

Research Article

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Using Geography Textbooks in Competence-Based Education: A Study about the Actors in Germany

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Abstract

Competence-orientation plays a meaningful role in many recent school curricula. But how are the theoretical and conceptual approaches of competence-orientation based on educational research interpreted by in-service teachers, teacher trainers and representatives of the school administration? And which approaches of competence-orientation are implemented in every day school life? Therefore the article focuses on the subjective concepts of competence-orientation of different participants (stakeholders at school, seminaries for teacher education and ministry of education) in the educational system. Initially, the individual topics and hypotheses are generated based on qualitative expert interviews with these stakeholders. The stakeholders at the seminaries for teacher education and the ministry of education suggest a strong use of media other than the licensed textbooks, or a different way of making use of the provided materials and tasks within the textbooks than it is intended. However, it seems that most in-service teachers stick to the combination of tasks and materials arranged within the textbooks. Thus suggests, that every day school lessons are not competence-oriented in the way, the stakeholders at seminaries for teacher education and at the ministry of education want them to be. One cause may be the textbooks, which should provide a new, different combination of tasks and materials for competence-based education to enable competence-based education in every day school life.

Keywords

Competence-Orientation, Geography Education, Textbook, Educational Media, Qualitative Study

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After the Pisa-Study 2001 the German educational policy implemented educational standards on the federal level. In the case of geography, the German Geographical Society formulated educational standards (German Geographical Society, 2014) that have been accepted by the Federal Ministry of Education and Research. These educational standards define subject-specific competences. With the help of tasks, they should make analysis and testing possible on different competence levels within lessons. Baden-Württemberg, as example for one of the sixteen federal states, oriented its curricula 2004 on key competencies (Oelkers, 2008; Ministerium für Kultus, Jugend und Sport des Landes Baden-Württemberg, 2004).

The demand for subject-specific competences is accompanied by the request for more “output-orientation”, in which apart from subject-specific knowledge and skills domain-general competences are acquired and further developed.

So, competence-oriented education as a concept has a vital meaning in new guidelines for teachers and should be put into practice in regular lessons. But Schott and Ghanbari (2012) suggest that there is a gap between research-based theory and guidelines on the one hand and practice on the other. This statement manifests itself when looking at research findings on the acquaintance of geography teachers with the educational standards of the German Geographical Society. Horn and Schweizer (2015) state that 26,2% of the geography teachers in the different kinds of secondary schools are acquainted with these educational standards. Several questions occur:

- 1) What are the subjective concepts of the different participants within the educational system on competence-oriented education?
- 2) How did the different participants get their subjective concept of competence-oriented education?
- 3) Applies this gap between research-based theory and practice only for the educational standards of the German Geographical Society, or are other research-based theories and guidelines unknown, too?
- 4) Where exactly lacks the transmission into practice – at the ministry, at the seminar-ies for teacher education, or at an entire different position?

These questions lead straight to the role of textbooks within competence-oriented lessons. When it comes to the implementation of new curricula, textbooks play a leading role (Oelkers, 2008). From the view of teachers, textbooks are held to be more important than curricula (Oelkers, 2008), and serve as individual curriculum of the teacher in every day school life (Vollstädt, Tillmann, Rauin, Höhmann & Tebrügge, 1999; Wiater, 2005).

Methodology

To answer the aroused questions, the view of different participants in the educational system on how competence-oriented geography education should be like, and on how the textbooks are used and should be used in competence-oriented lessons is of interest:

- Stakeholders at school: These in-service teachers are geography teachers working at Gymnasium, and from now on called “practitioners”.
- Stakeholders at seminaries for teacher education: These teachers are said to have exceptional knowledge on teaching as they train on-going teachers for one and a half year. In this outstanding position and within the school system they make sure, on-going teachers learn up-to-date theories and concepts of teaching and make use of them.
- Stakeholders at ministry of education: These teachers work at the regional councils of the ministry. They consult schools and in-service teachers within their region and organize staff training. So, like the teachers at seminaries for teacher education, they have an outstanding position and are said to have exceptional knowledge on teaching.

For the last two groups the term “experts” is going to be used.

To get deep insights in subjective concepts of individual persons we did interviews. Furthermore, the advantage in comparison to quantitative studies is caused by the possibility to inquire and ask for reasons, examples etc. in order to explore. So it is possible to constitute hypothesis. Of course, qualitative studies lack representativity and there are no control groups. A qualitative study would be a further step afterwards to verify the hypothesis and yet to early.

Participant Population

The group of experts within Baden-Württemberg consists of about 50 persons. The interviewed experts have been recruited via a simple random sampling. All experts have been contacted via letter or email. Out of this group, 19 replied willingly. After interview seven there was no need for more experts, because the extracted results were akin. So, there was no hint, that in this group various subjective concepts of competence-based education in theory and practice were existing. It is usual, that these outstanding persons have additional functions due to their knowledge. Two of the experts are also in charge of the State Institute for School Development in Baden-Württemberg. Three of the experts are authors of geography textbooks.

The interviews with the practitioners have been made after the interviews with the experts. These two interviews served as a counterpart to the experts’ view to get a maximum contrast between practitioners and experts. The extracted results confirmed the current state of research of Horn and Schweizer 2015. So there was no need for further interviews with practitioners. The coincidental sampling of the two practitioners seemed advantageous, because both – as authors of geography textbooks - have been available due to personal contact.

The interviewees cover a wide range of age and experience as they did their internship working with different curricula from different decades. One interviewee did his internship with the curricula 1977, one with the curricula 1984, four with the curricula 1994, two with the curricula 2004, and one did his internship in North Rhine-

Westphalia with the curricula 2006. It was necessary to consider the age and experience because, proceeding from the different curricula, the interviewees could have different subjective concepts or views on competence-based education.

Materials and Procedure

Technical performance. We performed individual qualitative expert interviews in the form of guided interviews (Mey & Mruck, 2007; Gläser & Laudel, 2010; Reinders, 2011) and recorded each interview. The single interviews required 35-55 minutes. Due to the wish of three interviewees we did these interviews in the bureau of the interviewer; the other interviews have taken place in the bureau of the interviewees.

Subsequent to the interviews we did the transliteration as literarily transcript. We used a sequential structure. A second person always controlled the transcript (Dittmar, 2009).

To get hold of the data we used the software MAXQDA for coding the interviews. Two collaborators did an inductive concurrent categorization procedure in order to ensure a reliable coding system. In the end, the coding system was with three levels (“main code” – “subcode” – “subsubcode”) delicate, so the amount of text per (sub)subcode was manageable. The main codes are “subjective understanding of competencies”, “curricula”, “usage textbook”, “example given lessons and tasks”, “materials & media”, “future textbook”, “research/theory – practice transfer”, “varia” and “future competencies”.

For example, the maincode “usage textbook” has several subcodes: “Klett – Terra”, “Schroedel – Seydlitz”, “Westermann – Diercke”, “Task --> Material”, “Place within lesson”, “Critic regarding competence-oriented lesson” and “time required within lesson”. A segment in an interview could be coded plurally with “Klett – Terra”, if the segment was about that textbook, with “Task --> Material”, if the segment was about the relation between a task and material and “Critic regarding competence-orientation”, if the segment was also a critic on the usage within competence-oriented lessons. As an example for subsubcodes we used “M1”, “M2” etc. to attribute the appropriate material in the textbooks with the text segment.

Afterwards, two persons did the consensual qualitative content analysis (Schreier, 2012). Two persons analyzed separately the segments of each subsubcode and afterwards discussed their results to get a result as objective as possible. Paraphrases are the result of this step.

Procedure of the interviews. The guided interview (appendix, table 2) can be divided into several phases. In the entry phase, we explain the course of the conversation and the themes, collect the personal data, and the interviewee gives his consent to recording and publishing the anonymized interview (Reinders, 2011). Subsequently the warming-up phase begins (Reinders, 2011). Here the talk is about the subjective concept of competence-oriented geography education, the personal experience, the knowledge on research and the socialization within the internship of the individual teacher. The central themes and questions are integrated in the main-phase (Reinders, 2011). The interviewee analyzes under usage of demonstration media the role of text-

books within competence-oriented geography lessons and the concrete usage of materials and tasks in these textbooks. Afterwards the interviewee talks about other media and materials in their competence-oriented geography lessons. In the exit- and post-interview-phase the interviewees give insight into their imagination, how the future of competence-oriented geography education and textbooks might be. This is supposed to work as a trigger to subjects the interviewee wants to talk about and to conclude the interview in a positive way (Reinders, 2011).

Demonstration Media. The three licensed geography textbooks for Gymnasium grade 7, “Terra 3” (Obermann, 2005), “Seydlitz 3” (Amtsfeld, 2006) and “Diercke 3” (Bönig & Gaffga, 2006) served as permanent available demonstration material throughout every interview. In the second phase of every interview the interviewee analyzed a specific double page of each textbook dealing with an oasis (Klett 3 pages 86-87; Seydlitz 3 pages 54-55; Diercke 3 pages 52-53). Each interviewee also had the possibility to refer to different printed media like atlases, workbooks and supplementary volumes etc. that were available in their own bureau or in the bureau of the interviewer. However, none used these additional media but they named and described the media and materials they referred to and explained the pros and cons of the media and materials in a clear way.

Pretesting. After the development of the guided interview we tested it in three steps in order to fulfill the criteria of relevance, mutual understanding, and duration and correct exercise of the methodology. First, there was a discussion forum with the staff of the department of geography at the Heidelberg University of Education to analyze the interview phases and the battery of questions. Second, we did several pretest interviews to test the time needed and thirdly psychologists and social scientists checked the guided interview during a workshop at the GESIS Leibniz Institute for the Social Sciences.

Findings

Concepts of Competence-Oriented Geography Education

Analyses focus on the first contact with competence-oriented education showed, that the curricula 2004 was the framework, within that all interviewees dealt with competence-oriented education for the first time. The experts partially worked on the curricula and had to do research on the international scale and in current research on competence-oriented education to define what this meant (interview 2, 03/02/2015, “3). Other experts were provided with materials to work as multipliers for practitioners (interview 5, 03/03/2015, “7). All in all, the experts had intensive contact with competence-oriented education, either to define, what competence-orientation in Baden-Württemberg is, or as multipliers who had to explain this definition to practitioners, transfer it into understandable practical examples and answer questions. Whereas the practitioners faced competence-oriented education in teacher training beginning from 2004 on or within further trainings (interview 7, 03/18/2015, “7, interview 9, 04/01/2015, “4, 9). They received the condensed extract in a few hours and had to work with that extract for themselves. Experts and practitioners got their subjective concept of competence-

oriented education in totally different ways, amounts of knowledge and time to work it out.

However, besides the same framework for the first contact, the interviewed experts and practitioners have different concepts of competence-oriented geography education. The two practitioners refer throughout the interviews to subject-specific methods (e. g. drawing and reading climate graphs, reading maps, tables etc.) whereas the experts move away from the much too narrow understanding of competence as being the same as methodical skills. But in the common discussion, strangely the methodical skills are important (interview 6, 03/17/2015, “11). The experts refer to a broad concept of competence-oriented geography education relating on the educational standards developed by the German Geographical Society (2014), a mixture of the definitions of Weinert (2001), Leisen (2010) and Ziener (2013), and the twelve elements of competence-oriented geography education developed by the Central Project Group Geography (ZPG) (Hoffmann, Rendel, Renz, Rothenberger & Scholliers) for geographical education in Baden-Württemberg.

Table 1 shows the several elements named by and related to the educational standards, definitions and concepts. In order to give a concise overview over the two different concepts of the practitioners (narrow) and experts (broad), the qualitative data gathered through the guided interviews have been rearranged and integrated in table 1. Therefore, table 1 also shows the difference between the two concepts and the relations to the educational standards, definitions and concepts the practitioners and experts are referring to. The difference documents the experts outstanding position in the educational school system in Baden-Württemberg and their superior knowledge on teaching. There is barely a difference between the statements given by the seven interviewed experts throughout the whole interviews. The practitioners do not use the name of authors, groups or concepts, but just referred to subject-specific knowledge, spatial orientation and methodology as (genuine) geographical competencies plus differentiation, diagnosis and (self)organization as common competencies. Therefore, in the further article until the discussion, the experts’ point of view is of interest, while the practitioners’ statements - which mostly differ from those of the experts – are not that rich in content.

Table 1
Elements of Different Concepts of Competence-Oriented (Geography) Education and the Elements Practitioners and Experts Referring To During the Guided Interviews

Element	Concepts of competence-oriented (geography) education					Reference	
	German Geographical Society	Weinert	Leisen	Ziener	ZPG	Practitioners	Experts
(Subject-specific) Knowledge	X	X		X		X	X
Spatial Orientation	X					X	X
Acquisition of Knowledge/	X	X		X	X	X	X

Methodology							
Communication	X						X
Evaluation	X			X			X
Action	X		X	X			
Motivational will- ingness		X					X
Social willingness		X					X
Volitional will- ingness		X					X
Student-oriented Construction					X		X
Differentiation					X	X	X
Diagnosis					X	X	X
Process-/goal- oriented					X		X
Exemplary learn- ing					X		X
Problem-oriented Self-organization					X	X	X
Individualization					X		X
Performance- /product-oriented					X		X
Reflection- oriented					X		X

Experts' Textbook Usage

Textbook usage in general. The interviewed experts struggle with the use of textbooks in general and the double pages used as demonstration media in particular. While the interviewees 4 (03/03/2015) and 8 (03/19/2015) admit to the usage of textbooks in general in competence-oriented geography lessons for one-third to one-fourth of an average lesson, interviewee 1 (03/02/2015) acknowledges, that for him it is always challenging. The same goes for interviewee 3 (03/02/2015), who only uses the provided figures ("20). Textbooks usage of the interviewees 2, 5 and 8 differs from the textbooks' intended conception. None of the experts would use textbooks as entrance into the lesson. Three of the experts name the development as the phase within an average lesson, in which they would use textbooks (interviews 1, "40 4, " 35, 43, 8, "30). Interviewee 8 would also bring in textbooks to cover the developed results.

The two practitioners often make use of textbooks throughout the lessons despite they are not satisfied with the textbooks (interviews 7, "19, 25, 9, "49, 58). There is no further information given, what exactly they would change or what exactly should be different.

Usage of the provided double pages. The interviewees 1 and 2 rule out the use of the provided examples, the others searched for alternative ways to the textbooks' intended conception. Instead of tasks aiming at simple reproduction of the provided texts and materials, exemplary conflicts and problems should be solved (interviews 2,

“41, 5, “31, 6, “54). Students should be motivated to develop structures and products for themselves (interviews 2, “24, 3, “45, 4, “25, 8, “30). The intended design of how to use the provided tasks and materials is much too narrow (interview 1, “73), knowledge is added and added without interconnectedness (interview 4, “39).

Again, the statements of the two practitioners differ. Both see a clear way, how the materials und tasks should be used from the start of their lesson to the end. Critic is reduced to the design of the materials or the page itself. The design should be more up-to-date and the images should be larger (interviews 7, “33, 37, 9, “9).

A second problem besides the not fitting combination of tasks and materials is the amount of text (about 50% per double page) and the way it is written. It is too much text (interviews 1, “40, 2, “29, 3, “39, 4, “41) and the lexical spelling style does not attract students (interview 5, “31).

For lack of space a few exemplary elements from the submitted double pages are presented below. They are used to showcase the criticism passed on the content and alternatives for the successful usage of the text book in competence-oriented lessons.

Arial images of an oasis. In all three text books an oblique arial image of an oasis was used. In Terra 3 the image was supplemented by labeled arrows describing the change oases are undergoing. Precisely those arrows prevent the usage as mentioned above (interview 3, “39). The oasis images are rated “good” in Diercke 3 and Seydlitz 3 (Interview 2, “33; “41; 6, “56; 8, “24, 30) yet for a competence-oriented application in lessons it should be provided digitally in order to be able to change the scale. Apart from that image matching is suggested to point out processes of change between past and present (interview 1, “40). Still

“(…) the image by itself is not enough (…)” (Interview 3, “39).

The image can be made more student oriented by role play, demonstrating possible conflicts (ebd.). Only a competence-oriented work instruction provides that “(…) students acquire the topics by themselves, (….) and they should try for themselves to comply structures (….) of how an oasis is composed, what can I see, and this is competence-orientation, that students understand things by working them out for themselves, (….)” (interview 8, “30, similar in interviews, “44; 4, “35, 43).

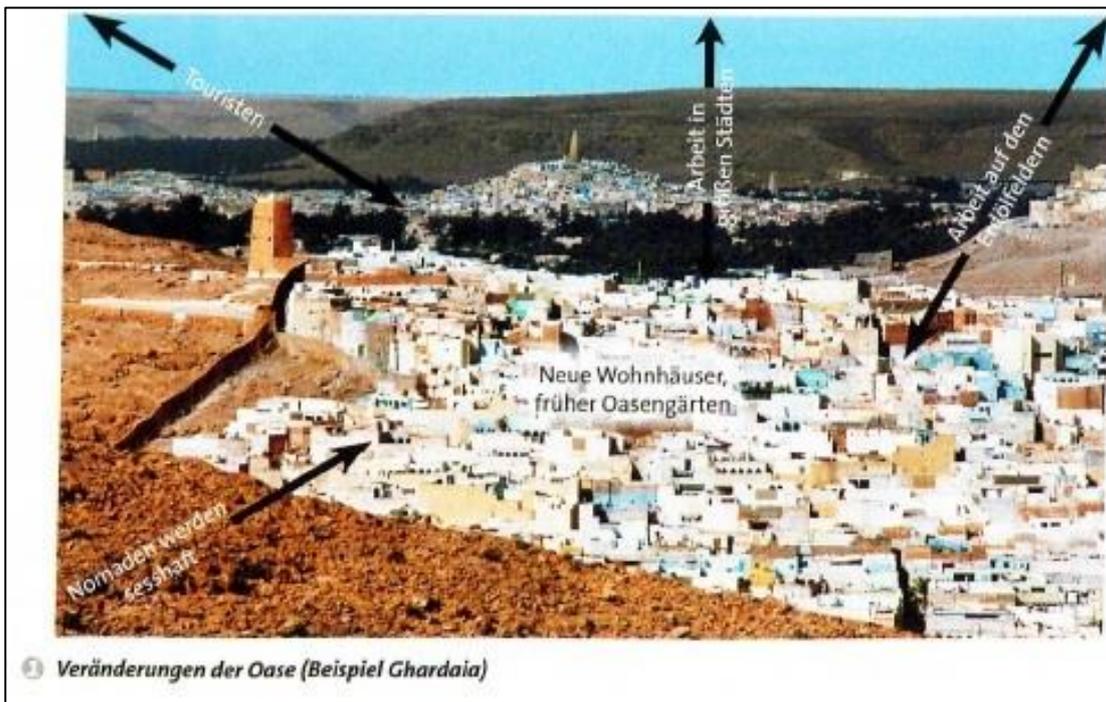


Figure 1. Typical aerial image of an oasis in textbooks (Obermann, 2005, p. 86).

Date palm. The date palm is used in all three text books in different ways. In Terra 3 a boy climbing the palm is depicted, whereas the figures in Diercke 3 and Seydlitz 3 show the deeply planted roots of the date palm. The image in Terra 3 is generally regarded as unworkable since it has no significant value (interviews 1, “40; 2, “29). The criticism on both the figures in Diercke 3 and Seydlitz 3 is that there is no interconnect- edness between open space and human utilization (Interviews 4, “35, 43; 6, “56). Using the date palm as an example the human-environment-system could be explained, yet this is not implemented. This way the lesson remains a “(...) purely additive process (...)” (interview 4, “35) without interconnectedness. The figure in Diercke 3 includes numerous comments on date palms. These comments are criticized just like the oasis image in Terra 3 (see above), since it can be used only as a panel for backup (interview 7, “41) but not for the development of competence-oriented lessons (interview 6, “56). Alternatively the date palm image can be used in competence-oriented lessons but rather to establish a human-environment connection moving away from a purely descriptive level to a judgmental and problem-solving one. One such possibility would be to regard the date palm in competition with other fruit within a given market-situation under certain environmental conditions resulting in a well-grounded decision (interview 6, “56).

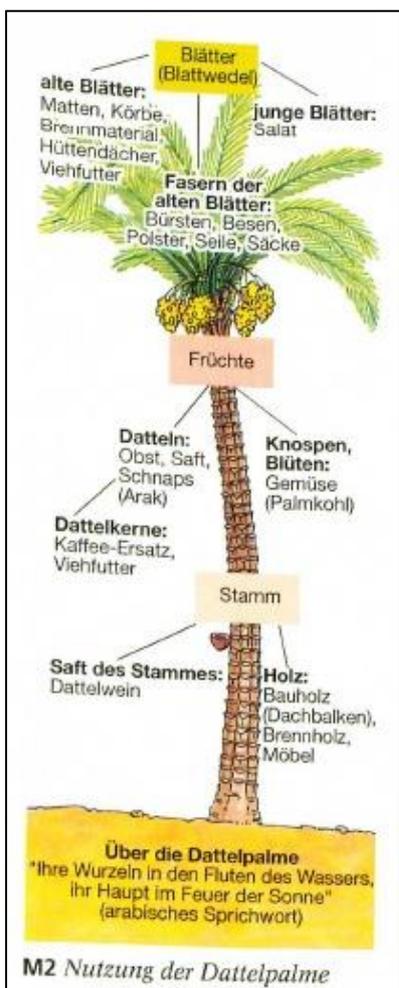


Figure 2. Typical picture of a date palm in textbooks (Bönig, Gaffga; 2006, p. 52).

Figures of various types of oases. The interviewees also commented on the usage of the figures of different types of oases, as shown to them in books of the Westermann- and Schroedel publishing companies. In Terra 3 there are similar figures depicted on a separate double-page, therefore a transfer of the given answers is possible. The interviewees broadly agree that the lettering and descriptive texts of the figures give away too much information, thus rendering them useless in competence-oriented lessons (interviews 3, “41; 4, “35, 43; 6, “56; 8, “24, 30). Without the lettering students are forced to devise their own scenarios. Furthermore, differentiation could be achieved by offering specific information in order to support weaker students (interviews 4, “35; 8, “30). Again the purely descriptive approach is criticized.

What is more, given the small number of geography lessons, interviewees doubt whether students need to know several different types of oases. It should be contemplated whether it makes more sense to work with a single example putting more emphasis on processes and systematics (interviews 2, “41; 6, “56).

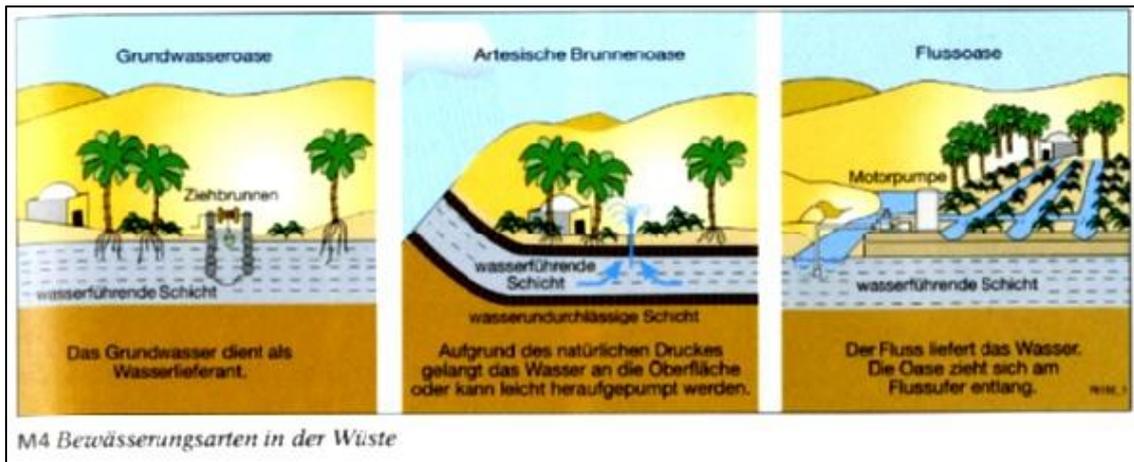


Figure 3. Different kinds of oases (Bönig, Gaffga; 2006, p. 53).

Texts. Texts are a central element in all three text books, taking up about 50% of a double page. In the case of Terra 3 it is considered too much text (interviews 1, “40; 2, “29, 31; 3, “39; 4, “41). Text in Seydlitz 3 is strongly coupled to the figure of the date palm (see above). Here, again, the enormous amount of text is criticized along with the small font size. The participants emphasized on text-reading and subject-related competence yet stressed that neither the amount nor the standard conform with their students’ skill level (interviews 1, “50; 7, “37; 8, “30, 34). The sole exception is the amount of text in Diercke 3, which seems adequate. This is also the book using the largest font. The question arises whether the contents used to explain the figures should be cut from the main text. There is no need for explaining these contents twice (interview 4, “43). Interviewees also did not approve the lexical phrasing (interview 5, “31).

Assignments. According to statements given by the interviewees, the contextual coherence of material by using assignments is vital in competence-oriented lessons. A positive example is one of the tasks in Terra 3, which is phrased open, while incorporating social competences due to its learning-group character (interviews 4, “41; 5, “37). Here, the two practitioners do not know, how to use this task in their lesson (interview 7, “41). Again, the difference between the experts and the practitioners in theory and practice is obvious. The Diercke 3 and Schroedel 3 books do not involve social competences. With respect to these books the strict operationalization is remarked upon positively (interviews 4, “45; 8, “26). However, all assignments are aimed at professional skills being reproduced by students. To achieve this relevant information has to be carved out of given materials, therefore methodological skills are partly represented, too (interviews 4, “45; 5, “52; 6, “52; 8, “34; 9, “56). In terms of a stronger orientation on competence-oriented lessons, the assignments need to be revised in multiple ways (interviews 2, “24; 4, “25, 35; 3, “45; 6, “54, 56; 8, “30). On the one hand, students should be tasked with solving exemplary conflicts and problems instead of simple reproduction (interviews 2, “41; 5, “31; 6, “54, 56). On the other hand, students should be motivated to develop their own structures (interviews 2, “29, 31; 3, “39; 4, “43; 5, “37; 8, “24). In this way, the simply additive approach could be replaced by networking (4, “39). Inter-

nal differentiation as a part of competence-oriented lessons needs to be strengthened by additional assignments and support, too (interview 8, “26, 30). It is necessary to revise the given assignments according to ones own teaching style along with students individually (interview 1, “73).

Implementing this kind of assignment allows to move away from the much-criticized declarative approach, which aims at pure comprehension, and achieve a problem-solving appraising scope of work.

In summary, the interviewees are facing difficulties by using the examined double pages to organize competence-oriented lessons:

„(...) the conception of materials and assignments is often too narrow, so that there is only one way of using this text book and this sometimes is difficult (...)“ (interview 1, “30).

The combination of materials and assignments is not suitable for competence oriented lessons. Either

„(...) the figures reveal too much and in this way we don’t approach the problem from a students point of view, we only tell them that this is simply the way things are, just understand. (...)“ (interview 8, “24).

or assignments fail to aim at a competence-oriented approach:

„(...) materials lack assignments where students have to get active themselves (...), for example draw a schematic plan, a map or a prepare a structural sketch, (...) (interview 8, “34).

Discussion

Subjective Concepts

The results of the expert interviews suggest that the subjective conception regarding competences and competence-oriented lessons differ greatly between practitioners and experts. Practitioners emphasize on method-oriented lessons, whereas experts emphasis on the entire spectrum of DGfG-Standards and a combination of Weinert/Leisen/Ziener. Adding to this are the ZPG-Standards for geography lessons on Gymnasiums in Baden-Württemberg. These different concepts coincide with the way, these two groups got confronted with competence-orientation. Experts had the task given and the time to define and work out the term “competence-orientation” for themselves. Practitioners got introduced to this concept via teacher trainings that are restricted in time and frequency. For them a deeper understanding seems to be not possible under these circumstances.

As the experts’ concept of competence-oriented geography education differs from the concept the practitioners refer to. Even though it is a qualitative study, seven out of a population of about fifty suggests that the experts’ concept is universally valid for all experts. The concept of the two practitioners cannot be generalized for all practitioners, even though a study done by Horn and Schweizer (2015) leads in the same direction: Only 26,2% of the geography teachers in the different kinds of secondary schools are acquainted with the educational standards of the German Geographical Society. Here, a

quantitative follow-up study should verify the thesis, that practitioners have a concept of competence-oriented geography education that only refers to (subject specific) knowledge and methods and so is much narrower than the multidimensional experts' concept.

This follow-up-study also should verify the thesis, that competence-oriented geography education referring to the experts' conception is not yet daily practice in most lessons, as the interviewees 2 and 8 claim.

Further training could change school practice as defined by those active in seminars and regional councils. Since it lies in the teachers' responsibility to verify materials and competence-orientation and, if necessary, change them, these topics should be included into further training. In this way professionals active in schools could expand the existing understanding of competence, restricted on didactic methods and knowledge, by the understanding of competence of those active in seminars and regional councils. Of course, textbooks need to be changed, too.

Competence-Oriented Lessons, Materials and Tasks in Textbooks

The previously outlined difference in comprehension is manifested in criticism on the text book double pages and the sparingly enounced scientific expertise on the part of those active in schools. Once again, the substantial role of textbooks for the transfer from theory into practice is made clear. While experts criticize the structure of textbooks, the tasks and the allocated materials in them for not being suitable for competence-oriented education, practitioners believe in these textbooks as being competence-oriented. The gap concerning the expertise on competence-oriented lessons between those interviewees active in schools and those active in seminars and regional councils would explain why competence-oriented lessons as defined by seminar and regional council members are not yet taking place in every day school practice (interviews 3, "9; 4, "23-24). Without fitting textbooks, regular practitioners will not know, what competence-orientation is, how competence-oriented lessons can be designed through tasks and materials, will not give competence-oriented lessons and will not know what they are lacking.

Notwithstanding the experts claim, that the materials and tasks in the licensed geography textbooks are not suited for their concept of competence-oriented geography education, the future of textbooks in geography education is still unclear. Together with the new curricula 2016, which continues with competence-oriented education, a new generation of textbooks will be published. The ministry wanted some curricula 2004 with competences, but they were not established, neither in textbooks, nor in final exams (interview 9). In the later textbooks for higher grades, a new actualized textbook for grade 5 and supplementary volumes, the experts' concept of competence-oriented geography education comes to the fore (e. g. Klett, 2010; Leat, 1999; Nichols, Kinninment & Leat, 1999; Schuler, Coen, Hoffmann, Rohwer & Vankan, 2013; Vankan, Rwohner & Schuler, 2007) (interviews 4, 6). The change or start to teach in the experts' competence-oriented way seems to be challenging, because young colleagues have much to teach but just one geography lesson per class and week, so they need a good textbook

(interview 3). Hence, textbooks may keep up their leading role in regular lessons. But again, several questions deserve to be answered: Are the new textbooks competence-oriented, and what is the concept behind them? Are the new textbooks used in a “classical way” or in a competence-oriented way, and in which competence-oriented way?

Since the tasks and materials in today’s geography textbooks are not competence-oriented, but there are supplementary volumes that arrange tasks and materials in a competence-oriented way, competence-oriented geography education is not a question of the kind of media used (interview 1).

Competence-oriented lessons, as seen by practitioners in seminars and regional councils is possible despite the multiple criticisms on text books. The experts show ways of using the supply of materials and assignments in text books in competence-oriented lessons by altering their application. The interviewees 5 and 6 refer to the same double page in Schroedel 3:

„(...), if that would be a competence-oriented page in a textbook, then one should start maybe this way: farmer Ibrahim in the oasis in the Kufra Basin must, well, sell tomatoes, zucchini, vegetables and poultry and stuff like that. Which problems must he solve (...) it should not be the last task (Diercke Geographie, p. 53, task 5) but the first task (...)“ (interview 5, “31)

„(...) if this was a competence-oriented page in a text book, they should start with something like this: What problems has Mr Ibrahim to solve concerning the retail of the tomatoes, courgettes, vegetables and poultry cultivated in his oasis (...) this shouldn’t be the last (Diercke Geographie, S. 53, problem 5) but the first problem (...)“ (interview 5, “31)

„(...) when I started to read, I thought this was going in the right direction with the oasis-farmer Ibrahim, wanting to sell tomatoes and so on cultivated in Kufra-basin in his oasis. This means I am placing him (the student) into a certain situation where he is expected to make a decision or an evaluation, which he can only achieve by understanding the problem. Only then we would get close to competence-oriented problems and lessons (...). If this assignment would show a clear problem-solving solution, i.e. where should he do this and how should he do this, we would get one step closer to competence-orientation. (...)“ (interview 6, “54)

Consequently, it is up to teachers at schools to develop competence-oriented lessons with the given supply on text books. In order to do so, teachers need a clearly structured concept of competence-oriented lessons and how to develop it.

„(...) actually I can use any textbook to develop competence-oriented lessons, I will not use every material there is, I won’t utilize every assignment but I can use it. Not every strictly competence-oriented textbook results in competence-oriented lessons. For me, the key figure is the teacher himself and the material is only secondary. Of course, it is easier if the material is developed with a clear symbiosis (...) (interview 6, “27)

The teaching staff acts as the mediator between problems and materials on the one side and students on the other side. They are responsible to ensure competence-oriented

lessons based on their own concepts and guarantee competence-oriented lessons are performed using competence-oriented teaching modules. Teaching modules, which are not competence-oriented yet, should be transformed into competence-oriented ones by changing the assignment of tasks accordingly.

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Appendix I.

Table 2: Interview guideline

1. Warming-up phase
When was the first time, you have been confronted with competence-orientation?
How did you inform or educate yourself about competence-oriented lessons?
Please give us an example, how you did a competence-oriented lesson successfully.
What did change in comparison to the past?
Do you see differences between “good lessons” and competence-oriented lessons?
What do you think are the most important competencies geography lessons should promote?
How do you value the influence of research on competence-orientation regarding practice?
2. Geographical textbooks in competence-oriented lessons
Which role do you think has the textbook you use regarding the achievement of competencies?
Which criteria should a textbook fulfill, so you say it is competence-oriented?
<i>The pages of the textbooks “Schroedel: Seydlitz 3, S. 75-55“, “Westermann: Diercke 3, S. 52-53“ and “Klett: Terra 3, S. 85-86“ get used as demonstration material for the next five questions.</i>
We would like you to explain to us, which elements and structures you think are suited best / worst for competence-oriented lessons. Please use one textbook.
Which materials are suited best to promote which competence?
How would you like to make use of the materials to promote competencies? To promote which competence?
How would you make use of the given combination of tasks and materials to promote competencies?
How long would you use the various materials to support the competencies?
<i>P. r. n. ask for reasons and repetition of these five questions until it is clear, which are the criteria for the use in competence-oriented lessons and what makes a successful implementation in these lessons.</i>
<i>Comparison of the three textbooks (e. g. topic “oasis” and structural elements of the text-</i>

<i>book as a whole) within the next three questions:</i>
Regarding the three textbooks, what do you think is particularly successful / unsuccessful?
How should the singular elements be changed to endorse competence-oriented lessons?
Which competencies do you think are major in textbooks?
3. Other teaching material in competence-oriented lessons
Please give us a “best practice“-example: Which materials are very precious for you for competence-oriented lessons, next to the textbook?
Which different materials do you use, if you want to do competence-oriented lessons?
How often do you use these materials in your average lessons?
How long do you use these materials in an average lesson?
How do you regularly make use of these materials?
How do you use given tasks for the use by the students?
What are your reasons to make use of these materials?
4. Perspectives
What future do you think is there for competence-orientation?
If the interviewee says competence-oriented lessons have a future: How do you think could competence-oriented lessons be improved?
Which role do you think will the textbook and other materials have for competence-oriented lessons?
What lacks materials (e. g. kind of materials, structure of materials ...) if competencies should be achieved?