pedagogy, and the Zig-Zag Windings of Complex Dynamics. In: *Journal of Economic Behavior & Organization*, 74 (3), 277–290.
- Epstein, Joseph. 2009. Past Their Prime (Rate). In: *Newsweek* (March 16).
- Fink, L. Dee. 2003. *Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses*. San Francisco, CA: Jossey-Bass.
- Friedman, Benjamin M. 2010. Reconstructing Economics in Light of the 2007–? Financial Crisis. In: *Journal of Economic Education*, 41 (2), 391–397.
- Gray, Jerry D.; Miller, J. Michael. 2009. *Intermediate Macro Texts and the Economic Crisis of 2009*. (posted February 2009, revised March 2010) <http://ssrn.com/abstract=1490686>
- Grimes, Paul. 2009. Reflections on the Introductory Course. In: Colander, David; McGoldrick, KimMarie, eds. *Educating Economists: The Teagle Discussion on Reevaluating the Undergraduate Economics Major*, Aldershot: Edward Elgar Press, 95–98.
- Hoyt, Gail. M. 2002. Regression Analysis for the Community: An Application of Service-Learning in a Business and Economics Statistics Course. In: McGoldrick, KimMarie and Andrea Ziegert, eds. *Putting the Invisible Hand to Work: Concepts and Models for Service Learning in Economics*, Ann Arbor: University of Michigan Press, 138–149.
- Keen, Steve. 2009. Mad, Bad, and Dangerous to Know. In: *Real World Economics Review*, 49, 2–7.
- Krugman, Paul. 2009. How Did Economists Get It So Wrong? In: *The New York Times Magazine* (September 8).
- Lawson, Tony. 2009. The Current Economic Crisis: Its Nature and the Course of Academic Economics. In: *Cambridge Journal of Economics*, 33, 759–777.
- Mankiw, N. Gregory. 2009. That Freshman Course Won't Be Quite the Same. In: *The New York Times* (May 24).
- Marton, Ference; Hounsell, Dai; Entwistle, Noel, eds. 1997. *The Experience of Learning*, Second Edition, Edinburgh: Scottish Academic Press.
- Maier, Mark; McGoldrick, KimMarie; Simkins, Scott. 2010. Cooperative Learning and Discipline-Based Pedagogical Innovations: Taking Advantage of Complementarities. In: Cooper, James, ed. *Small Group Learning in Higher Education: Research and Practice*. Stillwater, OK: New Forums Press.
- McGoldrick, KimMarie. 1998. Service-Learning in Economics: A Detailed Application. In: *Journal of Economic Education*, 29 (4), 365–376.
- McGoldrick, KimMarie. 2009. Promoting a Pluralist Agenda in Undergraduate Economic Education. In: Garnett, Robert; Olsen, Erik; Starr, Martha, eds. *Economic Pluralism*, New York, NY: Routledge, 221–235.
- McGoldrick, KimMarie; Peterson, Janice. 2009. *Public Scholarship and Economics: Engaging Students in the Demo-*



cratic Process. In: *Forum for Social Economics*, 38 (2), 229–245.

McGoldrick, KimMarie; Ziegert, Andrea, eds. 2002. *Putting the Invisible Hand to Work: Concepts and Models of Service Learning in Economics*. Ann Arbor, MI: The University of Michigan Press.

McGoldrick, KimMarie; Ziegert, Andrea. 2012. "Experiential Education." In: Hoyt, Gail; McGoldrick, KimMarie, eds. *The International Handbook on Teaching and Learning Economics*. Aldershot: Edward Elgar Press, 79–89.

Pearson, Sarah S. 2002. *Finding Common Ground: Service Learning and Educational Reform: A Survey of 28 Leading School Reform Models*. Washington D.C.: American Youth Policy Forum.

Peterson, Janice; McGoldrick, KimMarie. 2009. Pluralism and Economic Education: A Learning Theory Approach. In: *International Review of Economics Education*, 8 (2), 72–90.

Rajan, Raghuram. 2010. The Financial Crisis and the Death (or Hegemony) of Development Economics. In: *Journal of Economic Education*, 41 (2), 398–402.

Saunders, Paul. 1980. The Lasting Effects of Economics Courses. In: *Journal of Economic Education*, 12 (1), 1–14.

Shiller, Robert J. 2010. How Should the Financial Crisis Change How We Teach Economics? In: *Journal of Economic Education*, 41 (2), 403–409.

Smith, Frank. 1998. *The Book of Learning and Forgetting*. New York, NY: Teacher's College Press.

Walstad, William; Allgood, Sam. 1999. What Do College Seniors Know About Economics? In: *American Economic Review*, 89 (2), 350–354.



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Hauptschülers' Conceptions of Work – An Exclusion from the Subjective Dissolution of Boundaries?

Hauptschüler und ihre Vorstellung von Arbeit – eine Ausgrenzung von der subjektivierten Entgrenzung?

Gegenstand des Beitrages sind die erfahrungsbasierten Vorstellungen von Hauptschüler zu Arbeit, welche von der Autorin mittels leitfadengestützter, problemzentrierter Einzelinterviews eruiert wurden. An empirischen Fällen wird dargestellt, dass sich die Erfahrungen, die Hauptschüler mit Arbeit sammeln, einseitig auf atypische, unsichere Beschäftigungsverhältnisse mit hohem Prekaritätsrisiko konzentrieren sowie auf Normalarbeitsverhältnisse, beschränkt auf Berufe mit niedrigem Status, schlechter Bezahlung und hohen Gesundheitsrisiken. Privilegierte Tätigkeiten mit hohem Subjektivierungsgrad bleiben ihnen meist vorenthalten. Diese institutionell und sozial erzeugte eher einseitige Erfahrungskonzentration verursacht daher im Prozess der emotionalen Konditionierung einen eher engen Arbeitsbegriff. Gleichzeitig stellt Subjektivierung zusammen mit ihren Entgrenzungphänomenen zunehmend eine „generelle Anforderungsstruktur an alle Beschäftigten“ (Lohr, Nickel 2005, 217) dar. Um sich auf „Arbeitsanforderungen mit höherem Gehalt an subjektiven Flexibilitäts- und Selbstgestaltungspotenzialen einzustellen“ (ebd., 221), – so meine These – bedarf es allerdings vorab einer differenzierteren Vorstellung von Arbeit, insbesondere ein Bewusstsein für die Subjektivierung von Erwerbsarbeit mit ihren Entgrenzungphänomenen. Doch treten die befragten Hauptschüler mit einer eher einseitigen, negativen und vorwiegend fordistisch geprägten Perspektive auf Arbeit in den Lernprozess und später wahrscheinlich auch in den Arbeitsmarkt ein, wenn es Schule und Unterricht nicht gelingt, diese Vorstellungen zu erweitern und zu differenzieren. Insofern kann von einer Ausgrenzung von subjektiver Entgrenzung aufgrund eines unzureichenden Arbeitsbegriffes und einer mit aktuellen Anforderungen wenig kompatiblen Arbeitseinstellung gesprochen werden.

Hauptschülers' conceptions of work – an exclusion from the subjective dissolution of boundaries?

The focus of this paper is on the experience-based conceptions of *Hauptschüler* regarding work. These were identified by means of guideline- and problem-based interviews in a research project of the author. Some empirical cases will show that *Hauptschüler* often experience atypical forms of employment with high job insecurities, vast workloads and a high risk of financial insecurity. On the other hand, standard employment relationships are limited to occupations with low status, low pay and high health risks. Privileged occupations with a high potential of subjectivization are withheld from them. This one-sided institutionally and socially generated work experience causes a rather narrow concept of work in the process of emotional conditioning. At the same time, the subjectivization of work together with the dissolution of boundaries¹ (between private life and work) is a growing general requirement structure for all employees (cf. Lohr, Nickel 2005, 217). In order to deal with job requirements with higher subjective flexibility demands and self-organisation potentials (cf. *ibid.*, 221) – this is my thesis – a different conception of work is needed, in particular an awareness of subjectivization with the dissolution of boundaries. Instead, *Hauptschüler* will enter the labour market with a rather one-dimensional, negative, and fordistic-based view on work if school education fails to extend and to differentiate these conceptions. However, their conception of work and their work habits which are inconsistent with actual requirements, might exclude *Hauptschüler* from jobs with higher subjective flexibility demands and self-organisation potentials (“exclusion from subjective dissolution of boundaries”).

Keywords

Hauptschüler, employment, work, workforce, atypical forms of employment, standard employment relationship, nine-to-five job, conception, experience, emotional conditioning, emotion, subjective dissolution of boundaries, work-relevant skills, requirements

1. The “Gap” between Changing Requirements and Hauptschülers' Conceptions of Work

This paper focuses on pupils who attend a Hauptschule (*Hauptschüler*), a social group which is often regarded as culturally and socially disadvantaged. In the following, I will discuss these disadvantages in terms of the change in the living and working environment and the new demands resulting from it.

Hauptschüler often experience atypical forms of employment² with high job insecurities, vast workloads

1 Subjectivization of work is linked to two dissolution processes: The erosion of institutional and formal boundaries takes place in the dimensions working hours, job location, social organisation, technique, work content, form of organisation. This results in a second dissolution process, the process of “subjective dissolution of boundaries” (subjectivization of work). That means eroding boundaries between the person itself and its role as a worker because labour organisations increasingly make use of the subjects, their creativity and self-learning (cf. Gottschall, Voß 2003, 17 ff).

2 Atypical forms of employment are different employment relationships such as contract work, temporary employment, limited engagement, dependent self-employment, mini-jobs, part-time-jobs (cf. Dörre 2009, 188).



and a high risk of financial insecurity³ from their parents and other caregivers who, in Bourdieu's words, compose a kind of social and economic capital.⁴

Their parents' jobs are usually characterized by poor content and repetitive tasks barely allow action and decision and provide less potential for subjectivization. Further characteristics are an intensive, other-directed operating tempo (piecework and assembly-line work) and a strict controlling (cf. Hradil 2008, 309). *Hauptschüler* gain insight into standard employment relationships⁵ by school internships, too. But these insights are limited to occupations with low status, low pay (e.g. hairdresser), and high health risks (e.g. bricklayer) because of stressful work environments, stressful labour relations and stressful work content (cf. *ibid*, 306 f). This has to do with the fact that *Hauptschüler* join the training and the labour market with a school-leaving qualification (*Hauptschulabschluss*) that generally inhibits the access to professions with higher status. This school-leaving qualification, being an institutional cultural capital⁶, has a signal effect. As a stigma-symbol it signals employers a lower ability and efficiency today and in the future (cf. Solga 2004, 39, 41, 44). These mechanisms of discrediting and stigmatisation lead to "education-categorical boundaries" in the labour market. In turn, the consequence is that low-skilled workers have deprived social networks (such as recruitment- and offerer-networks) and deprived contexts of experience (= mechanism of pauperisation) which exclude them from labour markets even more (cf. *ibid*, 42 f).

Thus, *Hauptschüler* have a parochial range of career possibilities. Therefore, vocational preparation in school focuses on those professions in which the pupils are likely to find work. Privileged and subjective work, i.e. occupations with higher status, is something *Hauptschüler* learn on rare occasions. At the same time, there is the projection that the "trend of intellectualisation" (cf. Dörre 2009, 199) and subjectivization of work will be a general requirement structure for all employees (cf. Lohr, Nickel 2005, 217). One can already see such a development; for example, contract workers have to deal with the subjective re-

quirements of work as well (cf. Dörre 2009, 199) but lesser in a privileged than in a precarious way.

But the possibility of access to the subjectivity of the employee and the employee resources play a marginalised role in *Hauptschülers'* work conceptions. Instead, the one-sided focus on atypical forms of employment with high job insecurities, vast workloads and a high risk of financial insecurity on the one hand, and standard employment relationships limited to occupations with low status, low pay and high health risks on the other, results in a mainly fordistic-orientated, rather one-sided and negative conception of work. Thus, *Hauptschüler* enter the learning process, and later probably also the labour market, with this institutionally and socially generated, rather one-dimensional, negative, and fordistic-based view on work, if school education fails to extend and to differentiate these conceptions.

In addition to lower objective options due to their school-leaving qualification and lack of social networks, their contexts of experiences lead to an inadequate work concept which restricts their subjective options as well. If one accounts the awareness of and the adaptation to subjectivization as an additional but necessary qualifier, *Hauptschüler* can be seen as lowly-qualified even more. They are disadvantaged both in open and in closed employment relationships (cf. Solga 2004, 40) and limited to low-skill jobs without subjectivization which are increasingly cancelled (cf. Hradil 2001, 199).

This paper interrelates structural change and changing requirements with pupils' conceptions of work and shows the gap between them on some empirical cases. Furthermore, I will discuss in what way this "gap" is a challenge for social science education and might exclude *Hauptschüler* from jobs with higher subjective flexibility demands and self-organisation potentials.

2. Structural Change and Changing Requirements

In view of the change of the living and working environment and the new demands resulting from it, work-relevant habits and skills should be encouraged, so that the pupils are able to analyse, evaluate and shape life situations relevant for work in general (cf. KCAL 2006, 1). The structural change of economy, ac-

3 Indeed atypical is not identical to precarious work, but every atypical form of employment has a precarious potential (cf. Dörre 2009, 189). Thus, Lohr and Nickel talk about precarious forms of employment with a high degree of danger which seldom lead into standard employment relationships (cf. Lohr, Nickel 2005, 208). Employment is precarious if income, industrial safety, social integration are under the standard (cf. Dörre 2009, 181).

4 Bourdieu distinguished three kinds of capital: economic, social and cultural capital. Capital means a force of things which makes sure that everything is possible and impossible equally (cf. Bourdieu 1983, 183).

5 The standard employment relationship is still the criterion for good work which structures the expectations and claims of the

most part of the employees (cf. Dörre 2009, 182). It is a full time engagement which takes place outside the own household, has no occupation limit, but standard weekly hours (cf. *ibid*). Normal working conditions are characterized by the following characteristics: permanent, full-time dependent conditions, which provides a minimum income; standardized work (cf. Dombois 1999: 13 f); integration in social security systems (cf. Keller, Seifert 2009: 40); statutory protection against dismissal, full vacation and pension rights (cf. Famulla 2003).

6 Bourdieu distinguished three conditions of cultural capital: objective, institutional cultural and incorporate cultural capital (cf. Bourdieu 1983, 185 f).



accompanied by tertiarisation of the labour market, globalization and changed claims of employment have caused the decline of the labour force participation rate and the increase of atypical forms of employment with high social risks up to social exclusion (cf. Famulla 2003), along with the increasing dissolution of boundaries between work and life (eroding work-life-balance). These changes constitute new challenges for pupils. While the standard employment relationship is declining, atypical forms of employment are increasing; in 2007, 37 percent of all employees were employed in an atypical way (cf. Keller, Seifert 2009, 42). Despite its relative loss of importance, there is still a stable core of men in a standard employment relationship (cf. Lohr, Nickel 2005, 220). But the ongoing structural change of the working environment leads to a persistent change in managing workforce (cf. Kleemann, Voß 2010, 416, 433). Even fundamental changes in labour organisation and the development of new kinds of employment go along with this change which increases formal and informal qualification requirements (cf. Schober 2001, 18 f). In the context of new types of employment and new work control strategies the subject has to become more involved (cf. Kratzer 2003, 1). For one thing, the subject has to contribute more subjective qualities such as emotiveness, cooperativeness and the ability to deal with conflicts (cf. *ibid.*). In addition, changes in work control ask for extended skills in self-management. Employees are more organised and more responsible for their own workforce. This is why Voß and Pongratz spoke of an "Arbeitskraftunternehmer" already over 20 years ago. Their thesis of the "Arbeitskraftunternehmer" means that the fictional good manpower is changing to the effect that a blue-collar employee becomes an entrepreneur of his own workforce as a result of current business strategies of labour organisation. In comparison to the *tayloristic* and *fordistic period*⁷, the *transformation problem*⁸ is tackled today by using indirect kinds of control (for example, by target agreements) (cf. Kleemann, Voß 2010, 433). These business strategies to restructure

employment by economization and subjectivization (cf. Lohr, Nickel 2005, 219) increase the responsibility of the employees and lead to a fundamental change in the social condition of workforce (cf. Voß, Pongratz 1989, 132). Thus, there is talk of subjectivization as a transfer of an external control to a self-control, self-organisation and self-economization and as a new logic of economization which taps the full subjective potentials of its employees (cf. Lohr, Nickel 2005, 209, Kleemann, Voß 2010, 435). This subjectivization in employment is expressed in pluralisation, flexibilisation and dissolution of boundaries. In professional and subjective respects, it demands much from the employees and means dissolution of boundaries in aspects such as working hours, workplace, work content et cetera (cf. Lohr, Nickel, 2005, 216 ff, Dörre 2009, 198 f). Everything is going to be more flexible.

It was already taken into account that, contrary to the assumption that subjectivization of employment predominantly affects higher qualified labour and privileged tasks, there is also a "trend of intellectualisation" among factory work (cf. Dörre 2009, 199). While subjectivization in work was a privilege of exposed employees in the fordistic period, it has become a general requirement structure for all employees (cf. Lohr, Nickel 2005, 217). Thus, current business strategies of using employability require a high level of reflection in terms of self-control, self-organisation, self-socialization, self-economisation and self-responsibility (cf. Voß, Pongartz 1989, 131, Gottschall, Voß 2003, 15). However, *Hauptschüler* seemingly are neither aware of such requirements, nor do they assume these requirements to be applicable to them. To meet the requirements – this is my thesis – an adequate conception of work, especially an awareness of the subjectivization of employment with its dissolution of boundaries, is essential. Otherwise, adaptive difficulties, mental overload and insecurity can occur if pupils are not prepared for and attuned to the employment relationship they could be confronted with when entering the labour market. Thus, *Hauptschüler* can even more be seen as lowly-qualified and in danger of becoming ousted by better qualified persons who are prepared for subjectivized work.

Lohr and Nickel count *qualification* among two other differentiating factors, which decide about (in)equality relevant chances and risks in the subjectivization debate (cf. Lohr, Nickel 2005, 223). They realize that the fixing on efficient persons with high

7 The fordistic-tayloristic model is named after F. W. Taylor's (1856-1915) and H. Ford's (1863-1947) labour organization principles. A typical characteristic of Taylorism is the "scientific management" for the optimal utilisation of workforce. Rise in output is possible by using a central, hierarchically structured piecework. Specific for Fordism is mass production in assembly-line work with an extreme split of labour. (cf. http://www.anthro.unibe.ch/unibe/philhist/anthro/content/e297/e1386/e3847/e3849/linkliste3932/arbeit-9_ger.pdf (page-view 07.09.10)). The fordistic-tayloristic standard employment is a specific constitution of work and a historical business strategy of work economization (cf. Kratzer, Sauer 2003, 94). Outstanding characteristics other than those mentioned are: standardization of employment relationships, nine-to-five-job, fixed job location, standardized qualification and operations, split of labour, distinct boundary between work and life (cf. *ibid.*).

8 Companies are confronted with the problem to transform the workforce of their employees into a manifest output (cf. Kleemann, Voß 2010, 433). Up to now this so-called "transformation problem" has been solved by a direct control and standardization in any patch (cf. Kratzer, Sauer 2003, 95). Today employees are responsible for the transformation of their workforce themselves in many companies. So their self-responsibility heightens and direct control decreases (cf. Kleemann, Voß 2010, 433).



readiness to assimilate excludes all those, who are not equipped with individual resources such as relevant qualifications and skills to adapt to job requirements with a higher flexibility and subjectivization (cf. Lohr, Nickel 2005, 221).

The result is the exclusion of lowly qualified persons from subjective dissolution of boundaries.

3. Pupils' Conceptions – Some Kind of Cultural Capital

The mentioned requirements resulting from the outlined structural change of the economy also address *Hauptschüler*. They have to analyse the change of the living and working environment as well and they have to make decisions about education, employment, career by taking own interests, job requirements and the structural change of the economy into account (cf. KCAL 2006, 6).

The work-relevant skills pupils should acquire to cope with these requirements are accompanied by pupils' conceptions of work. In the following, the most important theoretical aspects of learners' concepts, resp. subjective theories, are outlined.

The conceptions and theories pupils develop of different political and socio-economical phenomena are worldview cognitions, i.e. thought structures and contents which refer to the self, others and to all things of the world (cf. Scheele, Groeben 1998, 15). This most complex mode of knowledge organisation (cf. Dann 1989, 248) is subjective: On the one hand, subjectivity grows out of individual traits, resources and dispositions. On the other hand, the social context influences the subjectivity (cf. Kleemann, Voß 2010, 416). Thus, a learner can be seen as a subject in two different ways. In a structural way, the subject is an expression of social conditions and comes across as a bearer of socially given traits which it has to deal with (cf. *ibid*, 415). In this case, the subject is dominated and influenced by society (cf. *ibid*). But in a subjective orientated way, the learner is seen as an autonomic individual who has complex traits and deals with society in an active and reflective manner (cf. *ibid*). Thus, the subject becomes a producer of social conditions (cf. *ibid*). Finally, both perceptions are an issue: The subject may not escape from social conditions and their influence but is able to reflect on them.

In consequence of this subjectivity, the main challenge is that pupils' conceptions are socially structured, partly taken over from caregivers, based on experiences (cf. Hüther 2006, 2009) and are embodied (cf. Gropengießer 2007, 112). According to Gropengießer, concepts develop from peoples' interaction with the physical and social environment – which means experiences (cf. *ibid*, 111). Thus, Giesecke calls them a product of socialization (cf. Giesecke 1992, 323) and Gläser remarks that they are socially structured (cf. Gläser 2002, 258). She points out that children's sub-

jective theories are enhanced by parents' and neighbours' narrations, by media and by communication with peers (cf. *ibid*). In the tradition of Vygotsky's social-cultural theory, the following may be accepted: The social world, parents, relatives, peers, teachers et cetera constitute categories and concepts by concentrating children's attention on information they might understand and by helping them interpret their experiences (cf. Siegler et al. 2008, 357). The social world exerts a dominating influence on concept development (cf. *ibid*, 358). That is why Hüther calls the brain "Sozialorgan", because children gain the most and important experiences from human relations (cf. Hüther 2006, 12). One can go one step further and say that learners' conceptions are some kind of incorporate cultural capital which has been passed on to the children by their parents (= social heritage) and means lasting dispositions such as skills, knowledge, culture (cf. Bourdieu 1983, 185).

Although parents' employment and labour conditions belong to the children's so-called "Exosystem" (Bronfenbrenner), their caregivers' working experiences become an influential part of the children's world (cf. Siegler et al. 2008, 493). Even these indirectly gained work experiences will be fixed firmly in the children's emotional experience-memory if they slowly, continually and repetitively take effect on them. This leads to an emotional conditioning, i.e. a close synaptic connection of a neuronal experience representation and a certain emotion (cf. Roth 2007, 145 f). The brain indicates different consequences and experiences with help of emotional labelling, which can be recall them quickly (cf. *ibid*, 142). That means that experiences decide what children and teenagers associate with the concept "work" and what emotions are caused if this concept comes to their minds.

For example, if a pupil re-experiences that work is (physically) stressful, labourious, exhausting and no fun, and if furthermore caregivers (parents, brothers and sisters, friends) convey the same impression about work, a so-called "Erfahrungintegral" (cf. Hüther 2009) arises in this process of emotional conditioning (cf. Roth 2007, 2009). By changing the neuronal connections in the brain (cf. Gropengießer 2007, 111), experiences create the model that work is a (physically) stressful activity which is no fun but which has to be done. This is saved in children's minds. Brain scientists hold the limbic system, which is the central appraisal system of humans, responsible for this emotional conditioning (cf. *ibid* 2006, 52). Repeatedly gained experiences and borrowed opinions act as empirical evidence of this "Erfahrungintegral". Finally, a belief and an inner attitude about work arise from these experience-based, emotional and cognitive grounded linkage phenomena (cf. Hüther 2009, 12). Thus, working experiences are conceptualized emotionally. If children experience the consequences



of precarious work firsthand, they will be registered by the brain and will be saved as a conception in the emotional experience-memory (cf. Roth 2007, 142). The more intensive the emotions and consequences of the experiences are the faster this embedding is accomplished (cf. *ibid.*, 143).

Conceptions of work developed hereby help to explain and to predict things, fulfil technical functions and are comparable with objective theories (cf. Finkbeiner 1998, 182). The subjective theories organise pupils' knowledge, influence all processes of thinking and understanding because they allow to establish causalities between two elements of a system and thereby explain why the world is the way it is (cf. Siegler 2001, 281, 291 f, Finkbeiner 1998, 182, Dann 1989, 248). As a result, learners' conceptions manage and regulate their actions (cf. Dann 1989, 249).

The concepts tell the learners how to react to new experiences, help them to simplify the world and help them to act effectively by interpreting new situations with former experiences (cf. Siegler et al. 2008, 356). In addition, conceptions fulfil different functions for the learners such as structuring, protective, safety, relief and orientation functions (cf. Reinhardt 2005, 52 f, Nonnenmacher 1982, 201). Because of these functions, the learners' conceptions are strong, hardy and learning-resistant (cf. Sander 2008, 158). They are cognitively and emotionally grounded, deep-seated in mind, important to deal with life situations, make sense and are subjectively important for the pupils (cf. Hüther 2006, 2009, Reinfried 2008, 8). This is why they are not called into question (cf. Mietzel 2007, 292, Seel 2003, 253).

Whether a working experience exists or not is checked by scanning and browsing trust memory, episodic memory and emotional memory. If some experience-based knowledge exists, there will be a feeling resp. an inner attitude. This means that due to accumulated experiences, emotions appear as soon as you are reminded of an event or if a positive or negative charged word is said. The limbic system always checks if a situation is familiar/is similar to a former situation and it also checks what experiences we made in that situation or with that thing (cf. Roth 2006, 52). Although emotions are targeted at an object, the emotion-releasing issue or record does not need to exist in reality (cf. Meyer et al. 2001, 30). Being satisfied that they exist or that they are possible and meaningful, the perspective of these records and their interpretation, the retrospections, associations with and thoughts of these events are needed to provoke an emotional reaction (cf. *ibid.*: 31). Thereby the episodic memory primarily delivers the details of the experiences (cf. Roth 2006, 52, Roth 2009, 92 ff). Thus, an inner conflict is sufficient to cause emotions.

That means that skills and knowledge (about work) mentioned above always develop in the context of pu-

pils' experience background, their attitudes and emotion reactions. This can be problematic. If a pupil has experienced subjectivization of work and dissolution of boundaries only in a marginalised and a precarious way, he will not develop a conception of work that is extended by higher subjective flexibility demands and self-organisation potentials. Instead, he will probably make decisions about education, employment, and career by taking own interests, job requirements and the structural change of the economy into account (cf. KCAL 2006, 6) with the help of his rather one-dimensional, negative and mainly fordistic-orientated view on work. Against this background pupils' decisions and judgements are probably undifferentiated, emotional and one-dimensional. But a person is regarded as social science educated if he is able to break away from his background and to pass his differentiated, rational verdict on political and socio-economical phenomena. Thus, social science education has the ambition to broaden and differentiate pupils' conceptions about social, political and economical subjects by means of academic theories and categories and to make sure that pupils' opinions about these subjects become more rational and more complex. Aside from the question whether rational judgement and behaviour are even possible (cf. Roth 2009), the realisation of this ambition is not easy because conceptions, as a result of their special functions, are strong, hardy and learning-resistant. For this reason, the brisance of their working experiences increases. *Hauptschüler* are likely to recall their institutionally and socially generated, rather one-dimensional, negative and mainly fordistic-orientated concept of work to cope with actual job requirements (subjectivization, flexibility, dissolution of boundaries et cetera) when entering the labour market. Work concepts without an awareness of the subjectivization of employment with its dissolution of boundaries do not fit to meet these new subjective requirements even *Hauptschüler* will have to deal with if they do not want to be ousted by better qualified persons who are prepared for these requirements.

In order to validate the assumption that *Hauptschüler* have a rather one-dimensional, negative and mainly fordistic-orientated conception of work four empirical cases will be shown below.

4. The View on Work

In order to obtain an in-depth insight into *Hauptschülers'* conceptions and experiences regarding work and unemployment, 24 *Hauptschüler* were interviewed in the context of the author's qualitative study about the Perspectives of *Hauptschüler* regarding Work and Unemployment.

A first sample was drawn by taking account of the criteria "approachability" and "quality of informants". It consisted of 62 *Hauptschüler* of three 8th grades (47 pupils) and one 9th grade (15 pupils); 31 were girls.



These 62 *Hauptschüler* filled out a questionnaire to draw a second sample from their answers. Aside from open questions regarding their understanding of work and unemployment the pupils were asked about the work of their family members and if their caregivers have ever been unemployed. They were also asked if they are affected by unemployment. Additionally, they had to provide demographic and social data (sex, age, migration background).

Again taking account of the criterion "quality of informants", especially their abilities to reflect and articulate visible by the answers in the questionnaire, a second sample of 24 pupils was drawn out of the first sample (= interlaced sampling (cf. Flick 2004, 91)). That means that the structure of the second sample was defined before the data collection started. Thus, the sample drawn out of the first sample was made by established criteria. Every fixed dimension of the sample structure was equally filled with cases (cf. Flick 2007, 156). This is why the second sample consists of 12 girls and 12 boys. Six boys and six girls have a migration background. The 24 pupils were questioned about their experiences and conceptions of work and unemployment in a guideline- and problem-based interview.

The empirical evidence shown below comes from short case descriptions of the second sample pupils. Such short descriptions of cases before the actual interpretation is a standard method of the "thematic coding" (cf. Flick 2007, 403). It has to be taken into account that a detailed analysis of the interviews remains to be done and that the parts of the short case descriptions below merely illustrate empirical tendencies. But these first tendencies confirm the assumption that *Hauptschüler* have a rather one-sided and rather negative conception of work because their working experiences are predominantly comprised of precarious forms of employment and standard employment relationships limited to occupations with low status, low pay and high health risks. Thus, a negative conditioning of work is possible. Furthermore, a characteristic for their narrow concepts of work is that neither subjective dissolution processes nor the erosion of institutional and formal boundaries in the dimensions working hours, job location, social organisation, technique, work content, form of organisation are parts of their conceptions about work. Most of the interviewed pupils have the desire for a standard employment relationship because they do not experience subjective and privilege work. As a result, some of the pupils' conceptions of work are even based on the fordistic-tayloristic model.

The following tendencies concerning conceptions and experiences of four 8th-graders regarding work, they all attend the same *Hauptschule* and the same class, have arisen out of the short case descriptions. As the word "description" implies, the presentation

of these tendencies is in a narrative-descriptive writing style. There is also a methodological problem: The quotes are originally in German but were translated into English here.

Meleke, a fourteen-year-old pupil who attends the 8th grade of a *Hauptschule*, was born in Germany but her parents are Turkish-born. She lives with both parents and her brothers and sisters. Her mother is unemployed; her father works as a packer in a factory. Meleke chooses school (education) over work because she experienced work almost exclusively as (physically) stressful, laborious and exhausting: "[...] *School is really more pleasant than work because at work you always have to stand and do something, you have to be intensive. But sometimes it is good to give free rein to ideas. And this certainly is exhausting, doing the same thing every day – maybe for years. And yeah, you have to bustle and care for everything [...]*". ("[...] *Aber ne-Schule ist echt angenehmer als Arbeit, denn wenn n Arbeit- du musst immer stehen, immer was tun, du musst intensiv sein. Aber manchmal ist es auch gut, den Ideen freien Lauf zu geben. Und das ist natürlich anstrengend, den ganzen Tag das Gleiche zu machen und das vielleicht jahrelang. Und ja, du musst immer hin und herlaufen, dich um alles kümmern. [...]*".) Assembly-line work seems to be is an integral component of her conception.

André is fourteen years old, too, but without a migration background. He lives with his mother who is unemployed. André's conceptions of work are influenced by practical experiences in construction and office work and as a motorcar mechanic which he could check out in *Craftsman Centre of Education*. In addition, his conception of work is influenced by information he has gathered about his dream *job bus and train driver*. This leads him to the conviction that work is (physically) stressful and that "trying procedure" ("*ein harter Ablauf*"), which means fixed working hours, is normal. His mental picture of his later life in job is "at least not too quiet" ("*auf jeden Fall nicht zu ruhig*"), otherwise something would be wrong in the firm. Furthermore, a nine-to-five job is of importance to him because he thinks: "*Factories with a standard operating feature save jobs longer*" ("*[...] in Betrieben mit geregelttem Ablauf werden die Arbeitsplätze auch länger erhalten werden*"). He explains his conviction that standard operating procedures and fixed working hours are better in an economical way: "*Yeah because the people don't have a break when they like to have one, and therefore more of the company's products can be produced*" ("*Ja, weil die Leute halt nicht dann Pause machen, wann sie wollen, dann halt auch mehr produziert werden kann*"). Thus, in his view flexible working hours are damaging for the production. Therefore, he is glad that his dream job is characterized by a standard operating procedure and fixed working hours.



Fourteen-year-old **Kevin** assumes a standard employment relationship, too. Kevin does not have a migration background and stays with a foster mother who is a child care worker. Kevin's perception of a work day implies the theory that there is always a separation of work and private life: "Um, well that I go there and stay there every day, eight, nine hours every day and earn money. And then come home in the evening" ("Äh dass ich da dann auch äh dann auch hingeheso, also auch jeden Tag dann so acht, neun Stunden, so jeden Tag, also auch Geld verdiene mit. Und dann auch abends dann nach Hause komme"). But shift work crosses his mind, too: "Yeah, that he works a full shift, that he err isn't at home most of the day, but rather in the evening. And if he has a partial shift he err works four hours, five hours and then he is home again. And the next day he works at night or so" ("Ja, dass er dann ähm auch wenn er jetzt ähm Vollschicht hat, dass er dann ähm den mei- den meisten Zeit des Tages nicht zuhause ist, sondern nur abends zuhause ist. Und wenn er Teilschicht hat, ist er dann halt so vier Stunden, fünf Stunden ähm arbeiten und dann ist er wieder zuhause, und dann arbeitet er am andern Tag dann nachts oder so").

For these pupils, the main function of employment is to earn money and to hedge against poverty.

Further motifs for working mentioned by some pupils are: not being bored, doing something and giving meaning to life. For most pupils, another important function of work is that the day is structured. One can follow this from Meleke's and Anna's conceptions of work:

According to Meleke, work means pastime, amusement, meeting people. Therefore, being without work and "sitting at home" ("zuhause rumsitzen") is out of question for her. "Giving functions to the body" ("Dem Körper Funktion geben") is something you have to do because you are not born for doing nothing. Thus, for Meleke work is a meaningful good: "[...] That work is a meaning of life [...]" ("[...] Dass Arbeit schon- dass es auch Sinn des Lebens is [...]"). At the same time, she associates it with physical stress and physical work load. This negative emotional conditioning is a result of evaluating and interpreting experiences she made directly via internships and indirectly via her father's narrations, as we will see below.

Anna, a fifteen-year-old girl, lives with her parents and a sister. Her father works in a box-factory. To Anna work means deflection, amusement and not being bored: "I wouldn't like it, if I err only sit at home and clean the house. That would eventually be boring, and this is why I would like to work" ("Mir würds auch nicht gefallen, wenn ich ähm den ganzen Tag nur zuhause sitzen würde und halt das Haus sauber machen würde und das wär auch irgendwann langweilig, und deswegen würd ich dann auch gern arbeiten"). Concerning her later life, Anna assumes to have a nine-to-five job. She seemingly does not know telework. According to her,

work takes place somewhere outside the house, in a factory or somewhere else: "Yeah, I work ordinarily. Everything is stressful. If you come home from work, you are tired, want to eat something. Then I try to spend as much time as possible with my family. Um, well after that you go to bed and after that you must work again" ("Ja halt, ich arbeite ganz normal. Ist stressig alles, wenn man von der Arbeit nach Hause kommt, ist man müde, will was essen. Dann versuch ich auch so viel Zeit wie möglichst noch mit der Familie zu bringen äh zu verbringen. Äh danach irgendwann wieder schlafen gehen und danach muss man ja wieder zur Arbeit").

The view of a function of work as a structured daily routine, results from the fact that most of them come from a poor background and broken homes where a daily routine is missing (cf. Wippermann/ Calmbach 2007: 211). Thus an exterior job structuring is important for the formation of an attitude to fixed work hours.

It is self-evident for Hauptschüler that employees are bound to instructions the employer gives. One can see this in Anna's view on work which focuses only on the employees' side: "[...] that you have to do the things the employer tells you to do just in time" ("[...] Halt dass man seine Sachen, die man bekommt vom Arbeitgeber, halt alle auch macht und äh dass man auch rechtzeitig fertig is. [...]"). But Anna's perspective on work shows an awareness of subjectivization as well: "You must know what you have to do. There is nobody who runs around and tells you what you have to do" ("Also man muss wissen, was man machen muss. Also und es wird nicht daher gerannt und gesagt, das wir das und das machen sollen [...]").

Most of the questioned Hauptschüler, especially those with a migration background, associate work exclusively in this way: *grafting; labour; having to do many and hard things; exhausting; being fragged out; much stress; less leisure time; getting up early; working long hours*. Such a negative association is typical for Meleke as well. Her father's work experiences imprint Meleke's conception of work. Her father always came home late and overstrained when she was young and told her about his hard and stressful working day. This is why she did not want to work when she was younger and had the conception: "that you have to do a lot of work which is no fun" ("dass man viel arbeiten muss, das kein Spaß macht"). She deduces her conception of work from specific jobs, primarily pharmacist, restaurateur, hairdresser. Beyond that Meleke gained working experiences in the *Craftsman Centre of Education*. As a result of trial lessons in hairdressing and plastering she knows: "that work is very exhausting", "that you have to keep an eye on it", "that you must have much patience and that you have to bother" ("dass [Arbeit] sehr anstrengend ist", "dass man genau gucken muss", "dass [...] man richtig viel Geduld haben muss und sich Mühe geben muss"). Additionally, it was necessary



to be polite, to smile and to get along well with colleagues. Furthermore, she experienced unpleasant things like working long hours, tidying up, waiting and standing for long hours. All these experiences influence Meleke's mental picture of work.

Every once in a while the conceptions of work are ambivalent: Own desires produced by the media and school lessons, e.g. work is fun (subjectivization of work), are contrasted by reality in form of gained experiences through parents, brothers and sisters, friends, as well as school and own internships. These experiences are stronger and more sustainable than the wishes. This is why verbalisations like "work is fun" are very seldom. Instead, the gap between desire and reality is expressed by the modal verbs "should" and "could": "work should be fun"; "work could be fun (but does not have to be)".

5. Résumé

Structural change on the business level demand subjectivization achievements of all employees (cf. Dörre 2009, 1999, Lohr, Nickel 2005, 217). The motive "earning money" and the conception of a "nine-to-five-job" are not sufficient for a subjectivized employment because it asks employees to contribute their subjective potentials and resources which lead to dissolution of boundaries. Instead, an adequate conception of work, especially an awareness of subjectivization of employment with its dissolution of boundaries, is essential for meeting these requirements. But the dominant conception of employment the interviewed *Hauptschüler* have is that work is (physically) stressful, laborious, exhausting. For these pupils, the main function of employment is to earn enough money. Prestige and work content are not essential. Both, subjective dissolution processes and the erosion of institutional and formal boundaries are not part of pupils' conceptions about work. The contrary is the case: Concerning their later life, *Hauptschüler* assume to have a nine-to-five job. Work takes place somewhere outside the house, in a factory or somewhere else, is temporally structured and work content does not have anything to do with the person who carries it out. It is self-evident for them that, as employees, they are bound to instructions the employer gives (cf.

Keller, Seifert 2009, 41). If anything, *Hauptschüler* appreciate privileged dissolution between work and life in the dimension of social organisation because teamwork in school is often justified by teamwork on the job. This dominant conception of employment results from experiences these pupils made and still make: The pupils primarily experience standard and precarious employment relationships through parents, brothers and sisters, friends, as well as school and own internships. Thus, their social environment causes conceptions which are indifferent and narrow.

Because the interviewed *Hauptschüler* do not experience subjectivization of work and dissolution of boundaries, they have not yet developed a conception of work that includes higher subjective flexibility demands and self-organisation potentials. If school education fails to extend and to differentiate these conceptions – which is not easy because of their subjective functions and emotional components – *Hauptschüler* will enter the labour market with a mainly fordistic-orientated, rather one-dimensional, negative, institutionally and socially generated view on work. In that case *Hauptschüler* are likely to recall their inadequate concepts of work to cope with actual job requirements (subjectivization, flexibility, dissolution of boundaries et cetera). In this respect there can be talk of an exclusion from subjective dissolution of boundaries because *Hauptschülers'* work concepts and habits, which manage and regulate their action in work-relevant situations, are not in line with job requirements with a higher flexibility and subjectivization. By accounting the awareness of and the adaption to subjectivization as an additional but necessary qualifier, *Hauptschüler* are even more lowly-qualified – a disadvantage which leads to displacement.

At least there arises the question: How can social science education, especially vocational preparation and counselling close the gap between *Hauptschülers'* conceptions of work and their expectations, on the one hand, and general requirements on the other? This question is strongly connected to another one: what effect does social science education actually have in consideration of the mechanism of social reproduction in schools?

References

- Bourdieu, Pierre. 1983: Ökonomisches Kapital, kulturelles Kapital, soziales Kapital. In: Kreckel, Reinhard, Hg. Soziale Ungleichheiten. Göttingen: Schwartz, 183–198.
- Dann, Hanns-Dietrich. 1989: Subjektive Theorien als Basis erfolgreichen Handelns von Lehrkräften. In: Beiträge zur Lehrerbildung: BzL; Zeitschrift zu Theorie und Praxis der Grundausbildung, Fort- und Weiterbildung von Lehrerinnen und Lehrern; berufliche Weiterbildung von Lehrpersonal/Schweizerische Gesellschaft für Lehrerinnen- und Lehrerbildung, SGL, Bd. 7, 247–254.
- Domnois, Rainer. 1999. Der schwierige Abschied vom Normalarbeitsverhältnis. In: Sowi-Online. (<http://www.sowi-online.de/reader/berufsorientierung/dombois.htm>) (Zugriff 06.09.2010).
- Dörre, Klaus. 2009. Prekäre Beschäftigung – ein unterschätztes Phänomen in der Debatte um die Marktsteuerung und Subjektivierung von Arbeit. In: Lohr, Karin; Nickel, Hildegard, Hg. Subjektivierung von Arbeit – riskante Chancen. 2. Aufl. Münster: Westfälisches Dampfboot, 180–206.
- Famulla, Gerd-E. 2003. Berufsorientierung als Bildungsaufgabe im Strukturwandel von Ausbildung, Arbeit und Beruf – Das Programm "Schule-Wirtschaft/ Arbeitsleben" aus Sicht der wissenschaftlichen Begleitung. In: Sowi-Online. (<http://www.sowi-online.de/reader/berufsorientierung/famulla.htm>) (Zugriff 06.09.2010).
- Finkbeiner, Claudia. 1998: Sind gute Leser/-innen auch gute Strategen. Was Fremdsprachenlehrer und -lehrerinnen darüber denken. In: DeFlorio-Hansen, Inez, Hg. Subjektive Theorien von Fremdsprachenlehrern. Tübingen: Narr, 180–203.
- Flick, Uwe. 2004: Triangulation. Eine Einführung. 1. Aufl. Wiesbaden: VS Verl. für Sozialwiss.
- Flick, Uwe. 2007: Qualitative Sozialforschung. Eine Einführung. Reinbek bei Hamburg Rowohlt-Taschenbuch-Verl.
- Giesecke, Herrmann. 1992. Didaktik der politischen Bildung. In: Breit, Gotthard; Massing, Peter, Hg. Grundfragen und Praxisprobleme der politischen Bildung. Ein Studienbuch. Bonn: Bundeszentrale für Politische Bildung (Schriftenreihe/ Bundeszentrale für Politische Bildung Diskussionsbeiträge zur politischen Didaktik, 305), 318–338.
- Gläser, Eva. 2002. Arbeitslosigkeit aus der Perspektive von Kindern. Eine Studie zur didaktischen Relevanz ihrer Alltagstheorien. Bad Heilbrunn: Klinkhardt.
- Gottschall, Karin; Voß, Günter G. 2003. Entgrenzung von Arbeit und Leben – zur Einleitung. Gottschall, Karin; Voß, G. Günter, Hg. Entgrenzung von Arbeit und Leben. Zum Wandel der Beziehung von Erwerbstätigkeit und Privatsphäre im Alltag. München: Hampp, 87–123.
- Gropengießer, Harald. 2007: Theorie des erfahrungsbasierten Verstehens. In: Krüger, Dirk; Vogt, Helmut, Hg. Theorien in der biologiedidaktischen Forschung. Ein Handbuch für Lehramtsstudenten und Doktoranden. Berlin, Heidelberg: Springer-Verlag Berlin Heidelberg (Springer-11777 /Dig. Serial]), S. 105–116.
- Hüther, Gerald. 2006. Wie lernen Kinder. Voraussetzungen für gelingende Bildungsprozesse aus neurobiologischer Sicht. In: Forum Erwachsenenbildung: Beiträge und Berichte/DEAE Deutsche Evangelische Arbeitsgemeinschaft für Erwachsenenbildung e.V., 3, 7–13.
- Hüther, Gerald. 2009. Lernen durch Erfahrung. Neurobiologische Erkenntnisse als Rückenstärkung für Wegbereiter einer neuen Schulkultur. In: Lernende Schule: für die Praxis pädagogischer Schulentwicklung, 46/47, 9–13.
- KCAL: Kerncurriculum "Lernbereich Beruf-Haushalt-Technik-Wirtschaft/Arbeitslehre". 2006. In: Sowi-Online. (<http://www.sowi-online.de/reader/journal/2006-3/kecubht082006.htm#kap6>) (Zugriff 06.09.2010).
- Keller, Berndt; Seifert, Hartmut. 2009. Atypische Beschäftigungsverhältnisse. In: Bundeszentrale für politische Bildung, Hg. Aus Politik und Zeitgeschichte (ApuZ) 27/2009. Arbeitsmarktpolitik, 40–46.
- Kleemann, Frank; Voß, G. Günter. 2010. Arbeit und Subjekt. In: Voß, G. Günter; Wachtler, Günther; Böhle, Fritz (Hg.): Handbuch Arbeitssoziologie. Wiesbaden: VS Verl. für Sozialwiss..
- Kratzer, Nick. 2003. Entgrenzung und Verschränkung. Statement für den Workshop der KOPRA-Plattform „Entgrenzte Arbeit“ am 14. und 15. Februar 2003. ISF München. (http://www.isf-muenchen.de/pdf/KOPRA_WS_030214_statemnk.pdf) (Zugriff 07.09.10).
- Kratzer, Nick; Sauer, Dieter. 2003: Entgrenzung von Arbeit. Konzept, Thesen, Befunde. In: Gottschall, Karin; Voß, G. Günter, Hg. Entgrenzung von Arbeit und Leben. Zum Wandel der Beziehung von Erwerbstätigkeit und Privatsphäre im Alltag. München: Hampp, 87–123.
- Lohr, Karin; Nickel, Hildegard Maria 2009: Subjektivierung von Arbeit – Riskante Chancen. In: Lohr, Karin; Nickel, Hildegard, Hg. Subjektivierung von Arbeit – riskante Chancen. 2. Aufl. Münster: Westfälisches Dampfboot, 207–242.
- Meyer, Wulf-Uwe; Reizenzein, Rainer; Schützwohl, Achim. 2001. Einführung in die Emotionspsychologie. 2., überarb. Aufl. Bern, Göttingen, Toronto, Seattle: Huber.



- Mietzel, Gerd. 2007. Pädagogische Psychologie des Lernens und Lehrens. 8., überarb. und erw. Aufl. Göttingen: Hogrefe.
- Reinhardt, Sibylle. 2005. Politik-Didaktik. Praxishandbuch für die Sekundarstufe I und II. [2. Aufl.]. Berlin: Cornelsen-Scriptor.
- Roth, Gerhard. 2006. Warum sind Lehren und Lernen so schwierig. In: Herrmann, Ulrich, Hg. Neurodidaktik. Grundlagen und Vorschläge für gehirngerechtes Lehren und Lernen. Weinheim/Basel: Beltz, 49–59.
- Roth, Gerhard. 2007. Persönlichkeit, Entscheidung und Verhalten. Warum es so schwierig ist, sich und andere zu ändern. 5. Aufl. Stuttgart: Klett-Cotta.
- Roth, Gerhard. 2009. Aus Sicht des Gehirns. Vollst. überarb. Neuauf. Frankfurt am Main: Suhrkamp.
- Sander, Wolfgang. 2008. Politik entdecken – Freiheit leben. Didaktische Grundlagen politischer Bildung. 3., durchges. Aufl. Schwalbach/Ts.: Wochenschau-Verl.
- Scheele, Brigitte; Groeben, Norbert. 1998. Das Forschungsprogramm Subjektive Theorien. Theoretische und methodologische Grundzüge in ihrer Relevanz für den Fremdsprachenunterricht. In: DeFlorio-Hansen, Inez, Hg. Subjektive Theorien von Fremdsprachenlehrern. Tübingen: Narr, 12–32.
- Schober, Karin. 2001. Berufsorientierung im Wandel – Vorbereitung auf eine veränderte Arbeitswelt. Vortrag bei der 2. Fachtagung von "Schule – Wirtschaft/ Arbeitsleben" in Bielefeld am 30.-31. Mai 2001. In Sowi-Online (<http://www.sowi-online.de/reader/berufsorientierung/schober.htm>) (Zugriff 06.09.2010).
- Seel, Norbert M. 2003: Psychologie des Lernens. Lehrbuch für Pädagogen und Psychologen ; mit 12 Tabellen und zahlreichen Übungsaufgaben. 2., aktualisierte und erw. Aufl. München: Reinhardt.
- Siegler, Robert; DeLoache, Judy; Eisenberg, Nancy; Pauen, Sabina; Grabowski, Joachim. 2008. Entwicklungspsychologie im Kindes- und Jugendalter. [Nachdr.]. Heidelberg: Spektrum Akad. Verl.
- Solga, Heike. 2004: Gering Qualifizierte in der Bildungsgesellschaft – Theorie und Praxis. In: Schmid, Günther; Gangl, Markus; Kupka, Peter, Hg. Arbeitsmarktpolitik und Strukturwandel: Empirische Analysen, 37–56.
- Voß, Günter G.; Pongratz, Hans J. 1989. Der Arbeitskraftunternehmer. Eine neue Grundform der Ware Arbeitskraft? In: Kölner Zeitschrift für Soziologie und Sozialpsychologie, 50/1, 131–158.
- Wippermann, Carsten; Calmbach, Marc. 2007. Wie ticken Jugendliche. SINUS-Milieustudie U 27. Aachen: Verl. Haus Altenberg; MVG Medienproduktion und Vertriebsges.
- Znoj, Heinzpeter. Anthropologie der Arbeit, 9. Vorlesung: Taylorismus, Fordismus und Post-Fordismus. (http://www.anthro.unibe.ch/unibe/philhist/anthro/content/e297/e1386/e3847/e3849/linkliste3932/arbeit-9_ger.pdf) (Zugriff 07.09.10).

Klaas Macha, Michael Schuhen

Framework of Measuring Economic Competencies

How to model economic competencies with the objective of empirically testing them? This question has been discussed for many years now without a conclusive measurement model having been presented thus far. Taking an in-depth analysis of the definition of competency proposed by Weinert (2001) as a starting point, we will derive a framework for the necessary complexity of competency assessment, which finds its graphical representation in a competence octagon. After discussing existing empirical work in the field of economic education and classifying it using the categories of the competence octagon, we will then propose a new model of economic competency that allows for empirical testing.

Die Frage der Modellierung ökonomische Kompetenz zur empirischen Erfassung einer Economic Literacy wird seit vielen Jahren diskutiert, ohne dass bisher ein überzeugendes Modell für die empirische Erfassung vorgelegt wurde. Dies verdeutlicht der nachfolgende Beitrag, indem er ausgehend von einer detaillierten Synthese der Kompetenzdefinition von Weinert (2001) ein Schema der notwendigen Komplexität von Kompetenzmessungen entwickelt, das graphisch in einem Kompetenzoktagon zusammengefasst wird. Anschließend werden existierende empirische Arbeiten im Bereich der ökonomischen Bildung diskutiert und mittels der Kategorien des Kompetenzoktagons klassifiziert, bevor ein neues Modell für die Modellierung ökonomischer Kompetenz vorgestellt wird, das ökonomische Kompetenz für empirisches Testen öffnet.

Keywords

economic competency, economic literacy, economic education

1. Introduction

For the purpose of evaluating educational systems, standardized tests that allow for testing large numbers of test persons under unchanging conditions are essential. But whereas the areas of testing have been primarily focused on the domains of mathematics, language and sciences so far, this contribution discusses possibilities for assessing economic competencies and their respective requirements. One key problem with modelling economic competencies is that – unlike in the case of the above-mentioned school subjects – the subject of economic education is either heterogeneous or sometimes even non-existent in schools.

As a consequence, considerable academic discussions have not yet led to a homogeneous starting point for modelling economic competence. This is shown not only by the following overview of existing empirical work but also by the anatomy of the term itself (Beck 1989). Up until today it remains unclear which kind of benchmark should be used for a model of economic education. Should the role-concept be used, or rather a categorical approach? If so, which one? What are the central categories for economic education? Which categories allow for insights into the fundamental structures of economic thinking? What is its elementary content?

The following contribution will not be able to answer all these questions. But we will present a new coherent theoretical model for economic literacy and compare it to the results of previous empirical work. This model is based on the idea of literacy as it was developed in the OECD-PISA study, meaning there

that students should reach at least a basic level of reading and writing skills. To derive our model we started with a single similar normative pre-assumption: To participate in society nowadays, students need not only verbal literacy and mathematical numeracy but also economic literacy. Salemi (2005) defines the term as follows: “Students attain economic literacy if they can apply basic economic concepts years later, in situations relevant to their lives and different from those encountered in the classroom,” (Salemi 2005). As the authors have stated elsewhere (see Macha and Schuhen 2010) economic literacy means the application of economic concepts or knowledge in situations relevant to a person’s life.

To be very clear about this point: In our model, economic literacy is the normative starting point. We can speak of economic literacy if a person (a student) is in command of the necessary economic competencies that will be defined in chapter 5. Together these competencies make up the construct of economic competence. The distinct difference between competency (plural: competencies) and competence (plural: competences) lies in potential versus actual ability. In other words, competence can be understood as a general characteristic whereas competency is a skill demonstrated when performing an actual task (Sadler 2011).

Theoretically, our model of economic literacy is based on a cognitive psychological perspective, referring to the competence definition by psychologist and educational researcher Franz E. Weinert that can nowadays be regarded as a standard. Starting with Weinert’s definition we develop a competence octagon (a graph with eight corners) with eight measurement dimensions which should be incorporated in an assessment of competencies in view of the current scientific forefront. Specifically, these dimensions are:



- A. problem solving
- B. aspects of actions
- C. requirement
- D. content
- E. task design
- F. situations
- G. rôles
- H. motivation / volition

At least any reader with an economics degree will bring up the question of the benefits and costs of our approach. What exactly do we get that we cannot get from the strict measurement of knowledge? The answer is threefold, but rather simple:

1. By incorporating previously uncontrolled measurement dimensions we can achieve a much broader understanding of what students know economically and can apply in solving new economic problems.
2. In our model we make the decisive step from knowledge to competence that was made with the OECD-PISA study and other related studies before, but was widely ignored in the economic domain.
3. As a result we get assessments that are superior in the deciding measurement categories of validity, reliability and objectivity.

Since no one has yet tested the construct economic competencies, it is useful to collect these individual dimensions and combine them into one overall construct. The cost of such an approach is very low in the sense that only the type of test questions (or items) must be modified to fit all the categories described later. Which of the categories will be represented in the “brains” of the students is then left to them and not previously determined by any experts.

In that sense we see our contribution as part of the fundamental research that is very much needed in the area of economic education. Its concrete applicability in the small and in the large is currently being assessed in a pre-study named “ECOS – Economic Competencies Study” at the University of Siegen, Germany. The results of ECOS will hopefully give deeper insight into the structure of economic competencies of 8th grade students, at least in German schools. While this is not our primary goal, the assessment framework we propose is able – in a second step – to generate evidence that economic (and/or financial) education in schools actually influences students’ behavior because its measurement does not only contain the knowledge dimension but also a dimension of action.

To start with a short overview, the paper is organized as follows: In section 2 a scheme is developed for the purpose of showing the desirable complexity of measurement. In section 3 we give a tabular overview of relevant existing empirical work. In section 4 the relevant studies are classified in our scheme to show a research desideratum. In section 5 we outline the definition of economic competency and the competen-

ce model of our pilot study ECOS, that we are currently running, before we draw some conclusions in section 6.

2. Classification Scheme for Knowledge or Competency Tests in the Area of Economic Education

In the following we will derive a framework of components necessary for economic competency tests that is based on a cognitive psychological perspective. Whereas there are other interesting contributions to the field the authors do strongly believe that only a cognitive model can offer a chance to really look behind the deeper structures of the construct economic competency. Therefore we will develop a competence octagon that is based on the competence definition by psychologist and educational researcher Franz E. Weinert, which can nowadays be regarded as a standard. But before proceeding to Weinert’s definition we will shortly describe the circumstances that led to its widespread reception. Franz E. Weinert was one of the psychologists whom the OECD (Organisation for Economic Cooperation and Development) asked in 1997 to work on a project named “Definition and Selection of Competencies: Theoretical and Conceptual Foundations (DeSeCo)”. In a first publication based on the project (Weinert, 1999) an overview was given of different pedagogical, psychological and even linguistic understandings of competence. A second famous contribution (Weinert 2001, 27f., original in German, translation from the authors) defines competence as “the readily available or learnable cognitive abilities and skills which are needed for solving problems as well as the associated motivational, volitional and social capabilities and skills which are in turn necessary for successful and responsible problem solving in variable situations”.

The preceding statement makes use of some technical terms of psychological research and therefore needs to be explained in more detail. First, the word “cognitive” or its noun “cognition” are understood in the field of psychological research as “generic terms for all higher mental functions, especially thinking, perception, recognition and understanding” (Tewes, Wildgrube 1992, 183, original in German, translation from the authors). A similar definition by Zimbardo and Gerrig (1999) describes cognition as a global term for all forms of knowledge and its plural “cognitions” as structures or processes of recognising and knowing. This includes e.g. processes of perception, reasoning, remembering, thinking and deciding as well as the structures of these terms and of memory itself.

But interestingly, in his definition Weinert (2001) does not refer to the concept of “cognition”, but to “cognitive abilities and skills”. “Cognitive abilities and skills” can be understood as globally existing human skills related to memory, language, percep-



tion, attention etc. while “cognitive skills” describe rather recurrent, automatic cognitive processes, as for example mental arithmetic, calling someone on the telephone or getting dressed.

To understand the concept of “competence” the psychological term of “problem solving” is of vital importance. All actions that aim at a certain target state can be understood as “problem solving”. According to this there are (at least) three steps required for problem solving (cf. Newell, Simon 1972):

1. Grasping the status quo and/or the problem
2. Applying solution approaches
3. Attaining the desired target status.

Typical examples of problem solving processes are the chess game, the planning of a holiday or the writing of a research article. One of the difficulties concerning problem solving processes is the fact that most of the time the problem itself is complex. Such cases are called “complex problem solving”. It “occurs to overcome barriers between a given state and a desired goal state by means of behavioral and/or cognitive, multi-step activities. The given state, goal state, and barriers between given state and goal state are complex, change dynamically during problem solving, and are intransparent. The exact properties of the given state, goal state, and barriers are unknown to the solver at the outset” (French, Funke 1995, 8, original in German, translation from the authors).

In school-related studies one normally limits oneself to simple problems, but it is nevertheless possible to make use of more complex problems if the related kinds of competences are the target of the investigation. If we consider everything we have said so far, we get a crucial criterion for cognitive competence. This competence exists if new problems are solved with the help of prior knowledge. A survey question which only asks for prior, inert knowledge (e.g. “What was last years’ inflation rate?”) could therefore never be used for measuring cognitive competence according to the definition of Weinert (2001). Thus, we have derived category A. of the competence octagon, the problem solving dimension.

But before we consider further requirements concerning the actual measurement of competence we shall illustrate the second part of Weinert’s definition.

Besides the cognitive aspects we have described so far, Weinert (2001) states that there are other constructs in the human psyche that play an important role in a person’s individual competence in a certain area, namely the “motivational, volitional and social capabilities and skills which are in turn necessary for successful and responsible problem solving in variable situations”. For a rather long time, motivation and volition were not considered as separate items in psychological research. Nowadays they are separated as follows: motivation has an effect on the global target (i.e. which target is chosen by the person), whereas

volition is the major impetus concerning the chosen target (i.e. which strategies are chosen and which efforts are made). Both motivation and volition have an immediate effect on the measurable competence, if e.g. a performance test is heavily prolonged, the participants’ motivation will be reduced drastically, which in turn reduces their competence. Or, in the context of the same example, a participant’s overall motivation will remain sufficiently high whereas his or her volitional willingness to make an effort and exert him- or herself will decrease during the test. Thus, we have just derived a second category of the competence octagon, the motivational and volitional dimension (H).

In summary, one can specify the definition by Weinert (2001) as follows:

“[Competencies are] the readily available or learnable cognitive [structures or processes of cognition and knowledge] abilities [memory, language, perception, attention, etc.] and skills [actions which are applied in recurring tasks] which are needed for solving problems [overcome barriers between a given state and a desired goal] as well as the associated motivational [concerning the motives which have an impact on the action or decision], volitional and social capabilities and skills which are required for successful and responsible problem solving in variable situations”.

Thus the existence of competence relies on three crucial dimensions:

1. cognitive abilities and skills = knowledge which is needed in order to
2. solve new problems and
3. the necessary motivational, volitional and social capabilities and skills.

The goal of this chapter is to derive a competence octagon.

For this purpose the competence definition by Weinert (2001) has been specified. If one really wants to go into the field and conduct a competence survey in a certain area, complexity increases considerably. For the application of a standardized test a theoretical model is needed which adequately operationalises the competences to be measured.

Such “competency models” are classified into two categories by Hartig and Klieme (2006):

1. competency structure models
2. competency level models

Both approaches (and all types of competency measurement) make use of a content-related dimension that finds representation in dimension D. in the competence octagon. The competency structure model tries to grasp the inner structure of the competences to be measured, e.g. they deal with the question of which sub-competences form which main competences. An example of the examination of a competency structure model is the DESI study (Klieme, Beck 2007). In this study English language competence was subdivided into three main competence dimensions



“reception”, “awareness” and “production”), which in turn were subdivided into subdimensions. This measurement dimension can be found in the competence octagon as dimension B. aspects of actions.

In competency level models, on the other hand, the focus is on the question of “[...] which specific requirements a high competence person can master and which requirements a low competence person barely masters and which ones not at all,” (Hartig, Klieme 2006, 133, original in German, translation from the authors).

Such models deal with the exact measurement of requirement levels and their respective accomplishment by a participant. In such studies results are related to abstractly defined and theoretically based ideas about requirements a certain group of people in a specific area should meet.

This approach is closely related to the idea of “literacy” and/or “numeracy” and was pursued by the OECD in its PISA studies. These studies used it for the purpose of deriving competences which students should have in order to be able to meaningfully participate in today’s society.

In the competence octagon the requirement dimension (C.) represents the different levels of achievement.

The linking of both approaches (competence level models and competence structure models) in one common so-called “three-dimensional competence model” presents a kind of “silver bullet” in current research. An example of this kind of research is the Har-moS-study (Adamina, Labudde 2008). Here the dimensions of content and action (competency structure model) and multi-stage requirement levels (competency level models) are combined and assessed simultaneously. The disadvantage of this approach is the exponentially growing complexity and, as Weinert (2001) points out, the more abstract, intellectual and brilliant a competence is defined as being, the more problematic is its scientific psychological validation. On the other hand, the more specific and pragmatically useful a competence model is, the less satisfactory it becomes when considering its intellectual side.

In order to derive two additional dimensions (concerning specific task design) of our competency octagon we refer back to Weinert’s (2001) definition:

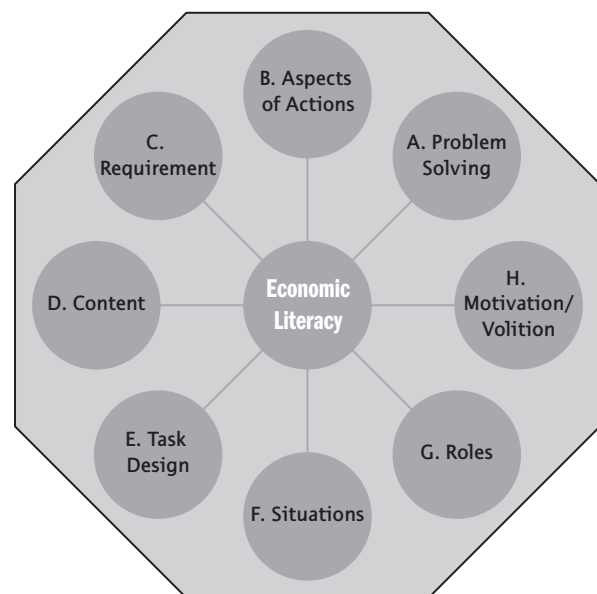
Weinert speaks of “variable situations” in which problems should be solved. This requires a variable design and different contexts of the tasks which the test participants will be solving. For the competence octagon this results in dimension F. situations. Concerning the measurement of economic competencies the relevant literature also suggests different roles to be of specific importance. For instance, Jung (2006, 7) developed a model which is based on the assumption of life and learning environment sensitive challenges within domain-specific roles. Starting with economically characterized life situations Jung (2009) proposes four roles

that are relevant to a student’s life: consumer, young person in search of occupation, employee, and economic citizen. Schlösser and Schuhen (2006) criticize the sole focus on the role concept and focus therefore on the relative importance of economic content. Whether it can be dispensed with the concept of roles or whether they exist as a construct, are to be worked out. Therefore we think that for the purpose of a coherent measurement model of economic competencies, roles are of indispensable importance and we include them in our competence octagon in dimension G. roles.

The last remaining dimension of the competence octagon is taken from Klieme (2004), who states that the tasks in competency tests should have different formats. Besides multiple choice tasks there should be open answer questions, work samples and oral formats etc., because it is crucial to minimize the bias of results that could be traced back to the familiarity of parts of the participant group with specific questionnaire formats. Accordingly, in our competence octagon the last dimension is E. task design.

The eight dimensions that a competence measurement should fulfill in view of the current scientific standard are summarized in the following competence octagon.

Figure 1: Competency Octagon



3. Studies on Economic Knowledge and Literacy in the Light of the Dimension

In a statement on economic education of German students, Beck (1989, 579) speaks of a “cloudy shapelessness” that has yet to be defined. Today this is not fully true anymore because several studies have been carried out in the meantime that deal with the assessment of economic knowledge or literacy. In the following overview we will intentionally pick out some of the existing surveys to

mark the characteristics of the field thus far. First, we briefly introduce the different studies before we categorize them based on the requirements developed in the previous section to a competency test in the field of economic education.

3.1 Economic Knowledge of Young Adults in Baden-Württemberg (Germany)

The study by Würth and Klein (2001) evaluates economic knowledge of students of all three types of secondary schools in Baden-Württemberg, Germany. 6380 students in the eighth grade (age group approx. 15 years) and in the senior year of the respective school type were interviewed. The starting point of the survey was the hypothesis that schools do not contribute enough to the students' knowledge of economic interactions and to the promotion of an open-minded and positive attitude towards professional life. "Economic knowledge" was gathered in terms of "accumulated knowledge of economic facts and interactions [...]. Not the subjective level of economic information of a person or a group of persons in comparison to others is the main focus [...] but the content and valences of the construct 'economic knowledge', which has yet to be defined." (Würth and Klein 2001: 127)

In conclusion, Würth and Klein (2001) mainly question and discuss topics related to business and economics, entrepreneurial versus private household perspectives or textbook knowledge versus everyday experience, but essential requirements such as problem solving, task variable formats and action aspects are found in the test design again.

3.2 Youth Study of the Federal Association of German Banks (Bundesverband deutscher Banken)

The Youth Study 2009 has the title "Economic understanding and financial culture", and is commissioned every three years by the Federal Association of German Banks. In 2009, 753 teenagers and young adults between 14 and 24 years were interviewed by telephone on the topics "youth and economy", "financial culture among young people" and "young people and banks". The survey is inadequate for measuring "economic competency" or "economic understanding" because most of the time it collects the appraisal of a certain term (e. g. "In view of the term 'social market economy' I associate... nothing specific, something good, something bad"). Only two

sections contain items on economic knowledge in the content areas of "supply and demand" and "inflation rate". This study met only one of the identified requirements.

3.3 Test of Economic Literacy (TEL) and the Studies of NAPS

The Test of Economic Literacy tries to identify elementary concepts of economic thinking – in spite of all scientific controversy. In essence, Soper and Walstad have obtained 22 concepts that can be divided into fundamental micro- and macroeconomic as well as international terms. Beck, Krumm and Dubs (1998) have adopted this test for Germany and tested its validity to students and trainees. Beck and Krumm (1994) attribute the fact that this canon of economic education has only a macroeconomic perspective and dismisses any business-related content to the mindset that microeconomic points of view and problems should be dealt with in professional specializations. However, the authors point out that this assessment is worthy of discussion (Beck 2000, 216), as there are some elementary concepts which can for instance be found in accounting and marketing as well. The approach of hierarchically ordered cognitive operations – borrowed from Benjamin Bloom's model of taxonomies – cannot be maintained within the TEL. Therefore Witt (2006) proposes to consider the taxonomy levels borrowed from Bloom as categorical levels but not as a fixed hierarchy. A major criticism of the TEL are the missing variable task sizes and the non-consideration of motivation and volition.¹

3.4 Competency Models for Vocational Education

Approaches to modelling professional competence in commercial apprenticeships (cf. among others Seeber 2008; Winther, Achtenhagen 2008; Winther, Achtenhagen 2009) most often refer back to the fundamentals of economic education in their competence models.

The longitudinal and cross-sectional study "Investigation on learning progress, motivation and attitudes of students in Hamburg" (ULME) assesses context-specific cognitive performance dispositions. Context-specific relates here to the specific requirements and situations during professional training in vocational schools and in the respective apprenticeship (Lehmann, Seeber 2007).

All in all, 51 tasks were created, being composed of 112 individual items: multiple choice, single choice,

1 We know that there are huge studies such as the National Assessment of Educational Progress Economics 2006 test of 12th grade students in the U.S. that have been left out. The reason for this approach is on one hand a practical one, to keep the list short. On the other hand, although the test itself is well-constructed and incorporates existing standards in the measure-

ment of economic knowledge or understanding, the authors do not see a major theoretical improvement in the assessment model that is used. The theoretical starting point is in principle the same as the one of the Test of Economic Literacy (TEL) that we have discussed already.



assignments and open answer format. Tasks with divergent requirements that needed constructive and argumentative steps in the solution process were disregarded. The items were placed in different situational contexts and were supposed to allow for analyses of dimensionality, required levels of qualifications and the hierarchical structure of professional competence. However, it became clear that the classification characteristics which were used for defining the cognitive dimension (reproduction, understanding/usage, criticism/reflection) were mostly invariant to the respective difficulty of the task. Nevertheless, this classification framework has been an important starting point for the development of the test itself because it prevented an unbalanced distribution of factual knowledge and the reproduction of contents (Seeber 2008, 77). Major results in the context of this paper are that approximately 38% of the variance related to the performance in the dimension “business performance processes, economics and law” can be traced back to common cognitive abilities, mathematical and rea-

ding skills. This was ascertained by the CFT. The percentage of the variance related to accounting was substantially smaller, namely 13 %. In this area, specific professional knowledge and the usage of professional concepts, terms and procedures are apparently more important and can only be partially traced back to the overall cognitive performance, like e. g. logical thinking or the mastery of mathematical relationships. These findings were confirmed by Winther and Achtenhagen (2008), who discovered that general skills for problem solving were replaced by specific professional knowledge if the situation became more specialized. In view of this fact they distinguish between domain-specific and domain-affiliated conceptual knowledge, whereas “economic literacy” and “economic numeracy” are regarded as part of domain-affiliated knowledge for the commercial-administrative area (Winther, Achtenhagen 2010, 19).

Combining now the dimensions of competence octagon with the presented studies it becomes clear that so far only the ULME study met all the requirements.

Table 1: Measurement of Competence with Desirable Degree of Complexity

Dimension	A. Problem solving	B. aspects of actions	C. requirement	D. content	E. task design	F. situations	G. roles	H. motivation/volition
Derived from	Weinert (2001)	Hartig/Klieme (2006)	Hartig/Klieme (2006)	Hartig/Klieme (2006)	Klieme (2004)	Weinert (2001)	Jung (2006)	Weinert (2001)
Study								
(a) Economic knowledge of young adults in Baden-Wuerttemberg, Würth and Klein 2001	No	No	Yes	Yes	No	No	No	Yes
(b) Youth Study 2009, Federal Association of German Banks	No	No	No	Yes	No	No	No	No
(c) Test of Economic Literacy, Soper & Walstad	some items	No	Yes	Yes	No	No	No	No
(d) ULME-study, Lehmann & Seeber 2007	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Siegen model of economic competency, Macha and Schuhen 2011	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes



This table shows that the previous approaches, having their origins in the areas of business, academic economics, economics education and the didactics of economics (Würth and Klein, Federal Association of German Banks, Soper and Walstad), merely conduct a subcomplex measurement. In studies such as the one we picked out from the Federal Association of German Banks the measurement of – in that case – the construct “economic knowledge” is conducted in a semi-scientific way where the items are reminiscent of a TV game show like “Who wants to be millionaire?”. The approach is orientated on inert knowledge or mere attitudes. In their study Würth and Klein (2001) also focus on economic knowledge as a relevant cognitive construct. But while they meet existing scientific standards a look at their items shows again that inert or fact knowledge is in focus. Whereas the theoretical measurement model behind the two studies just mentioned is rather simple, the Test of Economic Literacy by Soper and Walstad offers at least a two-dimensional measurement model. Adapting Bloom’s taxonomy of cognitive learning objectives they try to expand the measurement of inert knowledge with the more elaborate knowledge categories of “comprehension”, “application”, “analysis”, “synthesis” and “evaluation”. Therefore, to measure the construct “economic literacy” in this study it is possible to speak of a really valid measurement. But today the approach of Soper and Walstad (2001) is (no longer) cutting-edge, because it measures only knowledge and not fulfilled all the necessary dimensions of a competency assessment..

The approaches of Lehmann and Seeber, as well as Achtenhagen and Winther, in contrast, are complex, up-to-date competency models, which are able to measure the constructs in the area of vocational, mostly training-related competences in a valid, reliable and objective way. Although these models are rather elaborated, they can – with no exception – be assigned to the context of vocational and business education and are able to measure competences that are relevant and important to a future employer.

But they are neither able to capture nor are they interested in representing stand-alone economic competence in the sense of economic action and economic understanding.

Therefore, we are convinced that a large-scale assessment of economic competencies of students should fulfill the requirements of the competence octagon and that such an assessment is highly desirable. As mentioned earlier the authors have just started a small study called ECOS (Economic Competencies Study), which is currently in progress. The underlying measurement model, which we like to call the “Siegen model of economic competencies”, will be outlined in the following section.

4. Siegen Model of Economic Competencies

The Siegen model of economic competency is constructed based on the theoretical framework that was developed in section 2 of this paper. It incorporates all eight dimensions of the competence octagon.

Furthermore, research on expertise (e.g. Ericsson et al. 2006) in the culturally relevant techniques of reading, writing and calculating shows a sophisticated structure of different knowledge dimensions (Bransford et al. 2002 and an empirical paper on the economic numeracy Schuhmann et al. 2005). Similar results were obtained empirically in the OECD PISA studies. Achtenhagen and Winther (2009) speak with respect to the domain of vocational education of “economic literacy” and “economic numeracy”. The authors do strongly believe that the distinction of verbal and mathematical approaches also has a non-negligible impact on economic competency assessment because the area of economic thinking is typically orientated towards both “worlds”, the verbal and the mathematical one. For instance, already in archaic cultures all economic activity needed some kind of structured decision-making process involving mathematical calculating (“how many sheep do I have?”) and/or verbal acting (trading goods). If one accepts that verbal and mathematical abilities do somehow belong to the domain of economic competencies, the interesting question arises of how this could specifically be the case. Are verbal and mathematical competencies domain-specific? In the sense that they are originally attributable to the psychological construct of economic competency? Or are they only domain-related psychological constructs of their own that appear together with economic competency? To put it differently, one could ask if an economic competency could somehow exist without mathematical and verbal elements (see preliminary results for the domain of economic education in schools from Schloesser and Schuhen 2006).

To the best of the authors’ knowledge no existing study deals with the relation of mathematical, verbal and economic competency. Minor and unsystematic evidence could be given by the frequent approaches in the domain of economic education that try to develop class books for mathematics with only economics-related examples instead of the usual physics and sciences orientation.

In the study ECOS that we have conducted at the end of the year 2010, in a first approach we will differentiate between predominantly verbally and predominantly mathematically orientated economic contexts and related competencies at the highest level of the competency definition. To which extent this differentiation represents the “real” underlying psychological constructs in the students’ “heads” will hopefully become clearer from the pre-study data. Further evidence will then be derived through



testing in the areas of global intelligence (general fluid ability) and mathematical and verbal intelligence. These will be tested using the CFT-20 (Weiß 2006, 2007). The CFT-20 is the German version of Cattell's Culture Fair Intelligence Test-Scale 2 (1949, 1973).

In the Siegen model of economic competency we understand economic competency as the following:

Economic competency can be defined as the ability in verbally and mathematically orientated situations, roles and contexts to

1. recognise economic questions,
2. describe economic phenomena and arrive at economic conclusions,
3. apply economic knowledge in different situative actions,
4. occupy oneself with economic thoughts and ideas and deal with them in a way that is adequate to all current and future tasks of one's life as a constructive, dedicated and reflective citizen along with the related motivational, volitional and social dispositions and abilities, to make successful and responsible use of the obtained problem solutions in variable situations.

Parts (1.) and (2.) of this definition refer to the cognitive construct of knowledge-based competency in the sense of Winther and Achtenhagen (2008, 2009, 2010) such that an understanding of economic relations and issues is in focus. Parts (3.) and (4.) of the definition go back to students' action-based competencies, i. e. their actions in concrete economic situations and roles shall be modelled.

Typically any competence model needs a concrete operationalisation in a measurement model to be testable. In the ECOS project this operationalisation will be done – according to the competence octagon – by identifying eight relevant dimensions of measurement. Specifically, the dimensions are:

- A. content
- B. requirement
- C. aspects of actions
- D. problem solving
- E. situations
- F. roles
- G. task design
- H. motivation/volition

The content dimension (A.) of the Siegen model of economic competency is focused on a few core ideas that can represent the entire area of economic understanding. Such a concept of "big ideas" was developed in the OECD PISA studies and means – roughly speaking – that some content areas represent the whole content of the domain. To derive these big ideas from the domain of economic competency, we conducted a small content analysis of contemporary German school books on economics. The most frequently mentioned topics that we consider "big

ideas" were by far money, market and labour. These topics were also seen as relevant and content-valid in expert interviews with economic teachers and can – following these experts – stand as representative for the domain of economics. While the second dimension (B.) requires three different levels of task difficulty, the third dimension that we describe as aspects of actions (C.) has three different cognitive task types, which are "access information", "organise, structure, model" and "assess, evaluate" (following Adamina et al. 2008). In the fourth dimension (D., problem solving) we refer to Weinert's (2001) understanding of competence that leads to a certain kind of test questions in which new economic problems are solved with the help of prior economic knowledge, instead of only asking for prior knowledge (e.g. "What was the GDP last year?"). Fifth, our test questions are differentiated into the following four "situations" (dimension E.), which 8th graders face or will soon be facing in reality: personal situations, vocational or professional situations, societal situations, scientific situations. In these situations students assume different roles, (dimension F.) which are consumer, employee, employer and economic citizen. Furthermore (following Klieme 2006), test questions should have different formats (dimension G.), such as multiple choice, single choice, calculation and open answer format. Lastly, in a separate questionnaire, the dimension H of motivation and volition is measured.

The statistical analysis of the results will be carried out by using methods of the psychometric test-theory or Item-Response-Theory (originally Georg Rasch, 1960; Fischer and Molenaar, 1995; Davier and Carstensen, 2006; Rost, 2006) with the help of the programme Conquest 2.0 (Wu, Adams, Wilson, Haldane, 2007).

5. Summary

Following the idea of measuring economic competencies we have developed an eight-dimensional space for economic competency. In this space or matrix the different parameter values of each dimension for each test person can be assessed separately. This approach found a graphical representation in the competence octagon. In our model economic literacy is developed in a domain-specific way using "big ideas", assuming that there is both a mathematical and a verbal approach to economic competency. Therefore it is necessary to test within the competency model if the mathematical and the verbal economic competencies are domain-specific or domain-related. If and to which extent the role concept, the differentiation in mathematical and verbal parts and the other dimensions of our competency model will be relevant will hopefully be shown soon by our ECOS study data.



References

- Adamina, Marco; Labudde, Peter; Gingins, Francois; Zeyer, Albert. 2008. HarmoS Naturwissenschaften – Wissenschaftlicher Schlussbericht. Bern: Schweizerische Konferenz der kantonalen Erziehungsdirektoren.
- Bankenverband. 2009. Wirtschaftsverständnis und Finanzkultur. Berlin.
- Beck, Klaus. 1987. Die empirischen Grundlagen der Unterrichtsforschung. Göttingen.
- Beck, Klaus. 1989. "Ökonomische Bildung" – Zur Anatomie eines wirtschaftspädagogischen Begriffs. In: Zeitschrift für Berufs- und Wirtschaftspädagogik, Vol. 85, Issue. 7, 579-596.
- Beck, Klaus. 1993. Dimensionen der ökonomischen Bildung. Messinstrumente und Befunde. Abschlussbericht zum DFG-Projekt: Wirtschaftskundlicher Bildungs-Test (WBT). Normierung und internationaler Vergleich. Universität Erlangen-Nürnberg.
- Beck, Klaus. 2000. Wirtschaftskundliches Wissen und Denken – Zur Bestimmung und Erfassung ökonomischer Kompetenz. In: Euler, Dieter; Twardy, Martin; Jongbloed, Hans Carl, Hrsg. Sozialökonomische Theorie – sozialökonomisches Handeln: Konturen und Perspektiven der Wirtschafts- und Sozialpädagogik. Kiel, 211-229.
- Beck, Klaus; Krumm, Volker. 1994. Economic Literacy in German-Speaking Countries and the United States: Methods and First Results of a Comparative Study. In: Walstad, William B., Hrsg. An International Perspective on Economic Education. Boston/Dordrecht/London: Kluwer Academic Publishers, 183–201.
- Beck, Klaus; Krumm, Volker; Dubs, Rolf. 1998. Wirtschaftskundlicher Bildungs-Test (WBT). Göttingen et al.
- Bransford, John D.; Brown, Ann L.; Cocking, Rodney R. 2002. How People Learn: Brain, Mind, and Experience & School. Washington DC: National Academy Press.
- Bundesamt für Statistik BFS 2006. PISA 2006 Analysen zum Kompetenzbereich Naturwissenschaften. Rolle des Unterrichts, Determinanten der Berufswahl Vergleich von Kompetenzmodellen.
- Cattell, Raymond B. 1949. Culture Free Intelligence Test, Scale 1, Handbook. Champaign, Illinois: Institute of Personality and Ability.
- Ericsson, K. Anders; Charness, Neil; Feltovich, Paul J.; Hoffman, Robert R. 2006. The Cambridge Handbook of Expertise and Expert Performance. New York.
- French, Peter A.; Funke, Joachim, eds. 1995. Complex Problem Solving: The European Perspective. Hillsdale.
- Hartig, Johannes; Klieme, Eckardt. 2006. Kompetenz und Kompetenzdiagnostik. In K. Schweizer, Hg. Leistung und Leistungsdiagnostik. Berlin, 127-143.
- Jung, Eberhard. 2006. Möglichkeiten der Überprüfung von Kompetenzmodellen in der ökonomischen Bildung. In: Weitz, Bernd O., Hg. Kompetenzentwicklung, -förderung und -prüfung in der ökonomischen Bildung, Wirtschafts- und Berufspädagogische Schriften, Deutsche Gesellschaft für ökonomische Bildung, Vol. 33, Bergisch Gladbach, 33-60.
- Jung, Eberhard. 2009. Kompetenzmodelle und Bildungsstandards zur ökonomischen Bildung vor dem Hintergrund der Expertise "Zur Entwicklung nationaler Bildungsstandards" – Replik und Ansätze zur weiteren Diskussion. In: Theuerkauf, Walter E.; Meschenmoser, Helmut; Meier, Bernd; Zöllner, Hermann. Qualität technischer Bildung. Kompetenzmodelle und Kompetenzdiagnostik. Berlin, 195-209. (<http://www.uni-potsdam.de/u/al/forsch/download/WocateQualitaet-TechnischerBildung2009.pdf>).
- Jung, Eberhard. 2010. Kompetenzerwerb. Grundlagen, Didaktik, Überprüfbarkeit. München.
- Klieme, Eckhard. 2004. Was sind Kompetenzen und wie lassen sie sich messen? In: Pädagogik, 6, 10-13.
- Klieme, Eckhard; Beck, Bärbel, Hrsg. 2007. Sprachliche Kompetenzen - Konzepte und Messung. DESI-Studie (Deutsch Englisch Schülerleistungen International). Weinheim.
- Lehmann, Rainer; Seeber, Susan. 2007. ULME III. Untersuchungen von Leistungen, Motivation und Einstellungen der Schülerinnen und Schüler in den Abschlussklassen der Berufsschulen. Hamburg.
- Macha, Klaas; Schuhen, Michael. 2010. Financial Literacy von angehenden Lehrerinnen und Lehrern. In: Retzmann, Thomas, Hrsg. Finanzielle Bildung in der Schule. Mündige Verbraucher durch Konsumentenbildung. Schwalbach.
- Meyerhoefer, Wolfram. 2005. Tests im Test. Das Beispiel PISA. Opladen.
- Newell, Allen; Simon, Herbert A. 1972. Human Problem Solving. Englewood Cliffs.
- Pätzold, Günther. 1999. Berufliche Handlungskompetenz. In: Kaiser, Franz Josef; Pätzold, Günther, Hrsg. Wörterbuch der Berufs- und Wirtschaftspädagogik. Bad Heilbrunn, 57-58.



- PISA-Konsortium Deutschland 2006. PISA 2006. Die Ergebnisse der dritten internationalen Vergleichsstudie. Zusammenfassung. Berlin.
- Resnick, Lauren B. 1987. Learning in School and Out. In: *Educational Researcher*, Vol. 16, 13-20.
- Sadler, Royce. 2011. Making Competent Judgments of Competence. Paper presented at the conference "Modeling and Measurement of Competencies in Higher Education", Berlin.
- Salemi, Michael K. 2005: Teaching Economic Literacy: Why, What and How. In: *International Review of Economics Education*, Vol. 4, Issue 2, 46-57.
- Schlösser, Hans Jürgen; Schuhen, Michael 2006. Bildungsstandards in der ökonomischen Bildung. In: Weitz, Bernd O., Hg. *Kompetenzentwicklung, -förderung und -prüfung in der ökonomischen Bildung, Wirtschafts- und Berufspädagogische Schriften*, Deutsche Gesellschaft für ökonomische Bildung, Vol. 33, Bergisch Gladbach, 3-32.
- Seeber, Susan. 2008. Ansätze zur Modellierung beruflicher Fachkompetenz in kaufmännischen Ausbildungsberufen. In: *Zeitschrift für Berufs- und Wirtschaftspädagogik*, 104, 74-97.
- Soper, John C.; Walstad, William B. 1987. *Test of Economic Literacy*. 2. Aufl. NCEE.
- Tewes, Uwe; Wildgrube, Klaus. 1992. *Psychologie-Lexikon*. München. R. Oldenbourg Verlag.
- Walstadt, William B.; Rebeck, Ken. 2001. *Test of Economic Literacy*. 3. Aufl. NCEE.
- Weinert, Franz E. 2001. Vergleichende Leistungsmessung in Schulen - eine umstrittene Selbstverständlichkeit. In: Weinert, Franz E., Hg.. *Leistungsmessungen in Schulen*. Weinheim: Beltz, 17–31.
- Weiß, Rudolf H. 2006. *Grundintelligenztest Skala 2- Revision*. CFT 20-R. Göttingen: Hogrefe.
- Weiß, Rudolf H. 2007. *Wortschatztest und Zahlenfolgentest-Revision*. WT/ZF-R. Göttingen: Hogrefe.
- Winther, Esther; Achtenhagen, Frank 2008. Kompetenzstrukturmodell für die kaufmännische Bildung. In: *Zeitschrift für Berufs- und Wirtschaftspädagogik*, 104, 511-538.
- Winther, Esther; Achtenhagen, Frank. 2009. Skalen und Stufen kaufmännischer Kompetenz. In: *Zeitschrift für Berufs- und Wirtschaftspädagogik*, 105, 521-556.
- Winther, Esther; Achtenhagen, Frank. 2010. Berufsfachliche Kompetenz: Messinstrumente und empirische Befunde zur Mehrdimensionalität beruflicher Handlungskompetenz. In: *Berufsbildung in Wissenschaft und Praxis*, 1, 18-21.
- Witt, Ralf. 2006. Kompetenzstufenmodelle zur Messung ökonomischer Kompetenz. In: Minnameier, Gerd; Wuttke, Evelin, Hrsg. *Berufs- und wirtschaftspädagogische Grundlagenforschung. Lehr-Lern-Prozesse und Kompetenzdiagnostik*. Frankfurt, 407-419.
- Würth, Reinhold; Klein, Hans Joachim. 2001. *Wirtschaftswissen Jugendlicher in Baden-Württemberg. Eine empirische Analyse*. Künzelsau.
- Zimbardo, Philip G.; Gerrig, Richard J. 1999. *Psychologie*. Heidelberg.

Felix Fenske/Andreas Klee/Andreas Lutter

Concept-Cartoons as a Tool to Evoke and Analyze Pupils Judgments in Social Science Education

The following contribution makes an effort to place the concept-cartoon-method into the context of social science education. Concept-cartoons (CCs) enable teachers to use the everyday life experiences and individual thoughts of the pupils as a positive enrichment tool within the learning processes. In this context, CCs are very suitable to function as a method to gain information about both the existing mental conceptions and the individual political judgment strategies. Through this, it is possible to put everyday life concepts and scientific knowledge in a constructive relationship, which finally enhances new learning objectives.

First the article highlights the relevance of pupils' and teachers' concepts for judgment processes. On this basis the method of CCs is introduced and evaluated.

Der folgende Artikel beschäftigt sich mit den Möglichkeiten des methodischen Einsatzes von Concept-Cartoons im Rahmen sozialwissenschaftlichen Unterrichts. Als Instrumentarium zur Diagnose von Schülervorstellungen und individuellen Urteilsstrategien, bieten Comic-Cartoons den Lehrkräften die Möglichkeit, den Unterricht entlang dieser lernrelevanten Perspektiven zu gestalten. Durch die konstruktive Verknüpfung von Alltagskonzepten und Fachkonzepten können auf diese Weise neue Chancen für nachhaltige Lehr- und Lernprozesse erschlossen werden.

Innerhalb dieses Beitrags wird zunächst die Bedeutung von Schülervorstellungen und vorfachlichen Urteilsstrategien für wirksamen sozialwissenschaftlichen Unterricht geklärt. Im Anschluss erfolgt eine Einführung in die Methode „Concept-Cartoons“. Abschließend werden exemplarisch drei von den Autoren gestaltete Cartoons vorgestellt.

Keywords

Concept-Cartoon, pupils' concepts, teacher's concepts', judgment processes, judgment strategies, social science education

1. Concepts in the Context of Judgments Learning Processes

1.1 Pupils' Concepts in the Context of Judgments Learning Processes

The relevance of individual ideas and concepts for the process of scientific learning is almost indisputable. Everyone builds up ideas about certain parts of life and constructs their own individual reality (cf. Klee; Lutter 2010). These various ideas (also known as everyday life theories, subjective theories, lay theories) are closely associated to the physical and social environments people are confronted with. Those individual concepts are very stable and therefore hard to change. In the context of educational processes, the individual concepts are expressed through different judgments and judgment competencies. Usually those subjective judgment strategies are strongly linked to the following characteristics:

- Subjective concernment (How does the issue affect me?)
- Individual interests and needs (Of what use to me is a political decision?)
- Abstract ethical standards (Do I agree or disagree with an outcome?)
- Ideological conception of the world (How does a particular decision correspond to my political orientation/opinion?)

- Affinity and trust in certain persons (How does a certain politician appeal to me?) (cf. Massing 1997, 116)
- The above mentioned circumstances accentuate the problem of building up scientific judgment strategies and an adequate knowledge in the field of social sciences, among the students. Problems occur in particular when existing concepts and judgment competencies are disqualified or even excluded from learning processes. Everyday life concepts then often remain as most important constructs of judgment and interpretation, even after social sciences instructions have taken place (cf. Schnotz 1998, 77). Permanent and one-sided urges on rational, reasonable decision-making processes are therefore highly counterproductive for substantial learning processes. Rather must be assumed that a competent judgment arises out of various preceding acquisition processes. In this regard, educational processes always have to provide sensuous, physical and emotional approaches for the students (cf. Meyer 1992, 511). Otherwise the feeling is spread, that the gained knowledge is only useful for school, but irrelevant for "real life". A close connection between the everyday life concepts and the scientific concepts are therefore an essential necessity for sustainable learning processes. "In the most general sense, the contemporary view of learning is that people construct new knowledge and understanding based on what they already know and believe" (Bransford among others 2000, 10). Acknowledging this, it is necessary to figure out, in which learning sequences, forms and arrangements students are able to articulate their ideas, pre-perspectives and question re-



garding politics and society (cf. Schelle 2005, 87). In this way, the individual concepts become a significant structure-giving element of planning, teaching and reflecting socio-scientific lessons (cf. Lutter 2011, 98).

1.2 Teachers' Concepts in the Context of Judgments Learning Processes

Latest research results (Klee 2008) illustrate, that the development of political judgment strategies is a key problem within the context of social science teaching. Research results show that teachers have enormous problems to integrate both student-centered and scientific-orientated ways of teaching. In regard to this dilemma, teachers often tend to make a very uncomfortable decision for only one side. When teachers avoid scientific-orientated educational processes they are driven by the fear of promoting low quality political judgments among the pupils or even reproduce current opinions. Otherwise, when scientific orientated teaching is dominating they are afraid to discourage pupils and at the end avoid learning processes.

The key issue in this context however, is the question, which scientific or professional concepts are appropriate to absorb and integrate pupils' concepts in a positive and constructive manner, regarding the understanding of political processes? The primary role of didactics in this context is to reconstruct professional concepts in terms of their importance for learning processes among pupils. Learning in this sense is meant as an extension, change or reconstruction of a mental conceptual system (cf. Sander 2005, 52). The main objective then, is not to replace the pupils' concepts, but to create a learning environment in which different forms of knowledge are experienceable and understandable (cf. Grammes 1998, 62 ff). Pupils' concepts are therefore necessary "bridge pillars" for lasting learning achievements and of great importance for didactic conceptions. In order to ensure productive learning processes, it is important to mark everyday life concepts as a starting point and to create dissonances, as the learning process progresses. The resulting imbalances then promote fundamental learning and thinking procedures. Overall it seems to be an important challenge to develop a practice tool which on the one hand enables teachers to identify the existing concepts of the pupils and on the other hand helps to overcome the barrier between student and scientific centered ways of teaching. In the following text CCs are suggested as well as verified as such a "both-sided tool".

2. Concept-Cartoons as an Approach to Pupils' Social Science Conceptions and Misconceptions

Concept cartoons (CCs) first developed by Keogh and Naylor (1997) are a highly visual and stimulating approach to teaching and learning. They are based on a

constructivist view on learning, in which learner's existing concepts influence their future learning (cf. Sewell 2002). Within CCs discussions between individuals are presented in a cartoon-style format. Learners are invited to observe the expressed statements within. Furthermore they are supposed to decide which view they support and why they do so (cf. *ibid.*). CCs represent specific scientific ideas related to personal experiences. As a consequence learners are able to establish connections between scientific ideas and their everyday life experiences. CCs like the „Snowman“ (see Fig. 1) are useful to initiate discussions and to make learners ideas explicit.

Fig. 1



Figure 1 Snowman: (Source: <http://www.conceptcartoons.com/science/subway-1.htm>)

Several case studies are illustrating teacher perceptions of the outcome of CC in science classes. Although those teachers used CCs in different ways similarly results are reported (cf. Morris et al. 2007):

- CCs are providing a stimulus for discussion
Teachers have experienced CCs as an opportunity to explore pupils' concepts and to provide a stimulus for discussions without necessarily restricting the students' ideas to only those illustrated in the cartoons. The discussions have provided a forum for the students to change and develop their ideas. According to the teachers' statements students posed additional questions which have provided a foundation for further investigation to develop pupils' scientific ideas.
- CCs are providing a context and purpose for broader surveys

The teachers have pointed out that the use of common everyday experiences represented in the CCs allowed the students to readily link to their personal life. In this linkage has been found occasion for performing a deeper scientific-based analyses. Hence, the cartoon has provided both a context and purpose for discussion, which established an actual need for investigation.

- CCs are providing a motivating environment for investigations

Teachers have put pupils' active participation down to the clearly established purpose for performing the investigations. Furthermore pupils have considered the investigations as worthwhile and meaningful. In ad-

dition the pupils have been able to emphasize with the characters in the CCs.

3. CCs in Social Science Education – Theoretical Assumptions

In natural science education CCs are an already well established teaching and learning strategy (cf. Barke et al. 2009). The findings of Morris et al. suggest that CCs can be a meaningful instrument for social science lessons as well. Without any doubt the advantages of CCs like initiating discussions, engaging in investigations and motivating pupils, are valuable for social science classrooms education, too. But so far, the potentials of CCs are more or less idle. In the following an effort is made to transfer CCs into social science learning. CCs within social science education need to build a communicative frame that evokes political judgments. In order to realize this objective CCs should on the one hand always refer directly to an everyday life situation and on the

other hand represent possible scientific views. The given statements and represented situation within the CC should furthermore fulfill the requirements of controversy. Through this, CCs inevitably lead to a reduction of content. The presented situation and the given statements therefore represent only one possible perspective on the specific issue. The intentionally chosen thematic emphasis however should also point towards one of the two fundamental political “lines of conflict” concerning Freedom vs. Equality or Liberty vs. Security, which can be derived from the four normative dimensions of statehood (security, legal equality and legally guaranteed freedom, political self-determination, social welfare) presented by Zürn et al. (2004, 6). In an effort to negotiate and solve these fundamental conflicts, policy implements certain decisions, which can be concretized through certain exemplary cases. These cases are the basis for the construction of CCs (cf. Fig. 2 and Tab. 1).

Fig. 2



It may be assumed that within teaching practice CCs can be used as a tool to provoke and analyze pupil’s judgements in three different phases of instruction. In every of those three phases it is possible to provoke different statements which have then different consequences for teacher’s actions (see table below).

Tab. 1

Phase of instruction	Forms of statements	Teacher action
Introduction	Viewpoint conditions	Planning
Development	Judgment strategies	Feedback
Consolidation in results/ Transfer	Decision making	Evaluation

The different forms of statements can be analysed through the following key questions:

Viewpoint conditions

To find out and relate different individual ideas:

Which individual ideas are shown through pupils’ comments on the CC? How can they be related with each other?

To identify unbalanced opinions and judgments:

Which statement in the CC is preferred by the pupils?

To identify the professional starting points:

Which argumentative starting points connected with concepts are indicated in pupils’ opinions?

Judgment strategies

To identify the integration of scientific content knowledge:

Which scientific concepts do the pupils integrate in their interpretation of the CC?

To identify lesson-caused misunderstandings:

Which academic concepts mediated so far increase objective conclusion mistakes?

To identify learning potentials:

At which point can learning potentials be identified and how can they be used for the differentiation of pupils’ concepts?

Decision making

To determine concept changes:

What distinguished the decisions which were expressed at the beginning of the teaching and learning unit?

To make the progress of learning transparent:

Which competency development of the individual opinion finding is recognizable?

To point out transfer opportunities:

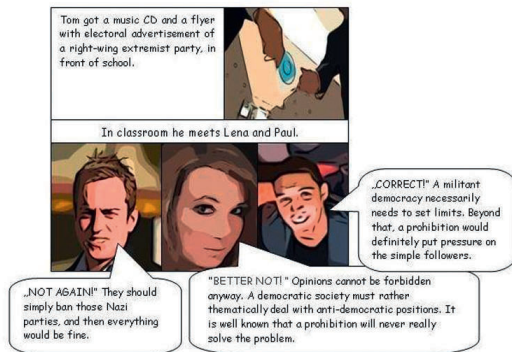
How can the new growth in opinion finding be used for another political controversy in general?



4. CCs in Social Science Education – Empirical Approximations

In order to evaluate the relevance of CC's in the context of social science education, the CC "party ban" (as listed below) was introduced and tested within three different groups of learners (political science classes, eleventh grade). Afterwards the anonymously given statements (55 in total) were systematically analyzed.

Fig. 3 Concept-Cartoon (Party ban)



The central objective of this small empirical study was to identify the different viewpoints of the pupils regarding the issue "party ban". For this reason the CC was brought in at the beginning of the teaching unit (phase of introduction). The results clearly showed that the introduced cartoon had a structure building effect on the statements of the pupils. The situation, illustrated within the cartoon, had been taken up and developed further by the pupils. In other words, the cartoon was the central frame of reference for the statements the pupils made. This recognition clearly shows that it is of great importance, to comprehensively evaluate the cartoons, before they are introduced into the educational practice. It is therefore extremely important to examine the situational context as well as the thematic content which is represented through the illustrated persons. In this specific cartoon, an effort is made to transfer the controversial political discourse concerning party bans. The discussion on party bans is one exemplary case to concretize the laws freedom of expression and (Article 5, Basic Law FRG) and political parties (Article 21; Basic Law FRG) with reference to the everyday life of the students. (cf. Tab. 2):

Tab. 2

Fundamental political conflict line	Implementation of politics	Concretization
Liberty vs. Security	Freedom of expression (Article 5, Basic Law FRG) Political parties (Article 21; Basic Law FRG)	Case "party bans"

The intentionally selected localization had a profound impact on the given statements. Numerous statements refer exclusively to the institutional opportunities that schools have regarding the problem of right-wing-parties.

Exemplary statements:

- "Tom should bring both the CD and the flyer to the school secretary. There is no entitlement for parties to advertise in front of schools. I believe the recruiting procedures of the parties should be observed and they should be stop if they start to advertise in front of schools. In that case, the responsible authority should be informed. [Tom sollte die CD und den Flyer im Sekretariat abgeben. Da es einer Partei nicht erlaubt ist, so Werbung zu machen (also vor Schulen). Ich denke, man sollte darauf achten, wie die Partei Mitglieder wirbt und sie stoppen, wenn es um Schulen geht. Es sollte der Behörde gemeldet werden.]
- "Election advertising in front of schools should be banned (not only right-wing advertising)" [Wahlwerbung vor Schulen verbieten (nicht nur Rechtsradikale)].
- "That is pure electoral advertisement! Political party advertising should only be allowed on neutral terrain, for example marked squares. This will assure that the advertising is not intentionally addressed at a particular group". ["Wahlwerbung pur! Parteiwerbung sollte nur auf 'neutralen' Plätzen, wie z.B. auf einem Marktplatz stattfinden dürfen, damit nicht nur auf bestimmte Gruppen, wie z.B. Schüler abgezielt werden kann."]

The above mentioned statements clearly illustrate the close connection between the given statements of the pupils and the situational content shown within the cartoon.

An even greater relevance however unfolded the thematically statements articulated by the concept-cartoon-actors:

Tab. 3

Tom	Lena	Paul
A complete ban would end right-wing propaganda.	Opinions cannot be forbidden.	A ban puts pressure on the simple followers.
	A democracy needs to respect controversial positions.	A democracy needs to set clear limitations

The results of the tests clearly show that Concept cartoons must be understood as an impulse that guides students to content-specific reasoning. Upmost in dealing with contextual statements of con-

cept cartoons is therefore not only “what the pupils’ say” but also how they deal with the offered information’s (content and situation). These insights enable teachers to carry out pupil-centered didactic reductions regarding the educational content. In this way the topic “party ban” offers a plethora of educational approaches. The introduced and tested CC concentrates its focus on the pros and cons of party bans and, as already noted, on the underlying political controversy regarding security versus liberty. This intentionally chosen orientation was also adopted by the broad majority of the pupils. The pupils argued primarily within three different conceptual figures:

4.1 Figure 1: Democratic Principles: Freedom of Speech as a Fundamental Cornerstone

Explication

The pupils argue that a ban of the NPD would violate basic standards and values of a democratic society and political system. Freedom of speech is identified as a right, which is characterized by its universal validity. A limitation of this essential right through institutional arrangement is therefore not acceptable. The possibility to vote for right-wing-parties must be acknowledged as a legitimate component within the democratic framework, even if the particular party pursues anti-democratic aims.

Exemplary statements:

I don’t think a ban would be the right decision. There is freedom of speech and everyone should be free to decide, who he wants to vote for. [Ich denke, ein Parteiverbot wäre nicht die richtige Entscheidung. Es herrscht Meinungsfreiheit und jeder kann frei wählen, wenn er wählen möchte].

“A prohibition against right-wing parties is not the right decision and additionally not legitimate. It would violate the fundamental right of freedom of speech”.

[Ein Verbot gegen rechtsradikale Parteien wäre einmal zu einfach und zweitens unmöglich. Es würde gegen die Grundrechte verstoßen, seine Meinung und eigen formulierte Ansichten öffentlich kund zu tun].

I think because of the existing freedom of speech and democratic political basis, a party ban should not be executed.

[Ich denke, dass aufgrund der vorhandenen Meinungsfreiheit und demokratisch politischer Grundlage, ein Parteiverbot nicht vollzogen werden sollte].

4.2 Figure 2: Institutional Intervention: Bans as a Legitimate Political Instrument of Strong Democracies

Explication

According to the pupil’s statements, parties should be banned, if they violate against fundamental demo-

cratic standards and regulations. For them it is therefore necessary that democratic political systems combat antidemocratic parties with everything that the rule of law offers. The pupils feel committed to the principles of a strong democracy. In this context antidemocratic aims and indoctrinating tendencies are legitimate reasons for party bans.

Exemplary statements:

“Parties should not be banned as long as they act democratically. Actions and opinions, however, which suppress people, should not be tolerated. If they act against the public wealth they should be banned”.

[Parteien sollten nicht verboten werden, solange sie demokratisch handeln. Wenn es jedoch Meinungen und Sichtweisen gibt, die andere Menschen unterdrücken oder gefährden, sollte man das nicht akzeptieren. Allein schon wegen des Allgemeinwohls dagegen vorgehen und sie notfalls verbieten].

“I think right-wing parties like the NPD should be banned, because their interests violate the essential rights within the constitution. Furthermore, it is quite obvious, that they would to reestablish Nazi Germany and deport all foreigners”.

[Ich finde, dass man rechtsradikale Parteien wie die NPD verbieten sollte, da sie verfassungswidrig sind und aus ihren internen Parteiziele klar hervorgeht, dass sie bei einer Machtübernahme ein 4. Reich wollen und alle Ausländer abschieben wollen].

“Something has to happen! Nazi parties must be banned. Too many young people can be influenced in this political direction”

[Es muss wirklich etwas passieren! Nazi-Parteien müssen verboten werden. Zu viele Jugendliche lassen sich in diese Richtung beeinflussen].

4.3 Figure 3: Enlightenment through Education: The Strengthening of Democratic Subjects

Explication

The pupils underline the problem of political manipulation through right-wing advertising. Thus, the addresses are at the heart of their arguments. They emphasize the necessity of education as most important preventive measure against right-wing ideas and the recruiting procedures of right-wing parties.

Exemplary statements:

“Even if those parties would be banned, that doesn’t mean that everything is fine! They should pay attention to this problem, especially at schools. The students should be informed so that they are not affected by such actions”. [Selbst wenn die Parteien verboten werden würden, heißt das nicht, dass dann alles super ist! Wichtig ist, dass gerade in Schulen aufgepasst wird, mit den Schüler/innen gesprochen wird und dass die Schüler/innen aufgeklärt werden, um aus eigener Kraft nicht von solchen Aktionen beeinflusst zu werden].



“I believe that it is not right to ban parties, because it would violate the right of free speech. In addition a ban is not appropriate to solve the problem of right-extremist-ideas. I think education would have a greater effect”.

[Ich glaube es nicht richtig ist, Parteien zu verbieten, damit würde ja die Meinungsfreiheit verletzt werden. [...]. Außerdem würde ein Verbot nicht die rechtsradikalen Gedanken beseitigen! Ich denke, dass Aufklärung mehr bewirken kann].

“It is important to prevent children from being drawn into a right-wing political ideology. If the children are informed, such CDs cannot harm or influence them. Then it will eventually stop.”

[Es ist wichtig zu verhindern, dass Schüler und Schülerinnen sich von so einer CD “nach rechts lenken lassen” anstatt die an sich so oder so verbotene Übergabe an Schulen. Schüler/innen aufklären! Wenn so niemand erreicht wird, dann hört es auf].

Assuming that the identified statements can also be found in other classes, teachers have several possibilities to adapt to this. In the case that one-sided arguments dominate, teachers can respond to the unbalanced positioning by bringing in material that emphasizes a completely opposite perspective. The intentionally created dissonance then can be used as a starting point for learning processes. If most of the given statements remain on a rather personal and less complex level, the teachers can bring in material or evoke discussions that point out the political and social dimension of the particular issue. In both cases an increase in complexity regarding the pupil’s concepts can be achieved.

5. Summary and Future Prospects

It has been shown that CCs may take over several important roles in social sciences education. In general they prove to be a functional tool to support teachers in giving pupil- as well as subject-orientated instructions. This opportunity lies in a connection between a certain practical situation and its scientific context. Within the example elaborated above it can be substantiate what Morris et al. (2007) have shown in the case of natural sciences regarding learning-processes in social sciences:

CCs represent a seminal starting point concerning the controversy of banning a party. Pupils are positively encouraged to form an opinion – not at least due to a drawn from life situation.

Essential subject-based debates can be looked at from the angle of a comic. Founded in this possibility every day life problems and scientific aspects get connected.

To access a subject-based topic from an everyday-life-base boosts pupils interest and motivation. They are experiencing that scientific contents are relevant not only for everyday life but for their own everyday life. This act motivational in general learning contexts as well.

Beyond these benefits using CCs succeeds in regard of the expected analytic function concerning lesson’s beginning (see tab. 1). It was possible to identify various arguable dimensions of pupils by using a CC. Those may be used by teachers for further scheduling. Those are encompassing:

- the emphasis of a democratic and liberal belief in politics
- the substantiation of the possibility of banning as an instrument of institutional defense
- an enlightened perspective of democratic capability.

Pupil’s concepts illustrated here may be used in different parts of a lesson- structure. Additionally knowing those concepts enables evaluation of position and attitudes of pupils towards a deeper engagement, for instance in the process of finding counter-arguments or a differentiated perspective. As well CCs give the opportunity to present and discuss individual statements in the classroom.

At this point of time CCs are not fully developed diagnostic instruments. But the given example shows that they have potential to do so. In the future more CC must be proved and accompanied by scientific methods. Upcoming challenges are:

- to develop and prove CCs within other social science topics
- to prove the CCs in different phases of instruction
- to encourage teaching experiments regarding pupils concepts identified by CCs.

References

- Barke, Hans-Dieter; Temechegn, Engida; Yitbarek, Sileshi. 2009. Concept Cartoons: Diagnose, Korrektur und Prävention von Fehlvorstellungen im Chemieunterricht. [Concept Cartoons: diagnosis, correction and prevention of misconceptions in chemistry classes] (http://www.uni-muenster.de/imperia/md/content/didaktik_der_chemie/conceptcartoons.pdf).
- Bransford, John D; Brown, Ann L.; Cocking, Rodney R., Hg. 2000. *How People Learn. Brain, Mind, Experience and School*. Washington D.C: National Academy Press.
- Grammes, Tilman. 1998. *Kommunikative Fachdidaktik [Communicative professional didactics]*, Opladen.
- Kattmann, Ulrich. 2005. Lernen mit anthropomorphen Vorstellungen? [Learning with anthropomorphic conceptions?] In: *Zeitschrift für Didaktik der Naturwissenschaften*; Jg. 11, 2005, 165–174.
- Keogh, Brenda; Naylor, Stuart. 1997. *Thinking About Science (Set of 8 Posters)*. Sandbach, Cheshire: Millgate House Publishers.
- Klee, Andreas. 2008. Entzauberung des Politischen Urteils. Eine Didaktische Rekonstruktion des Politikbewusstseins von Lehrerinnen und Lehrern. [Demystifying of the political judgement. A didactic reconstruction of the political awareness of teachers] Wiesbaden.
- Klee, Andreas; Lutter, Andreas. 2010. Greedy buyers, amoral speculators and lacking state control – Pupils Conceptions about the Crisis and their Relevance for Political and Economic Learning. In: *Journal of Social Science Education Issue 1–2/2010: Civic and Economic Education and the Current Financial Crisis*.
- Lutter, Andreas. 2011. Concept Map, Mindmap und Kartenabfrage: Methoden zur Diagnose und Evaluation im sozialwissenschaftlichen Unterricht. [Concept map, mind map and query maps: methods for diagnosis and evaluation in social science teaching] In: Zurstrassen, Bettina, Hrsg. *Was passiert im Klassenzimmer. Methoden zur Evaluation, Diagnostik und Erforschung des sozialwissenschaftlichen Unterrichts*. Schwalbach/Ts. 2011, 92–107.
- Massing, Peter, Hg. 1997. *Kategorien politischen Urteilens und Wege zur politischen Urteilsbildung*. [Categories of political judgments and means of political opinion formation] In: Bundeszentrale für politische Bildung *Politische Urteilsbildung. Aufgabe und Wege für den Politikunterricht*, Bonn, 115–131.
- Meyer, Hilbert. 1992. *Handlungsorientierter Unterricht*. [Practice-oriented instruction] In: Breit, Gotthard; Massing, Peter, Hg. *Grundfragen und Praxisprobleme der politischen Bildung*. Bonn, 500–516.
- Morris, Marry; Merritt, Mark; Fairclough, Scott; Birrell; Natalie, Howitt; Christine. 2007. Trialling Concept Cartoons in Early Childhood Teaching and Learning of Science. In: *Australian Science Teachers Journal*, 53(2), 42–45.
- Sander, Wolfgang. 2005. Die Welt im Kopf. Konstruktivistische Perspektiven zur Theorie des Lernens (The world in mind. Constructivist perspectives on the theory of learning), in: *kursiv – Journal für politische Bildung* 1/2005, 44–59.
- Schelle, Carla. 2005. Adressatenorientierung (Addressees orientation). In: Sander, Wolfgang, Hg. *Handbuch politische Bildung*. 3. v. überarb. Aufl., Schwalbach/Ts. 2005, 79–92.
- Schnotz, Wolfgang. 1998. Conceptual Change. In: Rost, Detlef H., Hrsg. *Handwörterbuch pädagogische Psychologie*. Weinheim, 75–81.
- Sewell, Audrey. 2002. Constructivism and Student Misconceptions. In: *Australian Science Teachers Journal*, 48(4), 24–28.
- Zürn, Michael, Leibfried, Stephan, Zangl, Bernhard & Peters, Bernhard (2004) *Transformations of the State? TranState Working Papers Nr. 1*, Bremen.

Andrea Szukala

Metaphors as a Tool for Diagnosing Beliefs about Teaching and Learning in Social Studies Teacher Education

Do domain specific teaching/learning beliefs and epistemological beliefs exist and do they explain a domain specific approach to teaching and learning the social sciences? This paper reports on the first stage of an exploratory qualitative study carried out at the University of Bielefeld in 2010/11 on pre-service social studies teachers (PSST, n=61). It has a threefold aim: First, providing a very short overview of relevant trends in recent research on epistemological beliefs and teaching/learning beliefs and presenting some plausible hypotheses on if and how these belief dimensions are related to each other in the field of social studies education; second, presenting and discussing metaphors as a suitable qualitative research method for diagnosing and analysing the teaching and learning beliefs in the field; third, presenting the general outline of the Bielefeld project and a comparison of two emblematic cases of the project to evaluate the potential advantages and shortcomings of the research design and methods, especially of metaphor analysis.

1. Introduction
2. Beliefs about Knowledge and about Teaching and Learning in Social Studies Education
3. Metaphors as a Theory and a Method for Analyzing Beliefs and Deeply Rooted Conceptualizations about Teaching and Learning
4. "Teaching Social Studies Reminds Me of Collecting Stamps..."
5. Conclusions
6. References and Annexes

Keywords

Metaphors, epistemological beliefs, teaching and learning beliefs, teacher education

1. Introduction

Recent studies on the development and on the enhancement of teacher competencies attach special attention to pre-service and in-service teachers' beliefs. They mainly focus on two dimensions: First on the attitudes to teaching and learning (See Hofer 2001; Sing-Chai 2009), second on the beliefs about the nature of their discipline and on domain knowledge (epistemological or epistemic beliefs, see Mason, Bromme 2010). As these beliefs are major independent variables explaining the success and failures of specific classroom practices, they may ultimately account for learning outcomes and students' academic achievements in different knowledge domains (Hofer 2001; Blömeke 2008; Brunner 2006). Finally teachers' beliefs are seen as critical for teachers' openness to student centered classroom-management and to their learners' alternative conceptions (Hashweh 1996).

Qualitative and quantitative inquiry on teaching and learning beliefs of teachers is abundant in the field of science and mathematics (see e.g. Köller 2000) and there are recent insights in the fields of history and geography. But still VanSledright underlines the limitations of existing research with regard to epistemological beliefs and states that a lot of research has to be done "to clarify the connections and their implications

for teaching and learning." (VanSledright, Limón 2006, 551). Social studies teacher education and teacher beliefs research in the narrower social and civic education domain (mainly associated with the academic disciplines sociology, economy and political science) stay even behind the existing analysis¹ and keep on being terra incognita, even in the international social studies education research community (Adler 2008).

But how to overcome the methodological challenge of detecting and diagnosing deeply rooted beliefs and attitudes about domain knowledge and teaching, that may have decisive impact on what happens in classrooms and on what and how students learn when they tackle social studies topics in school contexts?

By tradition the research on personal epistemologies is commonly based on large-N-surveys, open questionnaires and on interviews (see below). Newer analyses question the suitability of certain data collecting strategies i.e. when it comes to the study of pre-service teachers' attitudes: Novice teachers often use the same wording as teacher educators and researchers, but they don't signify the same concepts (see Hammerness, Darling Hammond et al. 2005, 368). This is called the over-assimilation-problem in teacher education and teacher education research, which is extremely prone to produce biased research results: Hofer and others call for more research addressing these notorious contradictions between expressed attitudes and the actual classroom practices (Hofer 2006, 90). Hence the uncertain relationship of epistemological beliefs (as thought processes) and observable behavior (as teaching practices) generates increasing scientific interest (Brownlee 2006; Fives, Buehl 2008; Chen, Chang 2009), but: "Assessment of epistemological be-

1 The existing insights on epistemological thinking in history (VanSledright 2006; Wineburg 1991; Wineburg 1996; van Drie, van Boxtel 2008) cannot be generalized to the social studies domain, because they focus on quite subject-specific issues such as the use of historical sources, historical empathy and contextualization.



iefs requires one to identify and uncover what lies well beneath the surface” (Buehl, Alexander 2001, 388). Exploring new ways of gathering and interpreting relevant insights seems therefore to be crucial for the detection of tacit beliefs. This would further enhance a deeper and qualitatively trustworthy understanding of teaching and learning in the social studies domain. In recent times the metaphor analysis is discussed being a pertinent instrument for revealing those beliefs in different contexts of the educational sciences, namely in teacher education research (See for a very recent overview of relevant results in the field: Patchen, Crawford 2011).

This paper reports on the first stage of an exploratory qualitative study carried out at the University of Bielefeld in 2010/11 on pre-service social studies teachers (PSST, n=61).¹ It is a synchronic comparative case analysis comparing a moderate number of cases. The project asks if and how domain specific epistemological beliefs may be connected to specific beliefs about teaching and learning the social studies. It aims to describe and to inductively designate different types of epistemological beliefs in the social studies domain and elaborates then on potential relations with certain teaching and learning beliefs using the metaphor analysis. This paper documents the theoretical background of the project and an initial stage of its evaluation: I discuss first relevant trends in recent research on domain specific epistemological beliefs and on teaching and learning to frame the research question. I aim then to present some plausible hypotheses on if and how these belief dimensions may be related to each other in the field of social studies education (2.); secondly, I present and discuss metaphors as a suitable qualitative research method for diagnosing and analysing the teaching and learning beliefs in the field (3.); finally, the paper reports on a comparison of two emblematic cases of the project in order to thicken the description of possible belief configurations and to evaluate then the potential advantages and shortcomings of metaphor analysis (4.).

2. Beliefs about Knowledge and about Teaching and Learning in Social Studies Education

Teacher epistemology- and teaching-beliefs-research is a fast expanding field of scientific inquiry, where educational researchers reframe and extrapolate the existing research on teacher knowledge (Shulman 1988) and the teacher beliefs and attitudes research (see e.g. Calderhead 1996; see in Germany ‘personal the-

ories’-research, Mandl, Humber 1983; Koch-Priewe 2000; Dann 1989; Groeben 1988). In a way it is a meta-theory to teacher-knowledge-theories in the Shulman-tradition: Personal epistemic variables such as the individual preconceptions about the nature of the discipline (cf. *content knowledge*), about knowledge for teaching the discipline (cf. *pedagogical content knowledge*) (Bendixen et al. 2010) as well as the preconceptions about teaching and learning in general (*pedagogical knowledge*) play a major part in teacher epistemology research. They are therefore critical elements of some newer models of teachers’ professional development (Blömeke 2008). In a teacher education perspective, researchers argue that the reflective work on individual beliefs, preconceptions and values of teachers should be a mandatory element of any teacher training (of pre-service and of experienced teachers), given the undisputed impact of epistemic beliefs on the choice of cognitively activating instructional strategies (Brownlee 2004) – and thus on students’ performance (see the COACTIV-project: Brunner 2006). The treatment of personal beliefs should play a major part as Leavy states: “While changes in beliefs have been found to occur, and often as a result of education programs, pre-service teachers are not seen to develop new perspectives during teacher education courses unless they are confronted with their held beliefs” (Leavy et al. 2007, 1219).²

This seems especially required for pre-service social studies teachers, whose prior experiences and deeply rooted attitudes towards the discipline and the school subject are fairly often surprisingly negative. They are frequently shaped by perceptions of citizenship education as an educational venture that is too consensus prone and excessively ‘politically correct’ (See the so called ‘political correctness backlash’ in Britain: Wilkins 1999, 223, see also Besand 2006). Empirical research about how social studies teacher beliefs and students’ achievements are related to each other at the aggregate level is virtually nonexistent apart from a follow-up analysis of the IEA Civic Education Study 1999 on US social studies teachers’ professionalization and the role of beliefs about standards and citizenship education as a school topic (this study was not yet inspired by epistemological research approaches, see Torney-Purta et al. 2005).

In educational research “epistemological beliefs” is a construct which is multi-faceted and calls for further definition. In the following sections I introduce some pertinent definitions and typical research perspectives developed over the past 20 years, which are

i I gratefully acknowledge the extremely helpful comments of two anonymous reviewers and of Reinhold Hedtke (Bielefeld) and Birgit Weber (Köln), as well as the excellent research assistance of Stephanie Matthias M.A. and a financial support provided by BISED/University of Bielefeld.

2 Recently teacher education programs in the United States focus carefully on the monitoring and enhancement of teacher beliefs namely in the social studies domain (VanSledright et al. 2011).



relevant for the investigation of teacher beliefs in the social studies domain. I then discuss the problem of domain specificity of epistemological beliefs and connect the state of the art to the teacher beliefs discussion aiming to present some hypothetical considerations that motivated the Bielefeld project analyzing the teaching and learning beliefs and the epistemological beliefs of future social studies teachers.

2.1 Definitions

American educational psychologists discuss the role of epistemological metacognitions for cognition and learning since the early seventies. This strand of research is rooted in pragmatism with Dewey being one of the first scientists asking how schooling may change knowledge beliefs and personal attitudes (Dewey 1933). Today most of the basic conceptualizations of epistemological beliefs research have been replicated in numerous *large N*-studies and are generally acknowledged by the educational research community (See for thorough recent overviews, Bendixen et al. 2010; Muis 2006; see also the journal *Metacognition Learning*, spec. issue 5/2010). *Epistemological beliefs*³ in general are beliefs about the study of knowledge. At a micro-level the concept of *personal epistemology* has commonly been conceptualized as an individual's "set of beliefs organized into theories, operating at the metacognitive level" (Hofer 2004, 46). Individuals reflect upon the epistemic qualities and the sources of their knowledge and may ask themselves: What do I know? How do I know what I know? Those beliefs are seen as functional for bridging the gap between knowledge and action: They are thus conceived as an "apprehension structure through which the knowledge to be learnt is anticipated" (Bromme 2010, 12), stimulating learners to cognitively "calibrate" to characteristics of their learning tasks (*Calibration hypothesis*, Ibid.) or to serve as an opportunity structure for domain specific self-regulated learning because beliefs "translate into

epistemological standards that serve as inputs to metacognition" (*Consistency Hypothesis*, Ibid., see also Muis 2010, 28). Therefore epistemic beliefs theories are in close relationship to theories of *metacognition* and *metacognitive processing* (Veenman et al. 2006, 4). Metacognition itself has a twofold character: On the one hand metacognition is pure knowledge because of its declarative knowledge components about e.g. the interactions between person, task, and strategy characteristics (Veenman citing Flavell 1979, Ibid.). On the other hand metacognition is also a skill, because its procedural knowledge components refer to self-knowledge, self-regulation and the planning of individual learning activities, which are processes that have built-in feedback mechanisms. As Veenman puts it: "Either you are capable of planning your actions ahead and task performance progresses smoothly, or you don't and your actions go astray" (Ibid. 5). Nonetheless it is still not evident where "beliefs" finish and where "knowledge" begins, the problem of conceptual borders is an old brainteaser of cognitive psychology that contains key methodological complications (Limón 2006, 20, referring to Sinatra 2001).

Even so epistemological beliefs are generally assumed to fulfill quite a number of subsequent functions for learning and more general for the use of specific cognitive strategies. In very recent educational research colleagues try to show how and when they may influence motivation, conceptual change (Stathopoulou, Vosniadou 2007) and the capacities for self-regulated learning (Muis 2009; Bromme et al. 2010). The most basic assumption about the effects of epistemological beliefs is that "advanced (or more sophisticated) beliefs about knowledge and knowing are prerequisites for the development of essential thinking skills and for learning in general" (Greene 2008, 124).

2.2 Two Research Positions in Epistemological Beliefs Research

Since the early years of research on epistemological beliefs researchers like Perry (1970) and others have posited different models on how people (mostly college students) interpret their educational experiences. Since then two central positions on how and what learners think about the study of knowledge have emerged: the *ontogenetic* and the *structural/analytical position*.

The former approach consists of works in a post-piagetian tradition that focus on the genealogy of epistemic thinking ("Genetic Epistemology", Baxter Magolda 2004; Belenky et al. 1986; King, Kitchener 1994; Kuhn 1991). Epistemological development refers to the progressing accommodation of the objective and subjective dimensions (*objectivism-subjectivism*) of knowing: The authors stress the

3 Terminology in the field is controversial and there is a lot of mislabeling (Buehl, Alexander 2001, 415), since numerous colleagues use the terms „epistemic cognition“ and „epistemologic(al) beliefs“ as quasi synonyms (Hofer 2002, 3) or use the term "epistemologic(al)" as a catch all category (Schommer, Baxter Magolda et al.). Some philosophers and educational researchers – like Kitchener (2002) and Hofer (2004) – put an accent on the difference between the beliefs about knowledge (epistemic beliefs) and about the beliefs about the study of knowledge and knowing (epistemological beliefs). I basically subscribe to this distinction, but I shall nonetheless report the original terminology of individual researchers to avoid a distortion of the scientific sources. A further thorough presentation of this terminological discussion would be far beyond the scope of this paper: A priori JSSE is interested in educational perspectives (epistemic cognitions and epistemological beliefs) and not so much in epistemology as a philosophical enterprise ("epistemic" beliefs about knowledge more generally).



consistent change of epistemic cognition over time and associate respective developments with educational experience and/or age differences. Hence these approaches follow the general line of reasoning that epistemological growth is sequential and moves e.g. from simplistic (e.g. “dualist”) to relativistic positions (Perry). Educational psychologists like Kitchener/King (proposing the seven stage reflective judgment model, RJM, 1994) and Kuhn (1991) mirror Perry’s early conceptualizations of intellectual development at different points in the life span or at different educational levels. But even if this research typically was qualitative, mostly based on interviews (King, Kitchener 2004), the focus always was on static positions and not on how different belief dimensions develop over time: There is a lack regarding the portrayal of transitional stages and their driving forces (Hofer 2001; Alexander 2006; Greene et al. 2008).

Basically all authors describe intellectual positions from “naïveté” to “sophistication”. Even though the different approaches use different labels and indicators demarcating the stages, they may commonly be labeled along three general levels (for this handy broad classification see amongst others: Hofer, Pintrich 1997).

The typical stages are represented as follows.

1. *Absolutism/objectivism*
e.g. simple/certain knowledge about what is false and true: authorities have the answer.
2. *Multipism/subjectivism*
everything could be true, knowledge is pure opinion.
3. *Evaluativism/objectivism-subjectivism*
knowledge is generated by human minds and is uncertain, but critical thinking is a vehicle for sound assertions. Therefore people have the right to their ‘opinions’, but some views may be ‘more right’ than others.

In newer analysis the evaluativist stage is associated with only very high levels of formal education since the multiplists’ indifference – even to inconsistent positions – is seen as a kind of “mainstream” thinking style, an expression of postmodern intellectual tolerance (Kuhn, Weinstock 2002, 138f.).

Like other ontogenetic stage-models (e.g. the legendary Kohlberg-Model) these models have of course attracted serious criticism from several directions, namely from a methodological point of view, from sociology and from philosophy of science. Nonetheless

measurement problems (Hofer, Pintrich 1997, 93), cultural biases and causality dilemmas (Moore 1994) do not alter the fact that distinct qualitative levels of epistemic thinking and of reflective judgement are empirically detectable, even if they are not only very difficult to quantify, but also not generalizable or linear.⁴

A second approach to epistemological research, the so called analytical position, is essentially represented by Schommer’s, Buehl/Alexander’s, Muis’ and Hofer’s work (Schommer 1990; Schommer 1994; Schommer 2004; Hofer 2000). They formulate heavy criticisms on the genetic epistemology and on the theoretical stances of Kitchener Perry et al. for being too unidimensional and for not capturing the multifaceted character of epistemological beliefs. They therefore reconceptualise beliefs as a system of more or less independent characteristics: Learners may be ‘sophisticated’ in some beliefs but not necessarily in others. Doing so Marlene Schommer has not only posited an influential basic model, but also renewed the methodological debate proposing a first standardized research inventory (SEQ⁵), which stimulated further methodological and conceptual debate. Today the Buehl’s DSBQ (Domain Specific Beliefs Questionnaire, Buehl et al. 2002) and the Hofer model (2000) using the Discipline Focused Epistemological Beliefs Questionnaire (DEBQ) are most influential instruments measuring epistemological beliefs for being domain specific and for not mixing up learning and intelligence beliefs with epistemological beliefs as Marlene Schommer does (Schommer 1994; see Hofer’s research report: Hofer 2009). Hofer suggests a system of four epistemic beliefs dimensions:

- Certain/Simple knowledge (beliefs about the *complexity/the structure of knowledge*);
- *justification of knowledge* (e.g. opinion based or first hand-experience based knowledge);
- beliefs in the source of knowledge (e.g. omniscient authority vs. evaluative stances);
- *attainability of “truth”* (there is one “right answers” vs. no ultimate truth).

It is important to note, that these facets are relatively consistent at the individual level (Muis 2006, 10f.): The ‘systems of knowledge beliefs’-research thus provides snapshots of a person’s belief configurations – or sets of beliefs – without yet providing any developmental-stage analysis. Several replicable studies assessed the validity of epistemological thinking as a

4 See the methodological critique of Muis (2006); further problems with regard to the ‘stages’ and trajectories are not part of the following descriptive presentation of ‘snapshots’ of teacher students’ beliefs since the presentation of case studies implicates a synchronic comparison, see the final publication of the BISED-research report (2012).

5 Schommer Epistemological Questionnaire (1990) tested a five factor model (structure, source and certainty of knowledge, quick knowledge acquisition, and ability for knowledge acquisition). Hofer and Pintrich (1997) report that only two factors, “quick learning” and “certain knowledge”, loaded across different populations. In response to criticisms of the SEQ, Hofer developed the DEBQ (see below); Schraw et al. (2002) developed the Epistemological Beliefs Inventory (EBI).



multidimensional construct in general, but the interpretation and substantiation of causality and multidimensional contextualisation are still highly controversial (Hofer 2009; Muis et al. 2009).

It is essential to note, that not only newer approaches seek to draw sharper boundaries between knowledge beliefs and knowledge acquisition/learning beliefs (which is important for the selective analysis of domain specific teaching and learning beliefs); but that also quantitative as well as qualitative analysis seek to combine multidimensional and genetic approaches to get a more complex picture about how and when learning and intellectual development occur (see below, see Greene 2008; see for domain differences in stage transitions Kuhn, Weinstock 2002). Last but not least later conceptualisations such as the DEBQ and Schommer's embedded systemic model stress the entrenched forms and the multi-layered nature of beliefs: There are not only important differences between knowledge beliefs in general and schooled knowledge/academic knowledge beliefs, but also the academic knowledge beliefs vary significantly according to different academic disciplines, they are thus domain-specific.

2.3 Domain Generality and Domain Specificity of Epistemological Beliefs

At the beginning of quantitative research on epistemic beliefs the assumption was that beliefs about knowledge and knowing were more or less unspecific across different knowledge domains and learning tasks. Schommer promoted the view, that the most complex and influential beliefs were "domain general" as they shall not vary from one academic field or discipline to another (Schommer-Aikins 2003). This contradicted an older assumption of problem solving research (Chi et al 1981), that knowledge is predominantly context-specific and therefore domain dependent. Today there are no more disputes that domain specificity exists; nonetheless there are still a number of methodological and conceptual limitations (e.g. Muis et al. 2006).

The definition of what constitutes an academic 'domain' is not unequivocal (Alexander 1992). Buehl/Alexander define a domain as "a field of study associated with academic realm", that differ in terms of structure and content (Buehl, Alexander 2001, 401). Without doubt there is no "academic realm" lacking institutionalized disciplines and school subjects. Therefore domains are also conventions and man-made constructs: Jehng calls them social insti-

tutions for knowledge and knowledge acquisition (Jengh 1993, 24). As a result, if there are domain specific epistemic beliefs, they will undoubtedly be culturally biased and somewhat display the characteristics of educational institutions and norms. Also teachers obviously teach differently when they act in different academic domains (see below, see Stodolovsky 1988). Limon opts for side-stepping the resulting methodological difficulties simply making explicit and reflecting that in most existing studies the term 'domain' is considered synonymous to the actual academic discipline and/or to the school subject (Limon 2006, 22).⁶

Domain classifications recall Biglan's classical categorization of academic domains as hard-soft/purely-applied (Biglan 1971). Many classifications in epistemic research are based on this early approach, most use the well-structured/ill-structured classification based on Spiro and Jengh (1990). Since research normally includes the easily accessible groups of students enrolled in high school and university courses, comparisons are often categorically based on differences between the actual school subjects/academic disciplines (See Jengh 1993, see Stodolovsky 1991).

The social studies domain categorization habitually suffers from the many-sided character of the field. When research points to the 'social studies' it may indiscriminately allude to disciplines like psychology (a soft, pure, ill-structured domain) and education (a soft, applied, ill-structured domain). Muis citing this example – recommends a narrow domain focus when collecting data, because: "Comparing students' beliefs about broadly defined domains diminishes the power to detect similarities and differences along various dimensions" (Muis et al. 2006, 25). However most of the disciplines belonging to the social sciences are classified as loosely and/or ill-structured domains. This general classification scheme implies that knowledge acquisition in the field always requires a greater flexibility of thinking (Buehl, Alexander 2006, 700), because in these domains one has to deal with conflicting assumptions and evidence. Whether a solution is right or wrong remains time and again open to debate; the definition of problems is part of the answering process. In contrast, well-defined problems share two essential features (Schraw 1995, 523): "(1) There is only one correct solution that can be determined with total certainty; and (2) there is a guaranteed procedure available to reach this solution." That is why Schraw and others draw the conclusion that advanced epistemic

6 Space constraints do not allow me to present the sociological debate on the notion 'domain'. The differences between academic knowledge domains and schooled knowledge domains is not so much highlighted in epistemological beliefs research, which is mainly U.S.-based, where researchers seemingly don't

pay much attention on too sharp distinctions between high school and college-students, when debating theories of knowledge beliefs, see for that perspective Hofer criticizing the lack of research including graduate students: Hofer 2006, 68.



thinking skills are a necessary precondition to successful problem-solving in ill-structured domains, but are not vital for coping with highly structured problems (Ibid.). Jengh emphasizes this assumption claiming that one person’s epistemic cognitions vary across domains (Jengh 1993). Thus he states for the social studies: „Especially in complex and ill-structured situations, there is reason to believe that epistemological beliefs influence how individuals understand the nature of intellectual tasks and decide what kinds of strategies are appropriate for dealing with them [...] (Ibid. 24). [...] The intellectual climate in the social sciences and arts/humanities is full of uncertainty and contradiction. After being involved in such learning environments for years, students become convinced that the nature of knowledge is uncertain, solutions to problems are sometimes impossible to reach within a certain time frame, learning a subject has no prescribed sequence, and knowledge takes time to accumulate.” (Ibid. 34)

Those domain specific beliefs about the social studies as a school subject are replicated in several studies, Stodolsky being one of the first researchers to talk about students’ views of the school subject and its archetypical classroom activities (“What is social studies?”, Stodolsky et al. 1991, 96ff.). Finally there is an obvious consistency of core facets of domain specific beliefs in the social science domain (Buehl, Alexander 2005): Presenting a cluster analysis Buehl/Alexander find that epistemic belief dimensions such as the beliefs in the certainty of knowledge and in authorities providing right answers are highly

consistent and specific within domains but also consistent across domains: thus epistemological beliefs have a dual character, they are domain general and domain specific (Ibid. 721). In their ANOVA-analysis Buehl/Alexander bunch ‘profile groups’ of students showing qualitatively different belief contours in social studies and math, which are connected to robust variances in performance and in motivation patterns. As many other researchers they provide reliable (quantitative) descriptions of belief configurations, but they fail to explain the epistemological trajectories and thus ways to qualitatively enhance the epistemological understanding.

The conceptual approach of Greene et al. (2008) provides last but not least a very first – not yet fully satisfying – three-dimensional hypothetical sketch of how genetic, domain specific and structural analysis of students’ thinking about knowledge in an ill-structured domain like the social studies may be theoretically modelled (compared to the hard sciences; see Fig. 1). The Greene-Torney Purta-Project thus attempts to fill an important gap in epistemic cognition research connecting both the dimensional and the positional/genetic aspects of personal epistemology in a domain specific perspective. Since there isn’t yet any empirical evidence for this assumption, that may help us to clarify levels and trajectories of domain beliefs, our own analysis takes this genetic-systematic-domain-analysis as a conceptual foundation for exploring inductively and comparatively the domain-specific character of epistemic configurations (and their association with certain teaching beliefs).

Fig. 1 Multidimensional Ontogenetic Model of Domain-Specific Epistemological Beliefs (Greene et al. 2008)

Age/Educational Level ^a	Epistemic and Ontological Cognitive Development Model							
	Ill-Structured Domains				Well-Structured Domains			
	Position	SC	JA	PJ	Position	SC	JA	PJ
4–12	Realism	Strong	Strong	Strong	Realism	Strong	Strong	Strong
12-early college	Dogmatism or	Weak	Strong	Weak	Realism	Strong	Strong	Strong
	Skepticism	Weak	Weak	Strong				
Middle to late college	Rationalism	Weak	Moderate	Moderate	Dogmatism or	Weak	Strong	Weak
					Skepticism	Weak	Weak	Strong
Postundergraduate education	Rationalism	Weak	Moderate	Moderate	Rationalism	Weak	Moderate	Moderate

Note: SC = Simple and Certain Knowledge dimension; JA = Justification by Authority dimension; PJ = Personal Justification dimension.

^aWe have used both age and educational level terms in this table given their predominance in the personal epistemology literature but acknowledge that they are not ideal, particularly because the latter are not inclusive of individuals who do not attend college.



2.4. Teacher Epistemological Beliefs in and Across Domains

Today in-service and pre-service teacher beliefs on teaching and learning a discipline are progressively investigated in an epistemological beliefs' perspective, since teacher effectiveness research has shown the vital impact of beliefs on classroom activities and learning outcomes (see introduction). The Bielefeld project on pre-service teachers' beliefs in the social studies domain attempts to show if and how certain domain specific epistemological beliefs (*beliefs about the content knowledge regarding the academic discipline and the school subject*) may be connected to beliefs about teaching and learning the school subject. At the outset it aims to inductively designate different types of pre-service teachers' epistemological beliefs typical for the social studies domain⁷ and explores then the potential connections to certain teaching and learning beliefs (using the metaphor analysis, see fig. 3). Several recent contributions in educational research point towards this line of reasoning clarifying the potential connections between epistemological beliefs and teaching beliefs in a domain specific perspective.

Basically Sinatra and Kardash (2004) state that pre-service teachers' beliefs about knowledge (beliefs about the complexity of knowledge mixed up with learning beliefs such as beliefs about speed of knowledge acquisition) predict the openness of teacher candidates to complex and constructivist perspectives on teaching and learning. Patrick and Pintrich (2001) as well as Brownlee (2001, 2006) in her newer research underline the necessity to destabilize the traditional notions of teaching and learning to make teacher education programs more effective. Fives and Buehl (2010) present a new quantitative research design (n=351) to uncover the pre-service teachers' conceptions about the knowledge they need for teaching and their beliefs about the nature of that knowledge as well as their beliefs about the origins of the ability to teach. They summarize that beliefs about these different facets of teacher knowledge and about teaching skills are "likely to be interrelated" (Ibid., 501). Yet they are unable to determine, if certain beliefs are most prevalent or influential on pre-service and practicing teachers' cognitions and behaviors (Ibid., 502).

However there is strong evidence that domain specific knowledge beliefs affect the teaching and learning beliefs, despite the somewhat contradictory relation between the manifest teaching practices, disciplinary content knowledge beliefs and the professed

teaching beliefs. Amongst others Olafson/Schraw report *blended beliefs* – defined as inconsistencies within the epistemological beliefs structure – since teachers "chose to blend beliefs from different world views in order to mix and match specific assumptions of these world views ... we suspect that a blended epistemological world view has more to do with naivety than reflective selection" (Olafson, Schraw 2006, 79). They endorse other researchers' stances such as Levitt's (2001) and White's (2000) who present similar findings. Nonetheless teachers may have relatively clear cut epistemic cognitions about academic knowledge domains, they may show tendencies to blur and/or align them to a lower (e.g. realistic/behaviorist) instructional standard. They pay tribute to the imagined softer school subjects' epistemological norm, see Olafson/Schraw referring to a science teaching example: "Alignment between beliefs and practices ... also illustrates how a traditional model of science instruction is consistent with a more naïve belief about knowledge" (Olafson, Schraw 2006, 81). These findings paradoxically confirm the assumption that epistemic cognitions about a domain and the domain specific teaching and learning beliefs are interrelated – be it in a joint "race to the bottom"-dynamic. This observation points to an important causality problem of belief research, since especially in-service teachers' disciplinary epistemic stances seem to be dependent on their pedagogical content knowledge beliefs and not vice versa. This confirms a newer analysis of Deborah Loewenberg, who calls for a further differentiation of Shulman's concept of pedagogical content knowledge as being pedagogical and disciplinary in a two-fold way (Loewenberg et al. 2008).

Insights about the interconnectedness of teaching beliefs and domain specific curricular beliefs are only occasional (see for the sciences: Van Driel et al. 2007). Thus analyses of domain specific beliefs about teaching and learning the social sciences in a narrower sense (not including history and geography) and their interconnections with domain beliefs about knowledge are still exceptional. Research perspectives are restricted to the analysis of disciplinary cultures and school (subject) cultures, that provoke that teachers sharing the same environment share the similar teaching beliefs and metaphors for teaching (see below, see Alger 2009 in her meta-analyses of several studies in the field). Kreber/Castelden (2009) examined the "disciplinary teaching styles" and their connection to epistemological understanding in university teaching using the Mezirow classification of teaching styles (Mezirow 1991). They draw the conclusion that faculty from soft fields show a greater variety of teaching methods, a greater variety in premise reflection and a greater involvement in communicative learning than faculty in hard disciplines (Kreber, Castelden 2009, 526). These findings would enhance a basic premise

7 In this context one should bear in mind that the term 'Social studies' labels an interdisciplinary school subject that is anchored in several German Länder school and teacher education systems with Sociology, Economy and Political Science as academic reference disciplines.



that teachers who are used to deal with epistemic uncertainty are more inclined to question themselves and their pedagogical practices being more student-centered and adopting constructivist teaching and learning stances without difficulty.

Even if this research report suggests that the epistemological analysis is still an emerging field of inquiry in teacher education research, the following tentative hypotheses on how teachers' epistemological beliefs may be related to teaching and learning beliefs in the social studies domain frame the following analysis. Since the research methods of the Bielefeld-project are purely qualitative, these assumptions shall not be 'tested', but they may provide a conceptual framework for grounding a first descriptive sketch of qualitative domain beliefs and their potential impact on teacher education and professionalization processes:

1. *Domain specific beliefs about social science knowledge exist.* At an advanced academic level they should have a tendency towards evaluativist stances. Therefore the facets of the epistemological beliefs concept, that are related to the ontological qualities of domain specific knowledge in a 'soft' field ("justification of knowledge", "certainty of knowledge" and "source of knowledge"), should show consistent selective belief configurations (this hypothetical position qualitatively condenses and thus replicates the domain-specific 'levels of epistemic cognition'-assumption reported in studies from Buehl, Alexander, 2005 et al.);
2. *Domain specific beliefs about schooled knowledge* should vary according to the degrees of sophistication of epistemological beliefs about (social) scientific knowledge (qualitative replication of the assumption that teachers with relativist positions with regard to the academic discipline tend to adopt relativist epistemological views about schooled knowledge, see Brownlee, Berthelsen, 2006; Chan, Elliott, 2004).
3. *Beliefs about teaching and learning should vary according to epistemic levels:* The more a personal domain epistemology is relativistic – the more constructivist the individual beliefs about teaching and learning; the more the epistemological beliefs are absolutistic – the more behavioristic the teaching beliefs (this hypothetical position replicates newer research results in epistemological beliefs such as those presented by Benedixen et al. 2010).

3. Metaphors as a Theory and a Method for Analyzing Beliefs and Deeply Rooted Conceptualizations about Teaching and Learning

Given the methodological limitations of the above mentioned approaches the Bielefeld project suggests to use metaphor analysis as a way to balance the quantitative belief research on teaching and learning.

The metaphor analysis thus complements our open ended questionnaire collecting data about the epistemological beliefs about knowledge for teaching (*beliefs about the pedagogical content knowledge as specialized content knowledge for teaching*) and about the disciplinary content knowledge (*beliefs about content knowledge/domain knowledge*)⁸

Qualitative educational researchers suggest that metaphor analysis is a unique heuristic tool for bringing implicit beliefs and tacit knowledge to awareness (Patchen, Crawford 2011). It is an instrument to circumvent the unlucky impact of ubiquitous "received ideas" discourses in the sphere of teacher education and pedagogy that are entirely disconnected from the reality of the teaching profession and from a faithful diagnosis of what future teachers actually really feel and think (Ibid.). This causes great harm because without a trustworthy knowledge base teacher educators cannot intervene effectively to promote a transformation of unproductive teaching beliefs and futile classroom practices. But there is a clear cut trade off: On the one hand our empirical findings will be of only explorative value and they are therefore not replicable. On the other hand a first "thick description" may stimulate future quantitative and qualitative research about the effects of epistemic beliefs in teaching and learning the social studies – and about suitable methods for diagnosing and offsetting fruitless attitudes.

How to define the term 'metaphor'? Generally speaking a metaphor is "any comparison that cannot be taken literally" (Bartel 1983, 3; Bowman 1998-1999, 1). Bowman states that a metaphor is "to be understood as a global term meaning a comparison between two unlike things which serves to enhance our understanding" (Ibid.). Metaphors facilitate the understanding of "relatively abstract or inherently unstructured concepts in terms of more accessible, concrete subject matter" (Lakoff 1994, 251), but they do not substitute one term for another as the antique theories of metaphor suggested (Aristotle, Poetics 21, 1457b9, 20-22).

Since the first wave of modern metaphor theory researchers like Black (1962) highlighted the argument that there is not substitution but interaction between two metaphoric ideas (*interaction theory*): Describing the use of metaphors, Black distinguishes between metaphorical focus (metaphorically used term) and framework. 'Source' and 'target' of a metaphor are thus irreversible, as metaphors express "an asymmetric process of interaction between a structure and data" (Indurkha 2006, 140). Finally a metaphor enhances the understanding of the cognitive roots of

⁸ See for the project-documentation: Annex 1. Translation of the open ended questionnaire used in the BIISED-project; Annex 2. Instruction Metaphor-Analysis.



a semantic field: It is not just a 'figure of speech' but a 'figure of thought'. But then again there are indeed exclusively linguistic metaphors that have lost their original conceptual resonance in peoples' minds, the so called "dead" metaphors (Traugott 1985).

Basically the modern cognitivist understanding of metaphors is grounded on the assumption that metaphors are conceptual in nature and inherent to the human mind. Metaphor analysis methodologically reflects the "interpretative turn" in educational studies. Metaphors are seen as thick or rich summaries of interpretative frameworks that project characteristics of one structured experience to another. "Conceptual metaphors" therefore motivate a system of associated metaphorical terms that appear on the "surface" of language. They are symbolic frames ("schemes") that provide an inferential base for understanding more discrete attitudes and behavior and thus capture an underlying world view or frame. They thus represent cognitive frames of concepts about social realities. Doing so they usually take a more abstract concept as *target* and a more concrete or physical concept as their *source*. Example: Teaching and learning is like walking or travelling. The "source" consists of an image scheme that is based on a representation of a real life experience: E.g. making a way from a starting point to a goal line. "Metaphors highlight ... certain aspects of our experience [...] metaphors may create realities for us, especially social realities" (Lakoff Johnson 1980, 156). Metaphors may thus as well hide certain aspects of our social reality and create coherence with regard to the representation of social facts: A representation of learning processes as journey excludes other representations such as the container metaphors about learning (see below "stamp album").

Since the early 1990s it has been evidenced that conceptual metaphors are not only based on bodily experience but that even our most fundamental ideas (time, causation, morality etc.) are almost completely composed of systems of conceptual metaphors (Johnson, Lakoff 2003, 249). Even the most basic understanding of morality seems to be grounded in conceptual metaphors. Lakoff and Johnson point out that there are about "two dozen metaphors that arise spontaneously out of common, everyday experience in cultures around the world" (Lakoff, Johnson 1999, Chapter 15). Theorists therefore assume that individuals also use metaphors as filters to crystallize core ideas or to reduce information in smaller adaptable packages (Scott Mio 1996, 130). This may especially apply to the information and actuality driven domain of social sciences. In addition metaphors are capable of linking the rational and the non-rational, implying cognitive and emotive elements (Jamieson 1985, 73; Scott Mio 1996, 133), which are important characteristics of the social, political and economic sphere and its conceptual frames.

During the past decades metaphor analysis was largely used for applied teacher education purposes. Afterwards existing metaphor collections about teaching constituted an important starting point for educational researchers to study the beliefs that future teachers bring with them to teacher preparation programs. Teacher beliefs research has hugely benefited from the progress made in this domain and metaphors about teaching and learning became one of the most prominent research fields of qualitative research with metaphors. The works of Martinez (Martinez et al 2001), Leavy (Leavy et al 2007), Saban (2007), Mahlios (2010) and others highlight the methodical advantages of metaphor analysis of teaching and learning beliefs. As Mahlios states resuming existing research: "Preservice teacher candidates have definite beliefs about pupils and classrooms, as well as, distinct images of themselves as teachers" (Mahlios 2010, 50). Cortazzi and Jin (1999) find 236 metaphors of teaching distillate 10 comprehensive metaphorical leitmotifs that guide pedagogical imaginations of future teachers. Sfar (1998) constructs metaphorical maps and clusters "acquisition metaphors" vs. "participation metaphors". An influential German position suggests a classification of metaphors (Schubert 1986) differentiating three important root metaphors for teaching and learning: the 'production', 'journey' and 'growth'.

A basic classification for organizing metaphors has been put forward by Martinez et al. (2001), which since then channeled numerous metaphor analysis an initial classification scheme:

Martinez et al. organize metaphors as falling into a three-dimensional categorical scheme- following a position from educational psychology (Greeno et al. 1997) they do not embrace a "grounded theory"-approach but operationalize learning theory clustering behaviorist/empiricist, constructivist and situated/social-cognitivist perspectives. They base their assumptions on pertinent research in educational pedagogy (Dubbercke et al. 2008) and on the subsequent metaphor analysis using very similar organizing principles (see Alger 2009). The following paragraph paraphrases the pertinent categorical clusters (see overviews Alger 2009, 745, and Aguado et al. 2009; see categories Martinez et al. 2001, 967f.):

Metaphors that fall into the *teacher centered category* view of social studies teaching. Teaching is knowledge transmission, (including extremely behavioristic stances such as "teaching is like tuning an instrument" Martinez et al. 2001 Ibid. 970); but also education ('guiding', 'nurturing' and 'molding', Alger 2009, 745). Teacher has control over the classroom processes; there is no actual teacher-student interaction.

Constructivist metaphors fall into a *student centered category*: They conceive knowledge acquisition as a constructive process: Students actively build their own



perspectives by interpreting their experiences. The teacher is a facilitator promoting highly self-regulated learning processes, anchor: "Learning is like setting the bricks of a house. The student is the mason and the house at the same time. S/he is also the owner of the house. The teacher is the site foreman." (Ibid. 971) The teacher is seen as a person, who just provides a tool box, students have more or less full control over their learning process.

Situated/socio-cognitive metaphors see knowledge as a social, collective product of interaction between individuals who negotiate identities and understandings. Essentially, this assertion points to knowledge as socially produced, but different from purely constructivist stances: "does not see this as compromising the possibility of rational objectivity in knowledge." (see Moore 2007, 29) Anchor: "A teacher is like a tourist guide who negotiates a route with the tourists." (Ibid. 972). Students and teachers share control over the learning process, teachers encourage the adoption of multiple viewpoints, negotiation of meanings amongst the members of a community of learners (Alger 2009, 745).

It is important to note that most of the works based on the above cited analyses used metaphors as a tool for diagnosing concepts in a general pedagogy perspective; only few contributions identified subject specific perspectives (school subject "cultures" and specific disciplinary contexts) furthering specific beliefs towards teaching and learning. The present analysis aims to distillate domain specific teaching beliefs oriented towards social studies education programs.

4. "Teaching Social Studies Reminds Me of Collecting Stamps...": Using Metaphor Analysis for Exploring Student Teachers' Beliefs in Social Studies Education (the BiSEd Project at the University of Bielefeld)

The Bielefeld-Study on "Epistemological Beliefs and teaching Beliefs in the social studies" took place at the department of sociology of the University of Bielefeld.

In advance a 'large n'- analysis of students' epistemological beliefs using Schraw's Epistemological Beliefs Inventory had been done in the context of an empirical Master-thesis project investigating the epistemological beliefs of 168 social sciences students at the Bielefeld faculty (see for a thorough research report: Matthias 2010). At the aggregate level this study had yielded significant effects with two epistemological dimensions when comparing freshmen, sophomore and seniors in social studies teacher education: It was established that pre-service students tended to believe more in the simplicity of knowledge at the beginning of their university career than advanced teacher students (junior and senior students, Ibid.). But the general picture was quite consistent with the above mentioned theories of domain beliefs: Most of the

students hold "typical" domain specific views on humanities' knowledge being oriented towards a more relativistic epistemological position. Furthermore, freshmen have been found to have a strong belief in innate ability while senior students tended to believe that the ability to learn can be acquired. The comparison of students studying a science subsidiary with students exclusively enrolled in social sciences' subjects revealed that "hard" science oriented students believed significantly more in innate ability than students studying topics in the field of humanities (Ibid.). A methodological conclusion drawn from this analysis was that at this point it was very difficult to substantiate the specific character and content structure of the domain beliefs and attitudes when using domain general instruments like EBI. It seemed that for teacher education as well as for research purposes it was necessary to learn more about the consistency of the different levels of sophistication and the possible effects of epistemological beliefs on prospective teaching and learning attitudes.

As a result we decided to choose a more qualitative approach for the Bielefeld-Study, although data gathering and evaluation is challenging when research aims at comparing diversity in a not only small but moderate number of cases. We agreed then to create case sets to assess typical configurations, which will be administered (using the qualitative data analysis software MAXQDA) for constructing a comparative case analysis following the Configuration Frequency Analysis CFA (the presentation of this part of the analysis is beyond the scope of the present paper). Due to organizational restrictions the project had to be organized using professional accesses to a group of students the author worked with on a weekly base during the winter term 2010/2011. The instruction consisted of two separate classes, 45 hours/15 weeks in total, 15 of which were framed as a classical lecture and 30 hours as teaching sessions featuring exercises, discussions, games/experiments and student presentations. Answering the paper and pencil questionnaires was part of the ECTS-teaching portfolio.⁹ Students' majority was enrolled in a BA teaching cycle, most of them in sixth semester. Only very few students had first teaching experiences in the social studies domain, more than half of the students intended to be a teacher at German Gymnasium/Gesamtschule. The socio-demographic structure of the group was quite representative for the clientele of the Bielefeld polyvalent study cycle in social studies education, so that at this level most of the students were novices with regard to social education didactics, had a good academic content knowledge base and fewer teaching and school experience.

⁹ Anonymity and student data integrity were observed since the administration of data was carried out by a third person not involved in this teacher educator-student-relationship.



Fig. 2 Overview of the Survey

N =	61
Gender:	
Male	37
Female	24
Average Age	24,3
Average number of semesters at university	6,9 (SD=3,30)
Average number of semesters in social sciences	4,22 (SD=2,10)
Section of Studies	
BA GHR	18
BA GY/GE	35
MA GHR	3
MA GY/GE	4
Majors and Minors	
BA Subsidiary Social Studies	24
BA Major Social Studies	27
New Subject MA	4
Third Subject	5
Teaching Practice Social Sciences	4
General Teaching experiences	42

After having split up the basic group in two sub-groups a kind of 'intervention study'-research design could be established: The entire group participated at the lecture while only half of the students participated at the author's teaching sessions that highlighted metacognition and accompanying reflection tasks about own learning processes, about preconceptions on social studies teachers and students and more. All activities intended to enhance self-regulation and motivation in order to reflect on the social studies education program. The control group participated at a conventional teaching format on the same topic, the basics of the social studies education didactics.

In order to gain a multi-dimensional assessment about what an individual pre-service teacher in social studies education beliefs about teaching and learning as well as on his epistemological stances with regard to academic knowledge and schooled knowledge, a set of different paper and pencil methods were used combining different qualitative research tools.

1. A questionnaire with open ended questions aimed at assessing (see Annex 1):
 - epistemological beliefs about social science in general (beliefs about social science content knowledge);
 - epistemological beliefs about social science schooled knowledge (beliefs about specialized content knowledge for teaching);
 - the perception of the qualities of a teacher, which are essential for being a "good" social studies teacher (pedagogical knowledge of content and teaching).
2. Metaphors to assess pre-service teachers' beliefs about teaching and learning social studies (see Annex 2, domain specific teaching and learning beliefs);
3. A questionnaire with open-ended questions assessing prior school experiences (as students) about striking school experiences during a social sciences class: Description and analysis of a "critical" situation in a social sciences class which the students have experienced during their school career or - if they cannot remember - an artificially constructed "problematic" situation; for the assessment of preconceptions and biographical experiences in the domain of social sciences (see for a methodological discussion of this research tool: Fischler 2001);
4. we combined then these assessment tools with a diagnosis using a concept map (Ritchhart et al. 2009), asking how the social sciences classroom knowledge materializes through learning processes (beliefs about learning the social sciences);
5. finally we explored some socio-demographic basic data like age, gender and enrollment and tested the development of declarative pedagogical content knowledge of students enrolled in the author's study group.

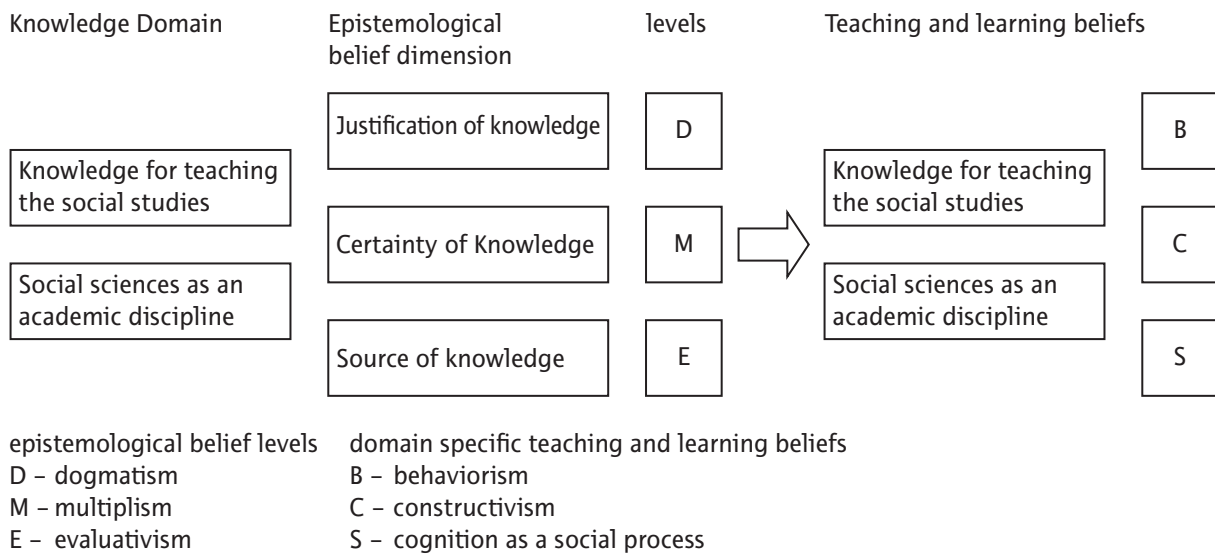
The assessment took place twice, at the beginning and at the end of the winter-term.¹⁰

The first step of the analysis (uniquely presented in this paper) consisted of an exploration of epistemic beliefs and the characterization of descriptive anchors for confining different levels of dogmatism-multipism-evaluativism of teacher students with regard to the social science scientific knowledge and schooled knowledge. We focused on the dimensions such as asserted by Hofer et al. certainty of knowledge, source of knowledge and justification of knowledge (see for the substantiation of beliefs' facets 2.2).

¹⁰ This research design will last but not least allow assessing the learning dynamics of students exemplifying different types of epistemological and teaching beliefs structures at the individual level in different university teaching contexts (the final results of the entire project will be presented in 2012).



Fig. 3 Model for Analysing the Association of Domain Specific Epistemological Beliefs and Teaching and Learning Beliefs



The second step consisted of analyzing the innate beliefs on teaching and learning in the social studies domain. At this point the first classification process was oriented on the Martinez et al. approach as a basis scheme for a first sorting of metaphors and on the knowledge beliefs dimensions following the scheme (as presented in Chap. 2.2, p. 55) for a first categorization of teaching and learning beliefs. After that, even though I wanted to explore the potential relations between epistemological beliefs and beliefs about teaching and learning I effected a case selection on the dependent variable: What are the eminent metaphors characterizing different groups of students at different levels of their university career? It was quite surprising to see – at any educational level – a vast amount of metaphors showing a relatively pure orientation on behaviorist beliefs about teaching and learning. This was completely contra-intuitive and challenged the first assumption, that our students should be constructivists oriented, given the relativistic epistemological beliefs found when their epistemological beliefs – admittedly based on a different students’ population – were first analyzed in 2010 by Stephanie Matthias (see above).

It seemed to be adequate then to continue theoretically sampling the 61 instances to find anchors for

very typical and very atypical patterns of relations between epistemological beliefs and teaching and learning beliefs in social studies education. The classification efforts enhanced the ordering and clustering of cases presenting specific features and combinations of categories relevant to a verification of the initial theoretical assumptions. Following Silverman (2006: 308) I focused on special features: 1) choosing cases in terms of our initial assumptions; 2) choosing “deviant” cases; 3) changing the scope of the present set, including *all* dimensions, I initially wanted to consider at the end of the research (preconceptions and crucial school experiences as well as concept maps on knowledge acquisition in social studies) process. Presenting the entire procedure and results is definitely beyond the scope of this article that focused on domain beliefs’ theory and on the pertinent methods for diagnosing the teaching and learning beliefs. I will therefore just present two configurations as emblematic examples for a freshman (“Julia”) and a senior student (“Alexander”). Figure 4 displays selected core features of the two emblematic cases: Due to space restrictions I focus on a few anchors and on the analysis of the teaching beliefs gathered round the metaphors “stamp album” (senior student”) and “gardener” (freshman).

Fig. 4 Alexander (Advanced Student): “Teaching Social Studies Reminds Me of Collecting Stamps...” (The Stamp Collection Metaphor)

	Senior Student (Alexander)	Freshman (Julia)
I Epistemological beliefs		
I.1 Academic knowledge	<p><i>“Social science knowledge comprises topical issues and societal phenomena and echoes theses and models of classical sociologists like Max Weber or Niklas Luhmann, as their knowledge is of enduring and universal relevance.”</i></p>	<p><i>“Social science knowledge has a strong practical orientation (e.g. everybody has to deal with economics in one’s life course). It is marked by topicality and constant change (e.g. media constantly update our knowledge, topics like politicians and elections can change when a politician resigns from office) [...] Knowledge emerges from the daily confrontation with topics reflecting social sciences issues in the media, within the family, at school etc.”</i></p>
Anchors		
Source	<p><i>_ knowledge is canonical and uncontroversial; authorities have the right answers.</i></p>	<p><i>_own experience echoed in the media: a scientific comprehension is not yet anchored</i></p>
Justification	<p><i>_ there is a need to justify knowledge: using theories is a decent way to get valuable answers</i></p>	<p><i>_knowledge is experience, not reasoning; there is no need to justify knowledge</i></p>
Certainty/Structure	<p><i>_social science knowledge is structured, stable and universal: social reality is subordinate to scientific perspectives</i></p>	<p><i>_social science knowledge is malleable, changes constantly, definition from ones owns perspectives, media relate reality</i></p>
Categorization	<p><i>dogmatism: social science knowledge is fixed knowledge</i></p>	<p><i>realism: knowledge is a photographic picture of reality, no epistemic awareness</i></p>
I.2 Knowledge for teaching	<p><i>“Social studies teacher knowledge originates from personal experience and from experiences related by others. Moreover, it originates from academic knowledge which is taught at the university.”</i></p>	<p><i>“Studies in social sciences, internships, own learning by means of newspapers, news and specialist literature. A sound domain knowledge (e.g. theories etc.). Permanent teacher training to be able to discuss current issues. Essentials in didactics, so that a teacher is able to transmit knowledge.</i></p>
Anchors		
Source	<p><i>_ restricted autonomy: own experience plays a role, experiences of others and from books are more valuable</i></p>	<p><i>_ training and knowledge acquisition, valuable academic sources and media; own experience as second order experience/observation (internship)</i></p>
Justification	<p><i>_ knowledge is experience and academic education</i></p>	<p><i>_ knowledge is above all skills, legitimized by a professional function: transmission</i></p>
Certainty/Structure	<p><i>_ experience and education remain unrelated, no specific content knowledge or pedagogical knowledge for teaching</i></p>	<p><i>_content knowledge for teaching is based on actuality; teaching knowledge is based on learning ‘theories’ and on training</i></p>
II Teaching beliefs		
	<p><i>“stamp album” – container metaphor</i></p>	<p><i>“garden” – growth metaphor</i></p>
II.1 Teaching beliefs	<p><i>teacher – “philatelist” student – “stamp collector”</i></p>	<p><i>teacher – “gardener” student – “plant”</i></p>
Anchors	<p><i>“Learning and teaching is like a stamp collection, it is never complete and must always be updated [...]. The teacher presents the “Michel” catalogue – this catalogue contains almost all the stamps which have ever been published – to the students so that they get an impression of their range of motives and diversity. [...]The teacher tells the students which are the fundamentals of philately by presenting the stamps which should be part of everybody’s collection. Based on this instruction, each student develops his or her own interest in specific stamps; in the course of their collector’s career.”</i></p>	<p><i>“Students in a class can be compared with a garden of flowers. The students represent the bulbs which need care and attention in order to become flowers. The teacher is the gardener who takes care of the flowers and gives them all they need for existing. But the environment influences the students, namely their family, their peers (for the flowers the sun, wind) [...]”.</i></p>
Categorization	<p><i>teacher centered metaphor: teaching is helping to accumulate, to value and to display knowledge; learners have to acknowledge the value of knowledge</i></p>	<p><i>extremely teacher centered metaphor: getting control/influence and caring play major roles, knowledge and learning are of minor importance</i></p>

The first case represents a freshman, Julia. Julia is enrolled into the second year of the social studies teacher education program. She has thus made first steps into the academic world studying the “disciplines” (sociology, economy and political science) and is now entering the genuine teacher education program, namely the social studies didactics. Interestingly, she has not yet adopted any metacognitive position with regard to her most recent educational experiences. It is curious to note that there isn’t any cognitive anchor reflecting a prior initial propaedeutic science work either, which would be typical for the higher secondary education in Germany (‘Gymnasium’). Julia focuses entirely on her own “real world” first and second hand (‘media-related’) experiences to delineate the field of social science and its related knowledge domains. In her view people ‘know’ economics because they have to take economic decisions through the course of their life. For her ‘economic learning’ matches ‘economic socialization’ and has less to do with academic knowledge acquisition. The academic as well as the educational dimension are strikingly absent in her first vision of knowledge related to the socio-economic and the political sphere. Therefore the metacognitive level of reasoning and cognitive processing are not fully activated. There is no epistemic awareness vis-à-vis the university teaching and learning: Since her knowledge emerges from current day-to-day experiences and media evidence, she has a fairly unstable/multiplist vision of the sources and the structure/certainty of social science knowledge. Since these qualitatively different kinds of knowledge-sources remain strictly implicit, a core dimension for epistemic reflection (“justification of knowledge”) is thus deficient. The first academic experience is not at all part of her reflection about the different kinds of “knowledge” essential for being a social studies teacher. This is especially true for the epistemological beliefs’ dimensions with regard to the disciplines and to schooled knowledge. Concerning the pedagogical teacher knowledge dimensions her perspective is uniquely focused on the practical implications of knowledge production (procedural knowledge for teaching, theories helping to develop teaching skills for transmitting knowledge). Hence, the pedagogical knowledge facets reverberate the academic context of knowledge acquisition, whether the disciplinary content knowledge acquired since school is absent or overlaps with day-to-day experience in the field. Do these not yet fully developed epistemological beliefs link to specific teaching and learning beliefs? For illustrating her perspective on teaching and learning the social studies Julia activates the “gardener”-metaphor, which counts among the teacher-centered metaphors. The “gardener”-metaphor points to the nurturing and caring aspects of the teaching profession. It develops around the vision of a benign educator, who emotionally takes care of his stu-

dents and tends to develop the “whole person”. The learner perspectives as well as the teacher-learner-interaction are blurred since the metaphor implies a great deal of pedagogic control over the student and his development: The metaphor entails the passivity of learners, who cannot move, but only grow. They are static and in a way have to surrender to the teacher-gardener. It is no coincidence that the domain specific dimension is completely absent in the metaphorical vision of Julia. Leaving out the domain learning and teaching, the gardener metaphor mirrors the pedagogical impetus of new pre-service teachers with very few academic experiences. This typical vision emulates the lacking epistemic awareness of Julia, who is not yet able to reflect her academic educational experiences metacognitively. Basically she is not yet “arrived” at the university while she is quite sure of her professional choices and orientations. The gardener metaphor generally contains no domain specific vision of teaching and learning – and therefore no epistemic stances –, because the instructional dimensions of the teaching profession aren’t dominant facets of this metaphor. Finally Julia’s vision of the teaching profession is a stance that is typical for a beginner at a teacher education program (female teacher students frequently choose the gardener metaphor, see further examples Alger 2009).

The second case, the ‘Alexander’-case, is chosen for being emblematic for an advanced student (fourth year of teacher education program). As Alexander has already completed a great part of his academic education studying the ‘disciplines’, he may serve as an emblematic case for being an advanced ‘academic’ on his way to being a professional teacher. Like other advanced students participating at our analysis Alexander – answering the open questionnaire – seemed to have reached a higher level of epistemological beliefs. This seems to be true not only with regard to the academic discipline (domain specific content knowledge), but above all with regard to domain specific schooled knowledge and perceptions about what makes a “good social studies teacher” (not in fig. 4). Compared to most of the freshmen participating at our study Alexander displays a consistently higher level of epistemic awareness: He is able to stress a clear cut distinction between different knowledge types, namely between schooled knowledge and scientific knowledge. He is as well able to differentiate specific characteristics of schooled knowledge, because he puts an accent on the interdisciplinary and applied character of knowledge when it is constructed in a perspective of teaching and learning objectives typical for the social studies. With regard to the purely academic knowledge he is willing and able to consider the role of theory and of methods for the creation of quite diverse/multiple perspectives on social, political and economic realities. But finally it is not fully comprehensible, how much he would be able to adopt evaluati-



vist attitudes, when conflicting assessments typical for the unstructured social studies domain are at stake. He seems to be capable to replicate different theoretical positions, but in a way “authorities” (like the above cited Luhmann and Weber) have answers, which are difficult to assess. What about Alexander’s teaching and learning beliefs as mirrored by his metaphorical narrative? The chosen metaphor strikingly reflects the very last aspect of Alexander’s epistemological stances. Alexander chooses a container metaphor, “the stamp album”, which equally counts among the teacher-centered metaphors. The metaphor describes teaching and learning as a process of knowledge accumulation and storage. The teacher enhances the accumulation process, first being an instructor, and then being a supervisor of students’ collecting activities. Basically the album-metaphor points to the fact, that knowledge may be ranked, categorized and displayed to third persons. In Alexander’s metaphor the teacher is central to this process as his evaluative stances are central to the decision about knowledge being valuable or not. The metaphor in a way reflects the authoritative vision of knowledge conveyed by authorities like Weber and Luhmann that Alexander describes in his epistemological beliefs’ assessment. There is thus a latent contradiction between his statement that schooled knowledge should be of “practical” value in a student’s perspective, and at the same time – see his metaphorical statements – underlining the role of the teacher as a gate keeper who decides about what students learn. On the other hand the open questionnaire confirms a special feature of Alexander’s pattern of beliefs (not in fig. 4): Namely that social science knowledge is general knowledge that has a distinctive character with regard to the social value of education in general (knowledge as a precious stamp album that can be exhibited and reveals the owner). The Alexander case sheds a fairly refined light on the difficulties to connect advanced epistemological beliefs about social scientific content knowledge with the pedagogical content knowledge perspective: At a declarative level Alexander would be able to formulate positions that a teacher educator may even categorize as being more or less satisfying in view of typical standards in social studies teacher education preparation classes. Consequently Alexander’s deeply rooted beliefs would remain unchallenged and therefore unchanged. This complex picture, which has lots of aspects not displayed in Fig. 4¹¹, highlights that the reconstruction of a pattern of beliefs including metaphors’ analysis allows complex conceptualizations that illuminates aspects, which otherwise would have remained undetected.

11 E.g. Alexander’s impressively negative school experiences and a concept map about learning the social studies, which confirms the distinction between academic and schooled knowledge that enhances social reputation and social/political real-world knowledge.

5. Conclusions

Especially the Alexander case (like several other case vignettes) appears to be a strikingly convincing example with regard to the methodological aspects of diagnosing beliefs and conceptual thinking using metaphor analysis. It displays a quite typical pattern which fully ratifies the methodological advantages of metaphor analysis. It would certainly be an exaggeration to proclaim a “linguistic turn” in qualitative educational research. But as the weaknesses of quantitative empirical research on beliefs and attitudes were obvious and difficult to circumvent, the metaphor analysis seems to be a promising step to complement existing approaches and to gather qualitatively deeper insights into the conceptual and/or domain specific pedagogical thinking of teachers (and learners?). There is certainly a tradeoff between the possibility to get a ‘thick’ description of configurations of a medium number of cases and the call for more quantitative analyses to assess the hard casualty assumptions related to teacher beliefs research and epistemological beliefs research in general. Figure 5 displays core methodological advantages and shortcomings with regard to the present approach to teacher education research in the social studies domain.

Fig. 5 Strengths and Weaknesses of Metaphor Analysis as a Tool for Diagnosing Beliefs on Teaching and Learning in Social Studies Education

Strengths	Weaknesses
Research outcomes of metaphor analysis are ?thicker? and ?truer? than those resulting from questionnaires. It is easier to 'lie' when filling out a questionnaire, above all in contexts, where participants are themselves more or less experts in empirical social research.	Data handling is a problem. Further methodological research is useful and may be unavoidable: Good theoretical sampling is a premise.
Research results are open to debate and to didactical reconstruction; the participatory research perspective is contained within metaphors' research as it builds bridges between theory and practice.	Research is not replicable; results will always be exposed to severe methodological critiques seen the substantial impact of situational factors within different research settings.
Deeply rooted beliefs can be made visible, that constitute archetypical representations of professional thinking: The contribution to professionalization research is useful even in view of future large n-analyses.	Metaphors are a spotlight on conceptual frames and for that reason may filter other important elements that would be equally important.
Metaphors can build bridges between implicit and explicit knowledge.	There are too many existing metaphors, above all in the field of teaching and learning, which makes it difficult to discriminate diverse categories and to distinguish general beliefs about teaching and learning from domain specific beliefs.



In a theoretical perspective it is striking to note and a major theoretical challenge, that in most cases the metaphor analysis (the teaching and learning beliefs assertions) and the epistemological assertions are consistent: In both cases presented in this paper, the students' metaphorical assessments reflect very important aspects of their epistemological beliefs. In the second case the beliefs were clearly domain specific, in the first case, there was a distinctive pattern of puzzling teaching and learning beliefs being extremely domain general. The metaphor analysis helped in both cases to display special belief facets that point to a deeply rooted problematic that is mirrored in the epistemic cognitions and as well as at the level of metacognitive awareness of the students, the senior and the freshman. The framework for analysis

presented in fig. 3 and the methodological operationalization using the metaphor analysis seem therefore to be a promising approach to illuminate the effects of epistemic cognitions on the beliefs about teaching and learning in the social studies domain. The most basic assertions about the domain beliefs and the interconnectedness of disciplinary epistemological beliefs and beliefs about schooled knowledge/knowledge for teaching seem to be at least very plausibly interconnected. Epistemological beliefs and teaching and learning beliefs have distinctive features that vary according to other aspects as well: First insights into the pre-service teachers' preconceptions and prior school experiences give clues that this line of research will constitute an especially promising branch of future research in the social science domain.

6. Annexes and References

Annex 1

Beliefs About Content Knowledge (Domain Knowledge) and About Knowledge for Teaching (Pedagogical Content Knowledge)

Instrument: Open Ended Questionnaire

1. *What are the characteristics of knowledge in social sciences? Please give examples illustrating your view.*
2. *How do you think develops knowledge in social sciences?*
3. *What kind of knowledge do you need as a teacher for the school subject "social studies"?*
4. *How does this kind of teacher knowledge develop for teaching the "social studies"?*
5. *Which qualities do you think should a social studies teacher have?*

Annex 2

Beliefs About Teaching and Learning the Social Studies

Instrument: Metaphor Analysis

Please create a short metaphor story which expresses your perspective on teaching and learning in the school subject „social studies“. Your description should be as detailed as possible. The following example is supposed to demonstrate how such a metaphor could look like:

“A teacher is like a candle. He burns himself out in order to show the way forward to his students...”

“Teaching and learning the social studies is like building sandcastles on the beach. The teacher represents the ocean and its waves, while the students decide themselves the distance of their sandcastles towards the ocean.”

You should take into account the following aspects when constructing your metaphor:

- a. Which roles do you attribute to the figures/characters of your metaphor representing the main actors at school in your metaphor (teachers, students, etc.)? Who is very active? What is the metaphorical relationship between the subject matter and the actors?
- b. What kind of tasks do you associate with the attribution of the roles (in a metaphorical sense)?
- c. Which effects does the behavior of the actors have?
- d. What is the possible impact arising from these effects?
- e. Which role does the environment of the students play in your metaphor (parents, peers etc.)?
- f. What kind of disturbances do you expect and how do the figures of your metaphor react?

References

- Adler, Susan. 2008. The education of social studies teachers. In: Levstik, Linda S.; Tyson, Cynthia A., eds. *Handbook of Research in Social Studies Education*. New York: Routledge, 329–352.
- Alexander, Patricia A. 1992. Domain knowledge: Evolving themes and emerging concerns. In: *Educational Psychologist*, Vol. 27, 33–51.
- Alexander, Patricia A. 2006. What would Dewey say? Channeling Dewey on the issue of the specificity of epistemic beliefs. In: *Educational Psychology Review*, Vol. 18, 55–65.
- Alger, Christianna L. 2009. Secondary teachers' conceptual metaphors of teaching and learning: Changes over the career span. In: *Teaching and Teacher Education*, Vol. 25, 743–751.
- Bartel, Roland. 1983. *Metaphors and Symbols: Forays into Language*. National Council of Teachers of English, Urbana, IL.
- Baumert, Jürgen; Kunter, Mareike. 2006. Stichwort: Professionelle Kompetenz von Lehrkräften [Keyword: Professional Competencies of Teachers]. In: *Zeitschrift für Erziehungswissenschaft*, Vol. 9, 469–520.
- Baxter-Magolda, Marcia B. 2002. Epistemological reflection: The evolution of epistemological assumptions from age 18 to 30. In: Hofer, Barbara K.; Pintrich, Paul R., eds. *Personal epistemology. The psychology of beliefs about knowledge and knowing*. Mahwah, NJ: Erlbaum, 89–102.
- Belenky, Mary Field. 1986. *Women's ways of knowing. The development of self, voice, and mind*. New York: Basic Books.
- Bendixen, Lisa D. 2002. A process model of epistemic belief change. In: Hofer, Barbara K.; Pintrich, Paul R., eds. *Personal epistemology. The psychology of beliefs about knowledge and knowing*. Mahwah, NJ: Erlbaum, 191–208.
- Bendixen, Lisa D.; Feucht, Florian C., eds. 2010. *Personal Epistemology in the Classroom: Theory, Research, and Implications for Practice*. Cambridge: Cambridge University Press.
- Besand, Anja. 2006. „Wir sagen nicht mehr wo die Bösen sitzen“ – Oder die Frage: Was will die neue Generation von Fachlehrerinnen und Fachlehrern in der politischen Bildung eigentlich? [We Do Not Point to The Good and The Bad Anymore: What Are the Underlying Intentions of the New Generation of Civic Education Teachers?]. In: *Politisches Lernen*, No. 3/4, 76–81.
- Biglan, Anthony. 1971. *Relationships Between the Characteristics of Academic Tasks and the Structure and Output of University Departments*. Seattle: Washington University.
- Black, Max. 1962. *Models and Metaphors*. Ithaca, NY: Cornell University Press.
- Bowman, Mary Ann (1998-1999) *Metaphors we teach by: Understanding ourselves as teachers and learners*. In: *OTEI Class Action*, Vol. 1, No.4, 1–2.
- Blömeke, Sigrid, ed. 2008. *Professionelle Kompetenz angehender Lehrerinnen und Lehrer. [The Professional Competencies of Preservice Teachers]*. Münster, New York, München, Berlin: Waxmann.
- Bromme, Rainer; Pieschl, Stephanie; Stahl, Elmar. 2010. Epistemological beliefs are standards for adaptive learning: a functional theory about epistemological beliefs and metacognition. In: *Metacognition Learning*, Vol. 5, No. 1, 7–26.
- Brownlee, Joanne; Berthelsen, Donna 2006. Personal epistemology and relational pedagogy in early childhood teacher education programs. In: *Early Years: An International Journal of Research and Development*, Vol. 26, No. 1, 17–29.
- Brownlee, Joanne. 2004. An investigation of teacher education students' epistemological beliefs: Developing a relational model of teaching. In: *Research in Education*, Vol. 72, 1–18.
- Brunner, Martin. 2006. Die professionelle Kompetenz von Mathematiklehrkräften: Konzeptualisierung, Erfassung und Bedeutung für den Unterricht [The Professional Competencies of Math Teachers: Conceptualisation, Diagnosis and Impact on Classroom Activities]. In: Prenzel, Manfred, ed. *Untersuchungen zur Bildungsqualität von Schule. Abschlussbericht des DFG-Schwerpunktprogramms*. Münster: Waxmann, 54–82.
- Buehl, Michelle M.; Alexander, Patricia A. 2001. Beliefs about academic knowledge. In: *Educational Psychology Review*, Vol. 13, No. 4, 385–418.
- Calderhead, James. 1996. Teachers: Beliefs and knowledge. In: Berliner, David C. ; Calfee, R.C., eds. *Handbook of educational psychology*. New York: Macmillan, 709–725.
- Chi, Marlene T. H. 1981. *Expertise in Problem Solving*. University of Pittsburgh: Learning Research and Development Center.
- Cortazzi, Martin; Jin, Lixian. 1999. Bridges to learning: metaphors of teaching, learning and language. In: Cameron, Lynn; Low, Graham, eds. *Researching and Applying Metaphor*. Cambridge: Cambridge University Press, 149–176.



- Dann, Hanns-Dietrich 1989. Subjektive Theorien als Basis erfolgreichen Handelns von Lehrkräften [Personal Theories as a Prerequisite to Successful Teaching Practice]. In: Beiträge zur Lehrerbildung, Vol. 7, No. 2, 247–254.
- Dewey, John. 1933. How we think. Boston: D. C. Heath.
- Dubberke, Tamar; Kunter, Mareike, McElvany, Nele, Brunner, Martin, Baumert, Jürgen. 2008. Lerntheoretische Überzeugungen von Mathematiklehrkräften: Einflüsse auf die Unterrichtsgestaltung und den Lernerfolg von Schülerinnen und Schülern. Zeitschrift für Pädagogische Psychologie, Vol. 22, No. 3–4, 193–206.
- Fischler, Helmut 2001. Verfahren zur Erfassung von Lehrervorstellungen zum Lehren und Lernen in den Naturwissenschaften [Methods for Capturing Teacher Beliefs about Teaching and Learning the Sciences]. In: Zeitschrift für Didaktik der Naturwissenschaften, Vol. 7, 105–120.
- Fives, Helenrose; Buehl, Michelle M. 2010. Teachers' Articulation of Beliefs About Teaching Knowledge: Conceptualizing a Belief Framework. In: Bendixen, Lisa D.; Feucht, Florian C., eds. Personal Epistemology in the Classroom: Theory, Research, and Implications for Practice. Cambridge: Cambridge University Press.
- Flavell, John H. 1979. Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. In: American Psychologist, Vol. 34, 906–911.
- Garner, Ruth; Alexander, Patricia, Hg. 1994. Beliefs about text and instruction with text. Hillsdale, New Jersey: Lawrence Erlbaum.
- Greene, Jeffrey; Azevedo, Richard; Torney-Purta, Judith 2008. Modeling Epistemic and Ontological Cognition: Philosophical Perspectives and Methodological Directions. In: Educational Psychologist, Vol. 43, No. 3, 142–160.
- Greeno, Jeffrey G.; Collins, AM; Resnick, LB. 1997. Cognition and learning. In: Berliner, David C.; Calfee, Richard D., eds. Handbook of educational psychology. New York: Simon & Schuster Macmillan, 15–47.
- Hasweh, Maher Z. 1996. The effects of science teachers' epistemological beliefs in teaching. In: Journal of Research in Science Teaching, Vol. 33, No. 1, 47–63.
- Hofer, Barbara. 2001. Personal Epistemology Research: Implications for Learning and Teaching. In: Educational Psychology Review, Vol.13, No. 4, 353–383.
- Hofer, Barbara. 2002. Epistemological world views of teachers: From beliefs to practices. In: Issues in Education: Contributions from Educational Psychology, Vol. 8, No. 2, 167–173.
- Hofer, Barbara K. 2004. Epistemological understanding as a metacognitive process: Thinking aloud during online searching. In: Educational Psychologist, Vol. 39, No. 1, 43–56.
- Hofer, Barbara K.; Lam, Chak Fu; Delisi, Alex. 2011. Understanding evolutionary theory: The role of epistemological development and beliefs. In: Taylor, Roger S.; Ferrari, Michael, eds. Epistemology and science education: Understanding the evolution vs. intelligent design controversy. New York: Routledge, 95–110.
- Hofer, Barbara; Pintrich, Paul P. 1997. The Development of Epistemological Theories: Beliefs about Knowledge and Knowing and Their Relation to Learning. In: Review of Educational Research, Vol. 67, No. 1, 88–140.
- Hofer, Barbara K; Pintrich, Paul P. 2002. Personal epistemology. The psychology of beliefs about knowledge and knowing. Mahwah, NJ [u.a.]: Erlbaum.
- Hofer, Barbara K.; Sinatra, Gale M. 2010. Epistemology, metacognition, and self-regulation: musings on an emerging field. In: Metacognition Learning, Vol. 5, No. 1, 113–120.
- Inbar, Dan E. 1996. The free educational prison: metaphors and images. In: Educational Research, Vol. 38, No.1, 77–92.
- Indurkha, Bipin. 2006. Emergent representations, interaction theory and the cognitive force of metaphor. In: New Ideas in Psychology, Vol. 24, 133–162.
- Jamieson, Harry G. 1985. Communication and Persuasion. London: Croom Helm.
- King, Patricia M.; Kitchener, Karen S. 1994. Developing reflective judgment. Understanding and promoting intellectual growth and critical thinking in adolescents and adults. San Francisco: Jossey-Bass Publishers.
- King, Patricia M.; Kitchener, Karen S. 2004. Reflective judgment: Theory and research on the development of epistemic assumptions through adulthood. In: Educational Psychologist, Vol. 39, 5–18.
- Kuhn, Deanna; Weinstock, Michael. 2002. What is epistemological thinking and why does it matter? In: Hofer, Barbara K.; Pintrich, Paul K. eds. Personal epistemology. The psychology of beliefs about knowledge and knowing. Mahwah, NJ: Erlbaum, 121–144.
- Jehng, Jihn-Chang. 1993. Schooling and Epistemological Beliefs about Learning. In: Contemporary Educational Psychology, Vol. 18, No. 1, 23–35.



- Koch-Priewe, Barbara. 2000. Subjektive didaktische Theorien von Lehrern [Teachers' personal theories of teaching]. Göttingen: Edition Ruprecht.
- Köller, Olaf. 2000. Epistemologische Überzeugungen und Fachverständnis im Mathematik- und Physikunterricht [Epistemological Beliefs and Disciplinary Beliefs in Maths and Physics]. In: Baumert, Jürgen ed. TIMSS/III, 2. Opladen: Leske & Budrich, 229–269.
- König, Johannes; Blömeke, Sigrid 2009. Pädagogisches Wissen von angehenden Lehrkräften: Erfassung und Struktur von Ergebnissen der fachübergreifenden Lehrerbildung [Pedagogical Knowledge of pre-service Teachers: Diagnosing and Structuring the Outcomes of Domain General Teacher Education Programs]. In: Zeitschrift für Erziehungswissenschaft, Vol. 12, No. 3, 499–527.
- Lakoff, George; Johnson, Mark. 1980. *Metaphors we live by*. Chicago, London: University of Chicago Press.
- Lakoff, George. 2008. The neural theory of metaphor. In: Gibbs, Raymond W. ed. *The Cambridge handbook of metaphor and thought*. New York: Cambridge University Press, 17–39.
- Leavy, Aisling M.; McSorley, Fiona; Boté, Lisa A. 2007. An examination of what metaphor construction reveals about the evolution of pre-service teachers' beliefs about teaching and learning. In: *Teaching & Teacher Education*, Vol. 23, 1217–1233.
- Levitt, Karen E. 2001. An analysis of elementary teachers' beliefs regarding the teaching and learning of science. In: *Science Education*, Vol. 86, 1–22.
- Limón, Margarita. 2006. The domain generality-specificity of epistemological beliefs: A theoretical problem, a methodological problem or both? In: *International Journal of Educational Research*, Vol. 45, 7–27.
- Loewenber Ball, Deborah; Hoover Thames, Mark; Phelps, Geoffrey. 2008. Content Knowledge for Teaching: What Makes It Special?. In: *Journal of Teacher Education*, Vol. 59, No. 5, 389–407.
- Magolda, Marcia B. Baxter. 2004. Evolution of a Constructivist Conceptualization of Epistemological Reflection. In: *Educational Psychologist*, Vol. 39, No. 1, 31–42.
- Mahlis, Marc; Massengill-Shaw, Donita; Barry, Arlene 2010. Making sense of teaching through metaphors: a review across three studies. In: *Teachers and Teaching: theory and practice*, Vol. 16, No. 1, 49–71.
- Mandl, Heinz; Huber, Günter L. 1983. Subjektive Theorien von Lehrern [Teachers' Personal Theories]. In: *Psychologie in Erziehung und Unterricht*, Vol. 30, 98–112.
- Martinez, Maria A.; Sauleda, Narcis; Huber, Günther. 2001. Metaphors as blueprints of thinking about teaching and learning. In: *Teaching and Teacher Education*, Vol. 17, No. 8, 965–977.
- Matthias, Stephanie. 2010. Entwicklung, Dimensionen und schulische Relevanz epistemologischer Überzeugungen [The Development, Dimensions and Educational Relevance of Epistemological Beliefs. ID: 2325725]. Online available at the Library of the University of Bielefeld: <http://pub.ub.uni-bielefeld.de/pub?func=drec&id=2325725>.
- Mezirow, Jack. 1991. *Transformative dimensions of adult learning*. San Francisco: Jossey-Bass.
- Moore, Scott D. 1994. A Comparison of Socialization Research. Paper presented at the Annual Meeting of the Western States Communication Association, San Jose.
- Muis, Krista R. ; Bendixen Lisa D ; Haerle, Florian. 2006. Domain-Generality and Domain-Specificity in Personal Epistemology Research: Philosophical and Empirical Reflections in the Development of a Theoretical Framework. In: *Educational Psychological Review*, Vol. 18, No. 1, 3–54.
- Muis, Krista R.; Franco, Gina M. 2010. Epistemic profiles and metacognition: support for the consistency hypothesis. In: *Metacognition Learning*, Vol. 5, No. 1, 27–45.
- Müller, Cornelia. 2008. *Metaphors dead and alive, sleeping and waking: a dynamic view*. Chicago, London: University of Chicago Press.
- Olafson, Lori; Schraw, Gregory 2006. Teachers' beliefs and practices within and across domains. In: *International Journal of Educational Research*, Vol. 45, No 1–2, 71–84.
- Pajares, Frank M. 1992. Teachers' Beliefs and Educational Research: Cleaning Up a Messy Construct. In: *Review of Educational Research*, Vol. 62, No. 3, 307–332.
- Patchen, Terri; Crawford, Teresa. 2011. From Gardeners to Tour Guides: The Epistemological Struggle Revealed in Teacher-Generated Metaphors of Teaching. In: *Journal of Teacher Education*, Vol. 62, No. 3, 286–298.
- Patrick, Helen; Pintrich, Paul R. 2001. Conceptual change in teachers' intuitive conceptions of learning, motivation, and instruction: The role of motivational and epistemological beliefs. In: Torff, Bruce; Sternberg, Robert J., eds. *Understanding and teaching the intuitive mind: Student and teacher learning*. Mahwah, NJ: Erlbaum, 117–143.

- Perry, William G. 1970. Forms of intellectual and ethical development in the college years. A scheme. San Francisco, Calif: Jossey-Bass Publishers.
- Prenzel, Manfred, ed. 2006. Untersuchungen zur Bildungsqualität von Schule. Abschlussbericht des DFG-Schwerpunktprogramms [Research on Schools' Educational Impact. Final Report of the Priority Program of the German Research Foundation, GRF/DFG]. Münster [u.a.]: Waxmann.
- Ritchhart, Ron. Turner, Terri. Hadar, Linor. 2009. Uncovering students' thinking about thinking using concept maps, in: *Metacognition Learning*, Vol. 4, No. 2, 145–160.
- Saban, Ahmet. 2007. Prospective Teachers' Conceptions of Teaching and Learning Revealed Through Metaphor Analysis. In: *Learning and Instruction*, Vol. 17, 123–139.
- Schommer, Marlene. 1990. Effects of beliefs about the nature of knowledge on comprehension. In: *Journal of Educational Psychology*, Vol. 82, No. 3, 498–504.
- Schommer, Marlene. 1994. An emerging conceptualization of epistemological beliefs and their role in learning. In: Garner, Ruth; Alexander, Patricia, eds. *Beliefs about text and instruction with text*, Hillsdale, New Jersey: Lawrence Erlbaum, 25–41.
- Schommer, Marlene; Walker, Kiersten. 1995. Are epistemological beliefs similar across domains? In: *Journal of Educational Psychology*, Vol. 3, 424–432.
- Schommer-Aikins, Marlene. 2003. Epistemological Beliefs Across Domains Using Biglan's Classification of Academic Disciplines. In: *Research in Higher Education*, Vol. 44, No. 3, 347–366.
- Schommer-Aikins, Marlene. 2004. Explaining the Epistemological Belief System: Introducing the Embedded Systemic Model and Coordinated Research Approach. In: *Educational Psychologist*, Vol. 39, No. 1, 19–29.
- Schubert, William H. 1986. *Curriculum: Perspective, paradigm and possibility*. New York: MacMillan.
- Schraw, Gregory. 2001. Current themes and future directions in epistemological research: A commentary. In: *Educational Psychology Review*, Vol. 13, No. 4, 451–464.
- Scott Mio, Jeffery. 1996. Metaphor, Politics, and Persuasion. In: Scott Mio, Jeffrey; Katz, Albert N., eds. *Metaphor. Implications and Applications*. Mahwah, New Jersey: Lawrence Erlbaum, 127–146.
- Sfard, Anna. 1998. On two metaphors of learning and the dangers of choosing just one. In: *Educational Researcher*, Vol. 27, No. 2, 25–72.
- Shulman, Lee S. 1986. Those who understand: Knowledge growth in teaching. In: *Educational Researcher*, Vol. 15, No. 2, 4–14.
- Sinatra, Gale M.; Kardish, Carol Anne M. 2004. Preservice teachers' epistemological beliefs, dispositions, and views on teaching as persuasion. In: *Contemporary Educational Psychology*, Vol. 29, 483–8.
- Chai, Sing Chin; Teo, Timothy; Lee, Chwee Beng. 2009. The change in epistemological beliefs and beliefs about teaching and learning: a study among pre-service teachers. In: *Asia-Pacific Journal of Teacher Education*, Vol. 37, No. 4, 351–362.
- Spiro, Rand J.; Jehng, Jihng Chan. 1990. Cognitive flexibility and hypertext: Theory and technology for the nonlinear and multidimensional traversal of complex subject matter. In: Nix, Don; Spiro, Rand J., eds. *Cognition, education, and multimedia: Explorations in high technology*, Hillsdale, NJ: Lawrence Erlbaum, 163–205.
- Stathopoulou, Christina; Vosniadou, Stella. 2007. Conceptual Change in Physics and Physics Related Epistemological Beliefs: A Relationship Under Scrutiny. In: Vosniadou, Stella; Baltas, A.; Vamvakoussi, X., eds. *Re-Framing the Conceptual Change Approach in Learning and Instruction*. *Advances in Learning and Instruction Series*, Elsevier Press: New York, NY, 145–165.
- Stodolsky, Susan S. 1988. *The subject matters: Classroom activity in math and social studies*. Chicago: University of Chicago Press.
- Stodolsky, Susan S.; Salk, Scott; Glaessner, Barbara. 1991. Student views about learning math and social studies. In: *American Educational Research Journal*, Vol. 28(1), No. 1, 89–116.
- Torney-Purta, Judith. 2005. *How teachers' preparation relates to students' civic knowledge and engagement in the United States: Analysis from the IEA Civic Education Study*. College Park, MD: Center for Information and Research on Civic Learning and Engagement.
- Traugott, Elizabeth Closs. 1985. 'Conventional' and 'Dead' Metaphors Revisited. In: Paprotte, Wolf; Dirven, Rene, eds. 2000. *The Ubiquity of Metaphor: Metaphor in Language and Thought*. *Amsterdam Studies in the Theory and History of Linguistic Science* 29. Amsterdam: John Benjamins Publishing, 17–56.
- Van Driel, Jan; Bulte, Astrid M.W.; Verloop, Nico. 2007. The relations between teachers' general beliefs about teaching and learning and their domain specific curricular beliefs. In: *Learning and Instruction*, Vol. 17, 156–171.



- Van Driel, Jannet; Van Boxtel, Carla. 2008. Historical Reasoning: Towards a Framework for Analyzing Students' Reasoning about the Past. In: *Educational Psychology Review*, Vol. 20, 87–110.
- VanSledright, Bruce A.; Kelly, Christine 1998. Reading American history: The influence of using multiple sources on six fifth graders. In: *The Elementary School Journal*, Vol. 98, 239–265.
- VanSledright, Bruce; Maggioni, Liliana, Reddy, Kim. 2011. Preparing Teachers to Teach Historical Thinking? The Interplay Between Professional Development Programs and School-Systems' Cultures. Paper Presented at the 2011 Annual Meeting of the American Educational Research Association, April 2011, New Orleans, LA. Online available at http://www.education.umd.edu/EDHD/faculty2/Alexander/ARL/Publications_files/Preparing_teachers_to_teach_historical_thinking.pdf.
- Veenman, Marcel V.J.; Van Hout-Wolter, H.A.M.; Afflerbach, Peter 2006. Metacognition and learning: conceptual and methodological considerations. In: *Metacognition Learning*, 1, 3–14.
- White, Bonita C. 2000. Pre-service teachers' epistemology viewed through perspectives on problematic classroom situations. In: *Journal of Education for Teaching*, Vol. 26, 279–305.
- Wilkins, Chris 1999. Making 'Good Citizens': The social and political attitudes of PGCE students. In: *Oxford Review of Education*, Vol. 25, No. 1, 217–230.
- Wineburg, S. S. 1991. Historical problem solving: A study of the cognitive processes used in the evaluation of documentary and pictorial evidence. In: *Journal of Educational Psychology*, Vol. 83, 73–87.
- Wineburg, Sam S. 1996. The psychology of learning and teaching history. In Berliner, DC; Calfee, R.C., eds. *The handbook of Educational Psychology*. New York: Simon Schuster Macmillan, 423–437.

Irena Zaleskene

Citizenship Education: Lithuanian Mapping

Some theoretical concepts of globalisation and citizenship are discussed in the article as well as changing role of citizenship education in transforming Lithuanian Society. The author points out that many problems in contemporary Lithuanian society arise from the fact that the relationship between individuals and the state is changing fundamentally. The state should broaden “positive” choices and support an individual by ensuring principles of equality in basic human rights and access to opportunities. On the other hand, an individual has to take the responsibility for his/her own life becoming a decisive factor in choosing personal life style and in building up civic community. In this respect, it is expected that *Citizenship Education* would lay an important role in educating competence and attitudes towards own responsibilities, in educating mental and practical skills for positive civic participation. Current status and new approaches of citizenship education in Lithuania are presented in the light of international developments. The article concludes that changing role of citizenship education has significant implications for professional development of teachers and for the national teacher training system as a whole.

Keywords

exclusion, citizenship education, teacher training

Introduction

The phenomena of globalization is considered as the most widespread trend on the eve of twenty – first century and it has resulted from the worldwide integration of economic and financial sector (Hallak, Poisson, 2000, 10). Globalization could be understood “as a socio – economic phenomenon that has profound political and cultural implications (Jarvis, 2001, 10). Among the main implications of globalization, researchers name such as: a) the *emergence of learning societies* due to multiplication of sources of information and communication; b) the *transformation of the nature of work* with the need for more flexibility and mobility, the importance of communication skills, the necessity of team work, the increasing use of technologies, etc; c) the *progression of social exclusion* – a large part of world’s population does not participate in this process. Globalization causes changing role of education; implementation of new trends in education (the need to keep up with changes taking place in society). Some of the characteristics of this new trend may be identified (Daswani, 2003, 19):

- The increasing incorporation of global and interdisciplinary topics into curriculum;
- Vocational education and lifelong learning (to prepare students for the world of work in adequate way);
- Citizenship education (to prepare students to assume their responsibilities as citizens and to develop competencies for active civic participation);
- Basic knowledge versus “up-to-date” contents (students must be taught the skills of research, inquiry and interpretation so that they may continue learning beyond the school and find adequate place in society).

Researchers from different research fields in different countries look for responds to the important ques-

tions such as: what does these characteristics of the trend mentioned above mean for education as whole? How do they change the role of education and particularly role and content of civic education? Taking into account the assumption that civic education can help to solve some of the challenges of globalized world, we try to analyse some of the possible answers to these questions.

1. Role of Education and Main Goals for Civic Education

Education during the ages have been seen as a social institution having functions such as *socialisation* (Broom 1992); *personal development* (Rodgers 1995); *political and social change* (Leithwood 1992); *transferee of culture* (Hodges 1974); *social stability and order* (Selfe, Burke, 1998); *social integration* (Fend 1980). The latest developments of philosophical and sociological mind show that integration of society is becoming one of the most important functions of education. That’s why education is seen as a main factor in extenuating social exclusion in the modern societies. Education fulfils the role of social integration through *curriculum*, through *infrastructure* of educational institutions and through creating *equal start possibilities* for everyone.

Reformation of educational system and inclusion of civic education into compulsory curriculum could be seen as an important way for strengthening social cohesion. Furthermore, we will pay some attention to the Lithuanian situation related to social cohesion and developments of civic education.

1.1 Some Remarks on Social Exclusion in Lithuania

In 1990, when Lithuanian citizens demonstrated their intention to build a free and open society based on the supremacy of law and democratic principles, they simultaneously undertook the responsibility for both their personal lives and strengthening the statehood.



People were ready to overcome the legal, political and social legacy of totalitarian society and face difficulties of transition. Nevertheless, it has now become clear that social process are developing at much more rapid pace than the human mentality is able to adjust itself to new values and lifestyles. Many problems in contemporary Lithuanian society arise from the fact that the relationship between individuals and the state is changing fundamentally. It's important to recognize that the way in which people build their lives depends on many circumstances over which they may have no control. For example, children who are not attending school and who are not taught any skills are deprived of many choices and opportunities for their future lives. And those people who have no access to information have no possibilities to make decisions. The state should broaden "positive" choices and support an individual by ensuring principles of equality in basic human rights and access to opportunities. The Lithuanian Constitution ensures equal right for everyone, but at the same time the state is not always capable of providing the necessary conditions for exercising these rights. For example, the rise in crime threatens individual right to personal security, the volatility of the economy and labor market causes unemployment, a low standard of living often undermines the right to education, a quality health service, adequate housing, freedom to travel and the choice of place of residence. On the other hand, an individual has to take the responsibility for many aspects of his own life becoming a decisive factor in choosing life style. In this respect, it is expected that *Civic Education plays an important role in educating competence and attitudes toward own responsibilities, in educating mental and practical skills for positive civic participation.*

1.2 Civic Education and Competencies

Researchers (Fulan 2001; Ozmon, Craver 1996; Jarvis 2001) analysing changing global world point out features of post modernity such as *social* (complexity and fragmentation of social structure), *cultural* (the fragmentation of cultural identity which changes between different social settings); *economical* (competitive relations in the market are demanding multi-skilled workers); *political* (promotion of the virtues of self-reliance, self-confident, self- decision-making). Person leaving in such complex related society has to be enabled to manage his or her life. And civic education can play an important role in such circumstances especially when democracy is seen as a form of government and as a practice, in which participation and involvement are key points. Very often form of government is being understood in the light of the historical development. However, for most nations democracy is an ideal which is superior to the democratic practice in real life. Thus, democracy is a concept in continuous development

and a topic for discussion without definitive answers. Nonetheless, there is a broad recognition of the possibilities for democracy to contribute to the learning to live together. It is obvious that democratic practice at local level can turn out in ways that resembles more those of old socio-cultural traditions than the modern – western oriented – conception of democracy. Active citizenship is more a democratic practice and to the large extent is culturally and politically based So, *"education must lead to the acquisition of...the knowledge, values and abilities that are needed for individual development, and for the exercise of participatory and responsible citizenship in a democracy"* (The Dakar Framework for Action 2000).

It is pointed out by the researchers (Perrenoud 2000) that active citizen could be described through developing "citizen" competencies which are needed to every individual in order to participate in the management of personal and social life in the harmonious society. These competencies are:

- being able to vote and assume one's responsibilities in a democratic political system and in community life, trade unions, etc.
- in order to survive in a society of free competition, being able to find accommodation, start a family and conclude and abide by contracts (relating to marriage, work, rental, insurance, ect.);
- being able to invest and spend intelligently one's resources in a free and transparent market, using in a rational manner information about products and services;
- being able to find one's way about in the educational system, receiving training, and learn and use available information;
- being able to access culture and media by making an informed choices of recreational and cultural activities;
- being able to look after one's health by preventative and responsible use of the medical and hospital system;
- being able to defend one's rights and interests by asking for police protection and making use of legal procedures and the courts.

In general, competencies are described as specialised system of abilities, proficiencies or skills that are necessary or sufficient to reach a specific goal (Weinert 2001) having four dimensions:

- political and legal dimension covers rights and duties with respect to the political system and law. It requires knowledge concerning the law, democratic attitudes and capacity to participate, exercise responsibilities at all levels of public life;
- social dimension covers relations between individuals and requires knowledge of what these relations are based on and how they function in the society. Social competencies are paramount here. This dimension is connected to others (solidarity);



- economical dimension concerns the world of production and consumption of goods and services;
- cultural dimension refers to collective representation and imagination and to shared values, it implies recognition of common goods and common heritage.

To understand better the changing role of civic education we will pay some attention to the concept of „Citizenship“ and to the main competencies which have to be obtained during the civic education process.

1.3 Concepts of Citizenship and the Changing Role of Civic Education

There are a lot of ideas about what it means “citizen” or “citizenship”. We did search and classified some of them:

1. Anderson, Avery, Pederson, Smith and Sullivan (1997) identified citizenship concepts among sample of teachers. Almost half of students have been taught to be questioning citizen, about one-quarter focused on teaching from culturally pluralistic perspective and only few stressed learning about government.
2. Davies, Gregory and Riley (1999) in England found that social concern and tolerance for diversity received the greatest support between teachers; Theiss-Morse (1993) model for four concepts of citizenship among adults in US: representative democracy (responsibility to be an informed voter); political enthusiast (advocacy through protest and little trust in elected officials); pursued interest (joining groups to pursue issues); and indifferent (trusting leaders and placing a low priority on trying to influence them);
3. Prior (2007) in Australia found that social concern, social justice and participation in school/community affairs were important for teachers;
4. Vontz, Metcalf and Patric (2000) in a study of effectiveness of a civic curriculum in Latvia, Lithuania and US found a positive impact on students’ knowledge and skills but not their sense of citizen responsibility.
5. In the IEA (International Association for Evaluation of Educational Achievements) Civic Education Study (Torney-Purta, Lehmann, Oswald, Schulz, 2001) was used mainly two concepts of citizenship: Conventional Citizenship (obeying the law, voting, participation in political parties, etc.) and Social-Movements related citizenship (participates in activities to protect the environment, participates in activities to benefit people in the community, work hard, etc).

As far as we can observe differences in the concepts of citizenship, we can agree that there are some basic elements according which the role of civic education is changing. These are:

A. Cognitive competencies:

- competence of a legal and political nature

- knowledge of the present world
- competence of a procedural nature
- knowledge of the principal and value choices

B. Ethical competences and value choices: freedom equality and solidarity.

C. Capacities for action (as social competences):

- capacity to live together with others, to cooperate, to construct and implement joint projects and so on;
- capacity to resolve conflicts in accordance with the principals of democratic law;
- capacity to take part in public debate, to argue and choose in real life situation.

The Concept of Democratic citizenship has different meanings and connotations because of huge changes in the cultural, political and social life. But a lot of different researchers (Carr 1999; Wringe 2000; MacLaughlin 1997 etc.), having very different views on it agree, that citizen in our days life has to have four main indications in order to have possibilities for positive socialisation into society. These indications are:

1. Political activity. This indication did change during different periods of developments in the societies. The first one dominated for a long time. At the beginning of XX century the Values component did become important.
2. Values. After 1960 politicians and researchers were looking for reasons why political activity is not always transferred in the behaviours of citizens. And the identity was one of the aspects to be added to the concept of citizen.
3. Identity. Finally, the developments of the last decades in the directions of modernisation of societies (“networking” society, integration of different societies, stress on importance of social capital for human development, etc.) added the fourth component for the concept of “democratic citizenship” – social competencies.
4. Social competencies. They are essential in nowadays civic life, so, they are key point in changing role of Civic Education.

Having in mind all the aspects mentioned above, the main role of civic education can be named as a education of skills and competences related to execution of active citizenship in globalized world (“Citizenship education: Learning at School and in Society”, 2001).

2. Current Status of Civic Education in Lithuania

2.1 Short History of Implementing Civic Education into National Curriculum.

- A. The mission of Civic Education in Lithuania was described in the first Law on Education (1991) which was legislated after restoration of Lithuanian statehood: Civic Education is *considered to be one of the*



essential goals of the educational system: to foster citizenship, the understanding of a person's duties toward family, nation, society, and the State of Lithuania, as well as the need to participate in the cultural, social, economic and political life of the Republic (The Law on Education in the Republic of Lithuania, 1991; 2003).

- B. Concrete goals and tasks for Citizenship Education in Schools are formulated in the "General Concept of Education in Lithuania" (1994), "Curriculum Framework for Primary and Basic (lower secondary) Education" (1996, 2004, 2008), and National Standards of Students achievements (1997, 2004, 2008). *The whole educational process is supposed to lead to an understanding of both the principles of life in a democratic society and also the problems in creating democracy (and ways to approach their solution)*. It was suggested that course entitled "Basics of Citizenship" has to be introduced as a obligatory subject at the basic school level (it did start in 1998).
- C. Starting from 1992 teaching and learning materials are under developmental process, in-service teacher training courses (regional, national as well as an international) are held in different regions in Lithuania.
- D. The processes of developing individual syllabus, school based curriculum, teaching and learning materials, pre-service and in-service teacher training courses are going on in Lithuania. It is expected that different schools, teachers will select the content for their civic lessons, will choose the teaching styles.
- F. Citizenship education courses are implemented into pre-service teacher training institutions since 2000.

2.2 The Ways of Organising Citizenship Education in Lithuania.

A. Through formal curriculum:

- a) Citizenship Education is taught as a cross-curriculum. It means that civic ideas, concepts, topics are integrated in the new developed curricular, textbooks, teaching and learning materials for whole variety of subjects and are already taught in the different grades, starting from 1st ending with 12th grades. For example, the course "Me and the World" is implemented in the primary school (grades 1-4); the History, Geography, Technology, Native Language and Literature, Political Science, Economics, Philosophy, Moral Education and etc. These courses are very interrelated when it concerns educating the conscious and active citizens of Lithuanian State.
- b) the separate obligatory subject "Basics of Citizenship" is introduced to the 9 and 10 grades (one hour per week).

B. Through extra - curriculum activities, the ways on which the school community and school relations with the local communities are organized.

One of the most important factors helping students to understand democracy in everyday life, to exercise the decision making skills and the skills of participation is the way on which school life is organized: does dialogue exist between students, between students and teachers, between teachers and parents, between teachers; does the teachers use democratic methods of teaching; does the students are encouraged to be responsible for the whole school community; does self-government of students exists, etc. In cooperation with local governmental and social institutions students have possibilities to learn about functions of social and political institution in real life; they can obtain necessary knowledge and skill for applying to these institution; they can identify problems their families are facing with; they can study how problems are solved, etc. Extra curriculum activities help students to improve their knowledge, skills and habits which are learned during formal educational process.

D. Through extending relations between students, school, Local, Regional, National, European and World communities.

Social environment play an important role in the Civic Education and creates a good possibilities for applying the democratic skills, which are learned during the educational process. On the other hand, such kind of relations can help for further development Civic habits and responsibilities for the People future.

3. New Trends in the Development of Citizenship Education

Researchers, educators look for new approaches and new trends in teaching young people to take responsibility not only for their personal lives, but for the local, nation and world communities.

3.1 Service Learning

In recent years it has been a movement towards strengthening schools based civic education that emphasizes instruction in the fundamental processes and instruments of democracy and government. Lithuanian developers of Citizenship Education look for new approaches reflecting needs of the contemporary global world. One of such approaches is Service-learning which could be described as an approach that combines a community service experience with classroom instruction and reflection, has been suggested as an opportunity to bring to life important political and social issues and thereby encourage youth activism and engagement (Gibson 2001, 8). Specifically, service-learning emphasizes the experimental component of civic education by providing opportunities for young people to engage in community-based ac-



tivities that integrate and put in context what they learn in the classroom.

It's important to understand the difference between service-learning and community service or volunteer. Community service is the volunteer work which isn't connected with school course work (Hepburn 2001), but the service-learning is a particular form of community service that is curriculum based. It means that service experience is related to objectives in the curriculum and is connected to classroom studies by written activities and discussions. There are identified four general components or criteria for effective service oriented, school based programs:

1. They integrate service into the content and activities of school courses because students gain more from the experience when it is carefully tied to courses in the school curriculum;
2. They provide periods of reflection (journal writing, group discussions, essays, etc.) on the service experience to allow students to contemplate their service experience and their implication;
3. They require service throughout the school years because very short periods of service have been shown to have little or no effects on students;
4. They involve students, teachers, administrators and community agencies in design of the curriculum.

We adopted service learning materials „Take a charge/ Youth Guide to Community Change“ developed by Constitutional Rights Foundation, LA (USA). And we try to implement it into school curricula and teacher training courses.

3.2 Education for Consumer Citizenship.

During last years it appears new approach on the European civic developments – education for *Consumer citizenship*. It has been conducted some EU projects according this approach and Department of Social Pedagogy at Vilnius Pedagogical University is a part of it.

Activities dealing with issues related to consumer citizenship have been and are being carried out most notably in Canada and Australia. While citizenship education has gained ground in schools throughout Europe, consumer education in general, and consumer citizenship education in particular, has progressed slowly. As the research shows Citizenship education has, to a great extent, concentrated on representative, participatory and judicial civic training for many years. Consumer education has been regarded as a minor aspect of daily life skills connected to home activities. Environmental education has generally focused on pollution and basic tenets of natural ecology. As far as a global citizenship refers to understanding one's responsibilities to others, to society and to environment, education has to take a role for

combining this three components of education. That's how concept of consumer citizenship appears. Consumer citizenship can be described as a situation *“when the individual, in his/her role as a consumer, actively participates in developing and improving society by considering ethical issues, diversity of perspectives, global processes and future conditions. It involves taking responsibility on a global scale when securing one's own personal needs and well-being.”*(McGregor 2002, 40).

Consumer citizenship education is a cross-curricular, interdisciplinary approach to promote attitudes, transfer knowledge and develop skills that combine consumer education, environmental education and civic training. It deals with empowering students to develop and evaluate alternative visions of a sustainable future and motivates them to turn these visions into reality.

4. Challenges for Civic Education and for Teacher Training

Rapid changes in the society and in the educational system influences the quality of citizenship education.

- A. The content of citizenship education is described only as a broad outline in the core-curriculum Curriculum and syllabi as well as teaching and learning materials are under process of development. The new methodology of assessment and evaluation of students achievements aren't developed yet. Teachers has to develop programmes according their own understanding, obligated core-curriculum, national standards and students needs, according the new challenges in the world community. This is very difficult task for teachers who were trained in older more traditional ways. The teacher training systems itself need be reformed. The content of civic education is not the subject of enough public discussion. *Teachers have consequently adapt their way of thinking and methods of teaching to a new educational objectives and to a new social and political circumstances in globalised sodiety.*
- B. Students present more diversity in terms of their social skills, social and cultural backgrounds, ambitions and behaviour. A lot of students are from excluded families. Teachers have to look for how to include them. *It has to take some time and efforts to prepare teachers for this changed situation.*
- C. The local communities are relatively underdeveloped in Lithuanian society. They are not prepared to take an active part in civic education or in developing the sense of belonging to a community. In some places, the only important institutions are thought to be the family and the national state, with no intermediate organisations to which young people might develop a sense of loyalty. *Teachers need some ideas and methodology*



how to include local institutions, NGO (which are sometimes very strong) to educational process.

D. Living in global society we do need people, but at first, teachers trained in the certain way: a) becoming citizens with strong social competencies by themselves; b) being able to help students to accumulate social capital and to develop “networking society”; c) being able to fulfil new function (*being one of the most important agents for social inclusion*) in education.

References

- Anderson, Christopher; Avery, Patricia G.; Pederson, Patricia V.; Smith, Elizabeth S.; Sullivan, John L. 1997. Divergent Perspectives on Citizenship Education: A Q method Study and Survey of Social Studies Teachers. In: American Educational Research Journal, 34(2), 333–364. (<http://www.jstor.org/pss/1163361>).
- Broom, Leonardo; Bonjean, Charles M.; Broom, Dorothy H. 1992. Sociologija: esminiai tekstai ir pavyzdžiai. Kaunas: Littera Universitatis Vytauti Magni
- Carr, Margaret. 1999. Being a Learner: Five Learning Dispositions for Early Childhood. In: Early Childhood Practice, 81–99.
- Citizenship Education: Learning at School and in Society. 2001. (<http://www.ibe.unesco.org/International/ICE/46english/46ws1e.htm>)
- Curriculum Framework for Primary and Basic (lower secondary) Education/Pradinio ir pagrindinio ugdymo bendrosios programos, 1996, 2004, 2008. (<http://www.pedagogika.lt/index.php?>).
- Daswani, Johnny. 2003. Citizenship Education: Learning at School and in Society. The Relevance of New Trends in the Teaching of Science, Social Science and Humanities to the Challenge of Globalisation and the Principles of Learning to Live Together. In: Globalisation and Living together. UNESCO: International Bureau of Education.
- Davies, Ian; Gregory Ian; Riley, Shirley. 1999. Good Citizenship and Educational Provision. Palmer Press, London and New York.
- Fend, Helmut. 1980. Theorie der Schule. München, Wien, Baltimore: Urban & Schwarzenberg.
- Fulan, Michael. 2001. Leading in a Culture of Change. San Francisco: Jossey-Bass.
- E. From one side the need to have „citizens with social competencies” and from another side, the changing role of education, coming from the developments of societies, *do help to move from traditional* understanding of civic education to more contemporary direction, reflecting on the needs of the society. So, building up and renovating the system of civic education in general and particularly in teacher training curriculum we do need to change our ideas about the role of civic education.
- General Concept of Education in Lithuania. 1994. Vilnius: leidybos centras. (http://www.smm.lt/en/legislation/docs/General_concept_of_education_in_Lithuania_1992.pdf).
- Hallak, Jacques; Poison, Muriel. 2000. Education and Globalisation: Learning to Live Together. In: Globalisation and Living Together: Challenges for Educational Content in Asia. Final report of the sub-regional course on curriculum development, New Delhi, India, 9–17 March 1999, organized by the International Bureau of Education and the Indian Ministry of Human Resources Development. UNESCO: International Bureau of Education. Central Board Of Secondary Education, India, 10-16. (http://www.ibe.unesco.org/fileadmin/user_upload/archive/publications/regworkshops/finrep_pdf/finrep_newdelhi_99.pdf).
- Hepburn, Mary. 2001. Service-Learning and Civic Education in Schools. In: Mann, Patrick, eds. Education for Civic Engagement in Democracy: Service-Learning and Other Promising Practices. Indiana University; Bloomington.
- Hodges, Donald, 1974. Socialist Humanism: The Outcome of Classical European Morality. Warren H Green.
- Hutmacher, Walo. 2002. Education Systems, Social Integration and Inequality. In.: Curriculum Change and Social Cohesion. UNESCO: International Bureau of Education.
- Jarvis, Peter. 2001. Mokymosi paradoksai. Kaunas: Vytauto Didžiojo universiteto Svetimo studiju centras.
- Leithwood, Kenneth. 1992. Transformational Leadership: Where Does It Stand? Educational Leadership, 49, 8–12. (http://www.nipissingu.ca/csle/journal_article_resources.htm).
- Law on Education of the Republic of Lithuania 1991, 2003. (http://www3.lrs.lt/pls/inter2/dokpaieska.showdoc_l?p_id=281043).
- MacLaughlin, Terence. 1997. Siuolaikine ugdymo filosofija. Kaunas: Technologija.



- McGregor, Susan. 2002. Consumer Citizenship: A Pathway to Sustainable Development?. In: Thoresen, Victoria, ed. *Developing Consumer Citizenship*. Hedmark University College, Norway.
- National Standards of Students Achievements/Bendrojo lavinimo pagrindines ir vidurines mokyklos mokiniu issilavinimo standartai, 1997, 2004, 2008. (<http://www.pedagogika.lt/index.php?>).
- Ozmon, Howard A., Craver, Samuel M. 1996. *Filosofiniai ugdymo pagrindai*. Vilnius: Leidybos centras.
- Perrenoud, Philippe. 2000. The Key Competencies to Social Fields: Competencies of an Autonomous Actor. In: Rychen, Dominique Simone; Salganik, Laura Hersh, eds. *Defining and Selecting Key Competencies*. Seattle, Toronto, Bern, Grottingen, 121–149.
- Prior Markus. 2007. *Post-Broadcast Democracy: How Media Choice Increases Inequality in Political Involvement and Polarizes Elections*. Cambridge University Press.
- Rodgers, Carl. R. 1995. *A Way of Being*. Houghton Mifflin Company, Boston, New York.
- Selfe, David, Burke, Vincent. 1998. *Perspectives on Sex, Crime and Society*. Cavendish publishing Limited.
- The Dakar Framework for Action. *Education for All: Meeting Our Collective Commitments*. Adopted by the World Education Forum. 2000. Dakar, Senegal, 26–28 April 2000, 2001. (<http://unesdoc.unesco.org/images/0012/001211/121147e.pdf>).
- Theiss-Morse, Elizabeth. 1993. Conceptualizations of Good Citizenship and Political Participation. *Political Behavior*, 355–380. (<https://springerlink3.metapress.com/content/wkm7264143556m00/resourcesecured/?target=fulltext>).
- Torney-Purta, Judith; Lehmann, Rainer, Oswald, Hans, Schulz, Wolfram. 2001. *Citizenship and Education in Twenty – Eight Countries: Civic Knowledge and Engagement at Age Fourteen*. Amsterdam IEA. (http://www.iea.nl/fileadmin/user_upload/Publications/Electronic_versions/CIVED_Phase2_Age_Fourteen.pdf).
- Vontz, Thomas S.; Metcalf, Kim K.; Patric, John J. 2000. *Project Citizen and the Civic Development of Adolescent Students in Indiana, Latvia, and Lithuania*. Bloomington: Eric Clearinghouse for Social Studies/Social Science Education. (http://www.civiced.org/papers/research_latvia.html).
- Weinert, Franz E. 2001. *Concept of Competence: A Conceptual Clarification*. *Defining and Selecting Key Competencies*. In: Rychen, Dominique Simone; Salganik, Laura Hersh, eds. *Defining and Selecting Key Competencies*. Seattle, Toronto, Bern, 45–65.
- Wringe, Colin. 2000. Diversity of Moral Education. In: *Journal of Philosophy of Education* 34 (4), 659–672. (<http://onlinelibrary.wiley.com/doi/10.1111/1467-9752.00194>).



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