Key Competencies for and beyond Sustainable Consumption
Fischer, Daniel; Barth, Matthias

Published in:
Gaia

DOI:
10.14512/gaia.23.S1.7

Publication date:
2014

Document Version
Publisher’s PDF, also known as Version of record

Citation for published version (APA):

General rights
Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

Take down policy
If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Download date: 25. Apr. 2019
Abolish the Junk of Affluence!

Although the world is still unable to give up the drug of “growth”, the debates about the end of excesses are gathering momentum. Sustainability researcher Nike Pezch provides a timely polemic that unmask the myth of “green” growth. In his counter model of a post-growth economy, he calls for restrictions upon industrial value added processes and for patterns of self-sufficiency to be strengthened. An eloquent plea for a decentered and unbordered world.

N. Pezch

Liberation from Excess
The Road to a Post-growth Economy
160 pages, paperback, 12.95 EUR, ISBN 3-86581-224-4
Also available in German.
Available at www.oekom.de / oekom@oekomverlag.de

From Knowledge to Action

Is the online trade in second-hand products changing individual consumer behaviour? How can energy-consuming daily routines in the workplace be transformed? These are only some of the research questions which highlight that there is much more to “sustainable consumption” than the simple purchase of organic or fair trade products. The editors of this book provide an insight into a research sector that is increasing in significance in our consumption-oriented socio-economic system.

R. Delia, A. Di Giaia, R. Kaufmann-Hayes (eds.)
The Nature of Sustainable Consumption and How to Achieve it Results from the Focal Topic “From Knowledge to Action – New Paths Towards Sustainable Consumption”
608 pages, paperback, 44.95 EUR, ISBN 978-3-86581-202-2
Also available in German.
Available at www.oekom.de / oekom@oekomverlag.de
How can we conceptualize the capacity of individuals to meet the multifold demands they are facing as consumer citizens to contribute to sustainable consumption? A competence approach provides an integrative framework and uncloses new perspectives in the debate.

Key Competencies for and beyond Sustainable Consumption
An Educational Contribution to the Debate

Abstract
Sustainable consumption is a field characterized by complex system relations that do not allow prescribing easy solutions for changing consumer behavior. This paper provides an educational perspective on the controversial debates that have evolved in GAIA and the broader scholarly literature about the roles and responsibilities of individuals in the context of sustainable consumption. We introduce an educational key competencies approach comprising of seven generic competencies, and argue that the promotion of key competencies is a transversal contribution to this debate, as it does not favor any particular normative position, but is relevant across all. We advocate for a more comprehensive and effective conception of an educational contribution to promoting sustainable consumption that goes beyond the narrow focus of training skills, providing information, and testing for results.

Keywords
consumer competence, education for sustainable development, key competencies, secondary education, sustainable consumption, vocational education

Contact: Dr. Daniel Fischer | Leuphana University of Lüneburg | UNESCO Chair in Higher Education for Sustainable Development | Scharnhorststr. 1, C14.312b | 21335 Lüneburg | Germany | Tel.: +49 4131 6772927 | E-Mail: daniel.fischer@uni.leuphana.de
Prof. Dr. Matthias Barth | University of Applied Sciences Ostwestfalen-Lippe | Institute for Competence Development | Höxter | Germany | E-Mail: matthias.barth@hs-owl.de

© 2014 D. Fischer, M. Barth; licensee oekom verlag.
This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/3.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

1 Here we use the terms “competency” and “competence” synonymously.
tate the interplay of cognitive, emotional and motivational dispositions and represent a system of preconditions that enable individuals’ self-organized learning processes (Klieme et al. 2008). The term “key competencies” highlights the significance of certain competencies: key competencies are relevant across different spheres of life and for all individuals and do not replace but rather comprise domain-specific competencies, which are necessary for successful action in certain situations and contexts (Rychen 2003). The question we want to raise then is how an educational key competencies approach relates to these different conceptions and what an approach can contribute to the promotion of sustainable consumption in and beyond an instrumental perspective.

Our analysis focuses on a framework of key competencies for sustainable consumption as it has been developed in the three year project BINK (German acronym for “educational institutions and sustainable consumption”). The development of the approach in the project was informed by an intense interdisciplinary discussion between educational practitioners and an interdisciplinary team of researchers about an effective and legitimate educational approach to the promotion of sustainable consumption among individuals. We will offer a brief summary of the approach in part two of the paper (for a more detailed elaboration of the approach and the process of its development see Fischer and Barth forthcoming). In what follows we will discuss how the framework of key competencies for sustainable consumption as an elaborated educational key competencies approach relates to the major controversies in the debate, what contributions it can make to the debate and what implications this has for a more comprehensive and effective conception of an educational contribution to the overall agenda of promoting sustainable consumption.

The Role of Individuals in Sustainable Consumption: Major Controversies in the Debate

In our view of the field, three related, yet differently accentuated controversies can be identified in the scholarly literature on the role of individuals in promoting sustainable consumption. The positions within these controversies are also prominently reflected in the debates in GAIA on this issue between 2010 and 2012. From an educational perspective that focuses on key competencies, the positions within each controversy have substantially different ramifications with respect to what abilities, proficiencies or skills should be promoted by the educational system.

We want to make two remarks on the following description of the controversies:

1. The positions in the controversies represent somewhat ideal types of opposing poles in the debate. In their purified form, however, they are rarely exclusively promulgated.
2. In what follows, references to authors are made to highlight conflicting issues. We do not claim to position entire works or authors in camps.

Controversy 1: Persuasion versus Co-Determination

A first matter of controversy concerns the question as to how policy makers should engage with consumers to promote more sustainable consumption.

One position in the debate argues for the development of specific communication strategies and the design of decision contexts that reduce the complexity inherent in sustainable consumption and induce and persuade consumers to make simpler and more sustainable choices. Bilharz and Schmitt (2011) suggest focusing communication efforts on those behaviors that evidently have the greatest environmental impact (key points). Bilharz and Schmitt’s motivation is primarily to relieve individuals of the burden of distinguishing between relevant and irrelevant impacts of their consumer choices by themselves. In this sense, it represents a classical position of scientifically informed consumer information. While Bilharz and Schmitt highlight the need for providing consumers with better knowledge of the relevance of different consumer behaviors, Heidbrink and Reidel (2011) go even further and challenge more fundamentally the actual ability of consumers to act sustainably. In their view, which is grounded in liberal paternalism, consumers are characterized by bounded rationality and selective distortion (e.g., through advertising or habits) which significantly reduces their ability to make well-informed choices. Hence, they consider any consumer policy building on the notion of consumer sovereignty and the informed consumer as utterly bound to fail. As a way out they suggest addressing contexts in which consumers make their decisions, and redesigning them in ways that induce consumers to act in favor of sustainable consumption. This does not foreclose that individuals actively participate in (political) decision-making processes with regard to how these organizational and institutional arrangements should be designed. It does, however, assign the responsibility for achieving sustainable impacts in consumption to the political system. Essentially, the first position requires an overall willingness to comply with and support interventions in everyday decision-making contexts.

The contrary position conceives of individuals not as objects that need to be pushed in a certain direction, but as co-constructors in a social learning process that is directed towards determining what sustainable consumption is and how it can be achieved. Rejecting the idea that experts can define solutions to problems of unsustainable consumption in ways that then only need to be politically enacted, Siebenhüner (2011) argues instead that households and individuals have a critical role to play in (co-)developing and experimenting with social innovations. Hence, the aim of policy efforts seeking to promote sustainable consumption should be to enable individuals to participate in such decision processes (Barth 2012). In this sense, policy efforts and communication strategies should seek to stimulate learning processes and the development of new solutions, rather than to convey recipes (Hübner 2012). Essentially, the second position necessitates the fulfillment of a number of preconditions among consumers, namely in terms of self-reflection, communicative and deliberative skills and the ability to take collaborative action (Barth 2012, Hübner 2012).
Controversy 2: Private Consumption versus Political Action

A second matter of controversy deals with the question about how far sustainable consumption should be addressed as a matter of private consumption and/or political action.

One position in the debate problematizes the political focus on changing private consumption as a silver bullet in achieving sustainable consumption. Grunwald (2010) criticizes a tendency to delegate the responsibility for progressing towards sustainable development from the level of the political system to the sphere of private consumption. He conceives this tendency as an inherently undemocratic process, as it mixes public deliberation with more subtle (publically facilitated) moral pressure on the private sphere of individuals. In his view, deliberative processes about sustainable consumption need to be situated in the public political realm of the polis. Individuals should not primarily be conceived of as consumers, but as political agents in different societal subsystems. While there are good reasons for individuals to strive for coherence between private and political behavior, private consumer behavior should remain in the private sphere and not be made a subject of moral pressure through public facilitation (Grunwald 2011). It can only be considered political when it is enacted publicly in a demonstrative manner, that is, with a political intention (Petersen and Schiller 2011). Essentially, this first position requires individuals to develop the capacity to engage in public deliberation processes and to act as political change agents in different roles, contexts, and “personalities” (Heidbrink and Reidel 2011).

The contrary position claims that consumer behavior should always be considered as an expression of political action, rather than something distinct from it. Siebenhüner (2011) adopts a governance perspective and argues that in light of the ubiquitous char-
acter of politics today, private behavior inevitably has a political dimension. Likewise, Bilharz et al. (2011) refer to the influence of changes in private consumption patterns on policy processes. Essentially, the second position requires individuals to (re)consider the political implications of their private consumer behavior and to exert and use market-based and political power.

**Controversy 3: Intentions versus Impacts**

A third matter of controversy builds on the distinction between an intent-oriented and an impact-oriented approach to assessing the sustainability of individual consumer behaviors (see Fischer et al. 2012). While the former acknowledges that consumer choices may be made with or without the explicit intention to result in sustainable effects, the latter accounts for the sustainability of their factual impacts. At the heart of the controversy is the question of in how far the responsibility of consumers should entail both perspectives.

One position in the debate argues that it is beyond the responsibility of individuals to account for the real effects of their consumption choices, but that it should be the responsibility of politicians to take effective measures to ensure that citizens can enact their overall consumer intention in order to contribute to the goal of sustainability and that these individual actions have intended impacts (Heidbrink and Reidel 2011). Petersen and Schiller (2011) draw two conclusions here: firstly, individuals have no responsibility for the overall progression towards sustainable consumption in terms of real consumption impacts, unless they actually take over political roles. Secondly, even if individuals (voluntarily) can (at least to some extent) foresee the effects of and assume responsibility for their consumer behaviors, they can only be made responsible for their intentions to contribute to (or to at least not impede) sustainable development. Essentially, the first position does not imply specific demands on consumers other than an overall willingness and intrinsic motivation to contribute to the aim of sustainability (Rauschmayer and Omann 2012) and the respective acceptance of public intervention (Heidbrink and Reidel 2011). This position is underpinned by the rather pessimistic assumption that consumers have only little interest in acquiring in-depth knowledge about the impacts of their consumption choices anyway (Grunwald 2010).

The contrary position acknowledges that the interaction between intended impacts of consumer behaviors and those that actually occur is complex and can neither be unanimously determined by science nor fully comprehended by individual consumers (Grunwald 2010). Notwithstanding and contrary to the former position, it considers it crucial to motivate consumers to engage with and account for the impacts of their behaviors. In this sense, Bilharz and Schmitt’s (2011) key point approach is not only concerned with more evidence-based, persuasive communication about behaviors and their overall effects (see controversy 1), but distinguishes between individual behavior directed towards assumed impacts and behavior directed towards impacts that have been proven to occur. The moral implications of this perspective become obvious when Bilharz et al. (2011) openly advocate the responsibility of consumers for overall societal progress toward sustainable consumption. Essentially, the second position presupposes critical motivational and intellectual proiciencies among individuals: namely their ability to evaluate the effects of their consumption choices on sustainable development (impact knowledge), to reflect on their responsibility for an overall progression towards more sustainable consumption and to reorient their consumer behaviors accordingly. This includes skills in identifying reliable sources in the search for such information. This position rejects the claim of an overall disinterest in knowledge about effects of consumption among consumers (Siebenhäuser 2011).

**Empowering the Individual: An Educational Key Competencies Approach**

Our exploration of how an educational key competencies approach relates to these different conceptions builds on an approach that was developed in the transdisciplinary research and development project **BINK** (for an introduction to the project background see Barth et al. 2010). The project ran from 2008 through to 2012 as one of ten projects of the focal topic From Knowledge to Action – New Paths towards Sustainable Consumption. In the project, partners in practice from six educational organizations (two secondary schools, two vocational schools and two higher education institutions) collaborated with an interdisciplinary team of researchers to promote sustainable consumption among youths and young adults. At the heart of the project was the participatory development of interventions to change the organizational culture of consumption in each affiliated educational institution (for an overview of the results see Michelsen and Fischer 2013). In the course of the project work, it became a subject of intense debate what the intended changes in the project should effectively promote among students. It emerged from the debate that an educationally acceptable rationale for interventions must focus on the potential of individuals to act, not on the action itself (see Fischer and Barth forthcoming for a more detailed elaboration on these arguments). The framework of key competencies for sustainable consumption resulted from this process. It thus focuses on formal schooling, particularly in the secondary and vocational education system.

The framework that was developed comprises seven key competencies for sustainable consumption, each of which consists of underlying cognitive and non-cognitive dispositions (see table; for a more comprehensive elaboration of the development of the framework see Fischer and Barth forthcoming). What the competencies have in common is that they are all oriented towards sustainability but also become relevant in contexts that go beyond...
The DeSeCo project (1997 to 2003) sought to produce a strong and widely shared consensus on which key competencies are necessary for the modern world. The aim was to depict a limited number of generic competencies that can be agreed upon as crucial. Based on a comprehensive literature review and the synthesis of a wide range of expert and stakeholder opinions, the framework plays an authoritative role for contemporary educational research and was linked, for example, to the two international large-scale assessments of competencies Programme for International Student Assessment (PISA) and Adult Literacy and Lifeskills (ALL) (Rychen 2003).

Three categories of key competencies were identified that are valid across different domains: The focus of the first category, to act autonomously, comprises key competencies that empower individuals to manage their lives in meaningful and responsible ways, and to develop a personal identity and value system. The second category, interacting in socially heterogeneous groups, concerns communicating and cooperating with other members of society. The third category, interactive use of tools, not only refers to necessary technical skills (the ability to read texts or to use a computer), but also to the degree of familiarity with the tool itself and the ability to reflect critically on its possibilities and limitations. Those competencies that are seen as key for multiple contexts and that are needed by everyone now can be structured and further detailed against the three categories.

Before we briefly present each key competency, it should be noted that they are not to be misunderstood as clearly distinct or exhaustive. According to Weinert’s aforementioned definition of competence, key competencies have to be perceived as “roughly specialized systems”. These systems or bundles of abilities, proficiencies or skills respond to different challenges that individuals are facing in the domain of consumption. The competencies themselves, however, need to be conceived of as interrelated and co-dependent; this is why they can only be adequately understood in their interplay and not from an isolated perspective. This becomes particularly obvious on the level of underlying dispositions, where such motivational dispositions to engage with sustainable consumption or attitudes towards sustainable consumption inform and shape the nature of literally every key competency. It is the specific set of dispositions that form a distinctive key competency and set it apart from other competencies.

Developments in today’s consumer societies are characterized by an increasing commoditization of needs and their satisfaction through market goods. The competency to reflect on individual needs and cultural orientations refers to the ability of individuals to critically engage with these developments and to reflect on their compatibility to their idea of sustainability (number 1 in table). This includes the willingness and ability to explore and scrutinize one’s own aspirations, wants and needs as well as established habits and practices that lead to their satisfaction. In a perspective that transcends the individual level, such reflection also entails and encourages analyses of collective cultural orientations (e.g., with respect to the proliferation of commoditized forms of needs satisfaction) and political agendas (e.g., concerning such issues as life-work balance or alternative welfare models). In particular, it presupposes knowledge of how these preferences are culturally contextualized and shaped. In a social and political context, such a reflective stance requires the ability to criticize unsustainable trends and systems of provision and to accept criticism by others.

Planning, implementing and evaluating consumption-related activities in a sustainable way are processes crucial for sustainable consumption. There is a whole range of relevant behaviors, encompassing not only the individual’s role in the market (e.g., the acquisition of goods or services, contact with companies’ customer service, or consultation of peers in acquisition processes) but also broader aspects of citizenry like participating in and influencing decisions about acquisitions in the public sector (e.g., eco-friendly materials or renewable energy) (number 2 in table). The ability to plan activities refers to the knowledge of how to assess in advance available resources, collaboration activities and consequences as well as possible side effects of different actions. It further covers the skills in developing and applying certain criteria to the selection and assessment of different options (e.g., in terms of quality or costs but also of the ecological and social impacts). Finally, it demands critical reflection on needs and even the consideration of non-consumption as an option. The ability to implement encompasses the knowledge and practical skills to execute a specific activity, while the ability to evaluate enables one to assess whether the activity contributes towards the intended objective.

The competency to critically take on one’s role as an active stakeholder in the market enables individuals to contextualize their roles in the broader system of provision and consumption (number 3 in table). It requires knowledge of system environments and of the roles, rights and duties of different actors within, and more particularly of opportunities to work towards changing these conditions into more sustainable ones. This includes skills to adopt a life-cycle perspective on the production, consumption and discarding of goods and services.
posal of goods (and services), the ability to put oneself in the position of other actors as well as the willingness and skills to forge strategic alliances with other actors to achieve common goals.

This conception of a political role of consumers transcends the narrowly confined boundaries of individual actors who engage in market-based transaction of commodities. Moreover, it implies the development of agency for political change and requires the competency to communicate the idea of sustainable consumption to others (number 4 in table). Clearly, this presupposes knowledge of the ideas, values and concepts underpinning the notion of sustainable consumption and involves the cognitive, motivational and empathetic skills to process this knowledge for different communicative formats, situations and interlocutors and audiences.

Individuals further need to be able to use, edit and share different forms of knowledge (e.g., own practical experiences, word of mouth experiences, written facts, mental concepts) in their different private and political roles (number 5 in table). This requires a willingness to invest resources into the search for adequate information, the ability to evaluate the validity of the information, and to use it to inform one’s own consumption-related decisions. Different knowledge may lead to different action. This competency involves the readiness to endure tensions that arise from such seeming contradictions. In a social perspective, it further reflects the motivation of and ability to share knowledge with others.

Information and communication technology (ICT) plays an important role as a source of knowledge and interaction with sustainable consumption issues. The competency to use this resource effectively includes the motivation and ability to search for information and reflect on its validity and reliability. However, it goes beyond research strategies and also involves an interactive component that enables individuals to use ICT to process information and pass it on to others. This interactive component also features the ability to use the potential of ICT 1. for social interaction, 2. for critically assessing the opportunities that ICT offers for the promotion of sustainable consumption, and 3. for assessing the risks that are involved with their dissemination (number 6 in table).

The competency to think visionary and to consider interrelatedness focuses on future-oriented thinking and comprises individuals’ awareness of their attitudes and values towards intra- and intergenerational justice as well as their opportunities to contribute to a sustainable development of consumption and production patterns (number 7 in table). This presupposes knowledge of the interlinkages between consumption and production systems, the ability to appraise the implications of one’s own consumption choices for others today and in the future, as well as a general perception of the future as undetermined and shapeable.

The framework of key competencies for sustainable consumption contributes to a broader body of research on competencies and key competencies in the field of sustainability-related education (see, e.g., Wiek et al. 2011). Its approach allows to relate and merge three specific perspectives that have not been integrated and addressed in the research field yet: it focuses on key competencies, in the domain of sustainable consumption, and elaborates these for the formal secondary and vocational school system.

**Discussion: Key Competencies in Light of Controversies**

The foregoing discussion of controversies shows that a variety of different expectations exists with regard to what proficiencies consumers need in order to adequately act in contexts related to sustainable consumption. How does an educational key competencies approach relate to these expectations and to the overall controversies in the debate?

For a first approach to an answer we need to recapitulate a distinct characteristic of a competence approach. Competencies refer to an individual’s potential to cope with the demands of different situations that he or she is confronted with in a given domain. As such, it does not prescribe certain behaviors or determine which choices an individual should make. With this focus on enabling individuals to meet the demands of a given domain, a competence approach is first and foremost to be conceived of as neutral with respect to any normative position in the controversies.

A second approach to an answer is to explore how the different key competencies proposed in the framework described above meet the demands and expectations of the different positions in the controversies. On closer examination it becomes apparent that the different key competencies do not stand in contrast to single positions, but instead make contributions to all of them. It enhances individuals’ abilities to come up with both an effective and informed response to persuasive strategies and to actively engage in deliberative and decision-making processes (controversy 1). It addresses individuals in their multiple roles, from private consumers to political actors (controversy 2). Finally, it promotes the skills to reflect on the normative orientations that underpin our intentions to consume and to foresee the effects that our consumption choices and actions may cause (controversy 3). From this somewhat instrumental stance, the key competencies approach is — with different emphases — transversal to the controversies and relevant for all positions in the debate (which could be termed competencies for sustainable consumption).

A third approach to an answer, finally, is to accentuate the qualitative extension in the notion of key competencies and their emancipatory potential. The emphasis is on those competencies that are relevant across different spheres of life and thus influence the overall ability of individuals to successfully realize their ideas of a good life. Moreover, as reflexivity plays a central role in the approach, key competencies always strengthen the individual’s ability to question practices, beliefs and knowledge that are taken for granted (see, e.g., key competency 1). In this rather emancipatory and genuinely educational stance the key competencies approach transcends the boundaries of meeting domain-specific requirements. It goes beyond the question of what abilities, proficiencies or skills individuals need to possess in order to be able to act competently in consumption contexts, as it seeks to enhance individuals’ capacity to engage with more fundamental questions (such as clarification of values, reflection of needs, etc.) that also apply to other domains of life. In that way, it embraces the individual’s overall opportunities to live a good life, not just within, but
also beyond the sphere of consumption (these could be termed competencies that go beyond sustainable consumption).

Summing up, it can be concluded that an educational key competencies approach cannot be situated within single positions of the debate. Instead, it is rather relevant across all positions, both as an instrumental approach that promotes the acquisition of competencies for sustainable consumption and as an emancipatory approach that enables individuals’ competencies to go beyond the sphere of consumption. Hence, the promotion and acquisition of such key competencies is important irrespective of specific approaches to achieve sustainable consumption.

An educational key competencies approach is relevant both to promote the acquisition of competencies for sustainable consumption and to enable individuals’ competencies to go beyond the sphere of consumption.

Implications

We have argued that an educational key competency approach is a transversal contribution to the controversies in the debate and as such relevant to supporting and facilitating progression towards sustainable consumption irrespective of any particular approach. Following on this, what can now be done to tap the full potential of an educational key competencies perspective for the realization of sustainable consumption? We will discuss implications on two levels, those that concern the role of key competencies in sustainable consumption policies and strategies, and those that promote key competencies in educational practice and research.

The Role of Key Competencies in Sustainable Consumption Policies and Strategies

Sustainable consumption policies and strategies disclose a number of approaches and measures to stimulate changes in consumption patterns. According to Kaufmann-Hayoz et al. (2012), these can be categorized into four groups: regulatory, cooperative, economic and communicative instruments. The promotion of dispositions associated with the concept of competence traditionally fall into the remit of “soft” communicative instruments (e.g., formal education or media campaigns). A major deficit in the political use of communicative instruments is the fact that they are often reduced to mere information provisions mechanisms. These do not only fail to tap the potential of more sophisticated communication strategies as they have been advocated for by consumer scholars (Tükker et al. 2008), focused on capacity-building, empowerment and deliberation. They also employ a somewhat simplistic rationalistic model of an information seeking consumer that neglects the complex interplay of cognitive and non-cognitive dispositions. A recent and prominent example for this uninspired interpretation of communicative instruments is the latest European Consumer Agenda (EC 2012). We see a great need to overcome the narrow focus on the provision of information for the sake of triggering behavioral change, towards a more comprehensive appreciation and utilization of the potential inherent in an educational key competencies perspective. Herein lies not just a task for the education system (as outlined below), but a challenge also for the overall design of and research on formal and informal participation structures, deliberative processes and the vibrant field of emerging social innovations.

The Promotion of Key Competencies in Educational Practice and Research

What role can these key competencies play for a revised form of consumer education that acknowledges the outlined controversies and seeks to enable consumer citizens to act responsibly both individually and socially? First of all, it adds to the educational practice by offering a set of systematically derived learning objectives. In the formal school system it offers manifold opportunities for curricular innovations aimed at developing learning that amounts to more than the mere practising of certain prescribed behaviors to master private consumption. Educators can use these learning objectives as a starting point to choose meaningful topics and teaching scenarios for the development of their very own learning setting. Referring to competencies and the development of these competencies offers a framework in which we can make informed decisions for successful learning. Problem-based learning in self-directed and collaborative settings with meaningful tasks for the students has proved to be a strong enabler of such learning (Barth and Burandt 2013).

A focus on competencies as intended learning outcomes also helps to systematically address the important question of how to evaluate and assess what sort of change can be achieved by such learning. A framework of key competencies offers ways of operationalizing these learning objectives and choosing adequate assessment tools. That does not mean we have to follow a seemingly dominant paradigm of measuring visible outcomes. On the contrary, this enables us to find alternatives to psychometric approaches of assessing learning and to focus instead on edumetric approaches that do justice to the complex interplay of cognitive and non-cognitive dispositions. Such an approach will in turn change the way we look at the learning process, as we stop to ex-
clusively test for results, but instead think and make use of other, more appropriate methods of evaluating the learning that takes place. What is needed is a new understanding of and a new approach to assessment in education. According to Gibbs and Simp- son (2004), such a new perspective on assessment challenges the traditional testing paradigm (assessment “of” learning) and con-siders the potential of assessment as a facilitator for learning (assessment “for” learning) or – more radically – as the key process of learning (assessment “as” learning). In this way, future work in the field could also contribute to overcome the lack of evidence on the effectiveness of approaches in the context of Education for Sustainable Development (ESD) (Tilbury 2011).

Thus an educational key competencies approach offers oppor-tunities to overcome some of the tensions that are inherent in the elaborated controversies. This is, however, just the beginning of what we see as a much needed debate about the link between learn-ing and sustainable consumption. More research and a thorough testing of this framework will be required.

The authors would like to thank all research partners and all partners in practice in the project Bildungsinstitutionen und nachhaltiger Konsum (BINK) for the critical and constructive discussions in the development and elaboration of the compo-nence approach reported here. The two anonymous reviewers and the guest editors are thanked for their valuable feedback on earlier versions of the paper.

References
Barth, M. 2012. Social learning instead of educating the other. GAIA 21(2): 91–94.

Submitted February 3, 2014; revised version accepted May 19, 2014.

Daniel Fischer
Born 1980 in Leverkusen, Germany. Trained primary school teacher, Master’s degree in educational management and school development. PhD on education and sustainable consumption. Since 2008 research fellow at the UNESCO Chair for Higher Education for Sustainable Development at Leuphana University of Lüneburg, Germany. Research interests: education for sustainable development, sustainability communication and journalism.

Matthias Barth
Born 1974 in Bamberg, Germany. Studies in environmental science, PhD in educational science analyzing the development of sustainability-related competencies. Since 2012 professor for didactics in environmental science at the University of Applied Sciences Ostwestfalen-Lippe, Germany. Research interest: education for sustainable development.