



Article scientifique

Article

2017

Published version

Open Access

This is the published version of the publication, made available in accordance with the publisher's policy.

Bildung and subject didactics exploring a classical concept for building new insights

Schneuwly, Bernard; Vollmer, Helmut Johannes

How to cite

SCHNEUWLY, Bernard, VOLLMER, Helmut Johannes. Bildung and subject didactics exploring a classical concept for building new insights. In: European educational research journal, 2017, p. 147490411769609. doi: 10.1177/1474904117696096

This publication URL: <https://archive-ouverte.unige.ch/unige:95165>

Publication DOI: [10.1177/1474904117696096](https://doi.org/10.1177/1474904117696096)

Bildung and subject didactics exploring a classical concept for building new insights

European Educational Research Journal

1–14

© The Author(s) 2017

Reprints and permissions:

sagepub.co.uk/journalsPermissions.nav

DOI: 10.1177/1474904117696096

journals.sagepub.com/home/eerj



Bernard Schneuwly

University of Geneva, Switzerland

Helmut Johannes Vollmer

University of Hamburg, Germany

Abstract

In the beginning of the 19th century, Humboldt defined Bildung as both process and product of the developing person. In this contribution we discuss how this classical concept may be used for defining subject didactics. We use two complementary approaches to answer it: a historical analysis, and the construction of a theoretical model. 1) Presenting results of a historical research on the process of didactic transposition of grammar in the 19th century, we show that Bildung seems to function as one driving force among others. 2) In reflecting on the respective signification of “learning” on the one hand and “Bildung” on the other hand, it is possible to define three levels of outcomes which (school) subjects have on persons who learn, Bildung being a not necessarily intended, but potential one. Both approaches show that Bildung is indeed a concept that can be used for doing research in subject didactics and for conceiving them as a whole, with a common core and with many differences between individual subject didactics at the same time.

Keywords

Bildung, educational goals, subject didactics, subjects, didactic transposition, school as an institution

The general goal of education in its institutionalized forms is to secure the survival and the reproduction of the people based on substantial knowledge and differentiated know-how and thus to make sure that this knowledge and know-how is passed on to the younger generation, without loss

Corresponding author:

Bernard Schneuwly, Section des sciences de l'éducation, Université de Genève – Pavillon Mail – bureau 21740, boulevard Pont d'Arve, CH-1205 Genève, Switzerland.

Email: Bernard.Schneuwly@unige.ch

of quality, even with an increase and improvement of mastery in all areas of life, if possible. But all of these endeavors and activities are embedded or guided by a second layer of motivations, namely the comprehensive education of the young ones as persons and citizens in terms of cognitive development, emotional stability, and ethical maturity which allows them to become autonomous and independent in the long run and self-responsible as individuals and social beings. This ultimate goal of education can be characterized as *Bildung* (a term used in German that we will adopt to discuss the problem we outline here).¹ It relates to the inner as much as to the outer development of a human being on a personal and on a functional level – in perceptions, judgment, emotions, in the management of new insights and intellectual challenges, in personal as well as social actions and decision-makings. Both perspectives together, the successful acquisition of knowledge and the formation of individuals as democratic citizens, are closely linked: they require a quality education focusing on high achievement and equality of chances which are the basis for preserving and continuing progress in all areas of life within democratic societies.

Some reflections on Bildung

The question of what *Bildung* is has been discussed since two centuries in German pedagogy and educational science. The main reference that gives a good idea of what the concept means is the often quoted excerpts by Wilhelm von Humboldt. He is considered to be the one who has introduced the modern concept of *Bildung* (Tenorth, 1994) and who is the *spiritus rector* of the idea that *Bildung* is deeply linked to the idea of education in various subjects² (Frederking and Bayrhuber, 2016). In his most influential text on the role of government and state, Humboldt claims:

The true end of Man, or that which is prescribed by the eternal and immutable dictates of reason, and not suggested by vague and transient desires, is the highest and most harmonious development of his powers to a complete and consistent whole. Freedom is the grand and indispensable condition which the possibility of such a development presupposes; but there is besides another essential, – intimately connected with freedom, it is true, – a variety of situations.³

As one immediately understands, Humboldt envisages, for everybody, independent of his or her status or class belonging, the possibility of developing the powers as far as possible on the one hand and as equilibrated as possible on the other. These powers should not be isolated or in competition with each other, but form a “coherent whole.” Freedom and variety of situations are the conditions for this *Bildung*. In his famous “Theorie der Bildung,” he puts this same idea in a slightly different way, by defining more precisely the conditions of *Bildung*:

It is the ultimate task of our existence to achieve as much substance as possible for the concept of humanity in our person, both during the span of our life and beyond it, through the traces we leave by means of our vital activity. This can be fulfilled only by the linking of the self to the world to achieve the most general, most animated, and most unrestrained interplay. This alone is the yardstick by which each branch of human knowledge can be judged.⁴

The ultimate goal of “*Bildung*” is referred to as the development of the “concept of humanity in our person.” This can only be achieved by the interaction of the self with the world; more concretely, the question of variety of situations is formulated in another way, by defining what “each branch of human knowledge” can bring. Knowledge appears here clearly as linked to a “branch,” a matter, a subject. In his quite utopian project of a plan for schools, Humboldt defines institutional conditions that allow to develop *Bildung* as he defined it theoretically:

All schools for which not one social class but the whole nation or the state is responsible, have as their only end the general *Bildung* of human beings. What the needs of life or of one single industry requires, has to be acquired isolated and after having finished the general education. If both is mixed, *Bildung* becomes impure, and one doesn't get completed human beings or completed citizens. (Litauischer Lehrplan, in Humboldt, 1809/2010: 276/277; our translation⁵)

In our contribution, the issue is not to define and discuss *Bildung* in a general sense, as has been done by so many colleagues from the educational sciences and from General Didactics in particular (see for instance Terhart, 2009). Rather, the challenge is to look at the subject-specificity of *Bildung* and describe in how far its unfolding and development is linked to subject teaching and learning.⁶ We claim that the idea of *Bildung*, in the general sense defined, since it is taken over by numerous actors in the field of education, is one driving force behind all educational planning and institutionalized teaching-learning activities and that it is already deeply embedded in the acquisition of knowledge, skills, methods and attitudes all of which relate to respective competences. We will focus on the relationship of what we consider “*Bildung*” and the teaching and learning of subject-matter or content including ways of knowing, ways of acquiring, and ways of reflecting about and of using a piece of knowledge. We are aware that “subjects” as a form of institutionalized teaching-learning units are marked by historical developments; we will not question fundamentally the structure of those divisions (subdividing the world as a whole), yet we will at least hint at different (theoretical) approaches of redefining or chunking the areas of teaching-learning into larger domains, implying new forms of viewing or experiencing aspects of the world and of managing them differently. How can knowledge building and general education (in terms of *Bildung*) be strived for and achieved at the same time? Is one an addition to the other? How does one unfold from the other? How is *Bildung* embedded into the very processes and outcomes of content learning and teaching?

In the following we will shortly outline what “*Fachdidaktik/didactique disciplinaire/subject didactics*” means, given the importance of *Bildung* as an overriding educational end. We will then explore two ways of how the concept of *Bildung* can be studied empirically in the research of this field, namely:

1. by analyzing, from a historical point of view, how knowledge is transposed within a given individual subject didactics exploring *Bildung* as one possible driving force;
2. by developing and defining a comparative framework showing how different subject didactics contribute to *Bildung* through their normal activities of analyzing and modeling the teaching and learning of subject-matter.

What is subject didactics?

“Didactics is⁷ the scientific study (and the knowledge resulting thereof) of the innumerable actions taken to cause (or impede) the diffusion of such and such a body of knowledge in such and such an institution” (Chevallard, 2007: 133), in fact in institutions specialized for transmitting knowledge. Besides “diffusion” and “institution,” the key concept is “body of knowledge,” and more particularly “knowledge.” It should be understood in a very wide sense. One way to understand it is to go back to the first theoretician of didactics Comenius (1648/2005), who defined the fundamental unit of didactics as “*docere – discere – scire*,” a three-pole entity with teaching, learning, and knowing. *Scire*, knowledge, itself has a meaning that goes beyond its usual one, at least in English. It encompasses all that can possibly be created by mind, by tongue or by hand, that is, to think, to speak, to make or build.

It is assumed that all learning is knowledge-based, mediated through specific topics or problems set up by the teacher and which are challenging. This requires looking deeper into goals, topics, and tasks, and into the structures, categories and specific demands they imply or pose – and the effect of knowledge on teaching and learning. All of these issues are treated within specific fields called subject didactics (*Fachdidaktiken*, *didactiques disciplinaires*, in the plural). The term thus relates to the science of teaching and learning subject-specific knowledge in the larger sense defined above (content, skills and procedures, inside and outside school) (cf. Schneuwly, 2011; Vollmer, 2013). Subject didactics is an independent research-based field of study developed theoretically and practically over the last decades in a surprisingly dynamic, yet steady way. It has evolved into an academic field, a scientific area of multiple, interdisciplinary dimensions with an object of its own and the development of appropriate methods to investigate this object in a systematic, scientific way.⁸

On the other side, subject didactics has never lost its roots as a practice and in the practice of teaching by real human beings, with an experienced-based sensitivity and judgment and with intuitions of their own (Tenorth, 2006; 2012). Teaching has never lost its quality almost as an art and is acknowledged by subject didactics to this very day as a skill or a complex competence driven by step-by-step interactions and based on personal, generalized experience whatever the outlined plans were or whatever formalization of the joint action in the classroom as a system was anticipated. To put it simply or even simplify it: subject didactics focusing on knowledge construction and on the teaching of content has at least two major sources of self-definition – scientific description and analysis as well as practical understanding and action. This double quality is a unique feature of the field and its representation in academia as much as in the teaching profession (Schneuwly, 2012).

Didactic transposition and the driving force “Bildung”: grammar and the formation of mind

The object of diffusion in the institutions – the “body of knowledge”, the *scire* – is the result of complex processes that constitute a central topic of didactics. A question one can ask from this point of view is how knowledge is chosen and constructed by the institutions in order to be taught and learned, that is, the process of *didactic transposition*. This is the object of many studies (for an overview in English see Chevallard and Bosch, 2014; Tiberghien and Sensevy, 2014) that show the deep transformation knowledge undergoes through this process. It has to be conceived not only as a changeover but also as a creative metamorphosis that integrates new elements and produces a really specific form of knowledge in function of the ends that the institution pursues, among them the most general end we have identified above: *Bildung*. In other words, knowledge is – among many other ends, for instance, also the one of segregating, of distinguishing persons – re-shaped, re-organized and re-ordered in its structure for pursuing this very general end. Any particular knowledge is situated in an “ecology of knowledge” the actors, explicitly or implicitly, consider. *Bildung* in the sense defined above is one criterion of thinking the whole, an ideological one of course, but ideas have also real influence. Didactic transposition is a long-lasting continuous process. Its description and analysis includes at least two levels: on the external side of the didactic situation (say, to simplify, outside of the classroom), research is done for instance on syllabi or school books; on its internal side, studies are led for instance on the negotiation in the interaction between the three poles of the didactic situation – teacher, students, and knowledge itself. In the following, we sketch out an example of the analysis of a didactic transposition process, namely the introduction of grammar teaching in primary schools in the 19th century, with the question in mind if *Bildung* intervenes in one or the other form in this process.

As to the example of grammar as knowledge, one could – and should – ask the question why the teaching of grammar is such a central domain of mother tongue⁹ education, at least in French- and German-speaking countries. As one knows, *grammatica* was one of the seven liberal arts, therefore a central part of the humanities that were, as we have seen, an important point of departure for the definition of *Bildung*. In the development of the school discipline called “Deutsch” or “Français” during the 19th century, this art was deeply redefined and finally integrated into a complex construct containing also reading, writing, speaking, and literature (for German, see Frank, 1976; for French, Chervel, 2006; a similar date is given for English as a subject in the USA by Applebee, 1974).

Up to the beginning of the 19th century, when Latin dominated, the grammar was at the same time a means for learning the language. This idea remained when “mother tongue” became the teaching of the first language, and Latin second; and it diffused also into what later was called primary school, the school for people, for everybody. But why was it really still so important to learn grammar in order to master his or her own mother tongue? And what kind of grammar should be taught, if ever? A careful analysis of the development of the place of grammar in mother tongue education and the different forms it takes allows us to understand the genesis of the discipline itself as part of the more general end of *Bildung*. We will concentrate on primary schools, including what was called upper primary school and take Switzerland as an example, comparing the German-¹⁰ and French-speaking part: one and the same country with two different languages, on the background of course of the evolution in Germany and France.¹¹

Grammar teaching as sedimentation of ends in the perspective of Bildung

In the introduction to his most influential *Deutsche Grammatik*, Grimm explicitly states that he is opposed to the “almost senseless elementary teaching” of grammar (1819: xix). This statement is widely discussed, at the time as much as today. Wurst, director of the teacher education school of Saint Gall (Switzerland), and a very successful school grammar author, even in Germany, is completely opposed to such a position and elaborates a “Sprachdenklehre für Volksschulen” [A course in language and thinking for primary schools] (1838), dedicated to students aged 7 to 14. It is based on Becker’s universal description of language, itself heavily influenced by Humboldt’s theory of the relationship between speaking and language. In his transposition of Becker’s grammar into primary school, Wurst repeatedly states that, as a primary teacher, he knows “how difficult it is, to fulfill at the same time the demand of science and of the elementary method. And nonetheless I’m deeply convinced, that it has to be done, and therefore will occur” (p. v): a didactic transposition that leans very strongly on the scientific model, in this case Becker’s well-known *Deutsche Grammatik* (1829). Wurst’s aim is clearly stated in his introduction, namely to propose a “a language-thinking course, i.e. an course of language by which one learns to think rightly and a thinking course, by which one learns to speak rightly” (p. viii). In these statements, there is a shift in the overarching purposes of grammar, from prescription and norm to learn a language to learning to think. Hence, it is no more utilitarian in a narrow sense. Analyzing language is learning to think: this is its new end. Or, as Scherr (1847) puts it: “Henceforth our aim is to lead the student so far that s/he becomes aware through reason how to express him-/herself in a simple manner, orally or by writing. Hereto it is necessary that s/he knows surely and distinguishes the word classes, the parts of sentence and the types of sentence” (p. iv).

This kind of grammar instruction is one-sided, says Rüegg forty years later. The purpose of grammar teaching in primary school is “like elsewhere to form language awareness; but this language awareness has not its end in itself” (Rüegg, 1885: 379). This means that the language course is no more mainly a thinking course. The concepts to be learned are still justified by science,

although the choice of contents and their progression are considered as more important than the inner logical structure of scientific knowledge. The didactic transposition process goes one step further in the direction of the creation of an original school grammar. The new subject matter to teach, school grammar, still drifts more away from scientific concepts in a still ongoing process of transposition. It is the result of the different ends that it served: learning a language; learning to think; being or becoming conscious in language use with a prescriptive dimension; learning to think about language. This sedimentation of the ends, none being clearly put away, is the result of different ways of operationalizing the overarching purpose of schooling that Rüegg (1871) for instance, in the introduction to his book *Teaching Language in the Elementary School*, defines as follows: “The Volksschule [school for the people, primary school] is an institution of general education. [...] Its task is only that it educates the becoming single human being to a real and true human being through its pedagogical agency, and to allow each one to become, what following his/her destination what s/he has to become” (p. 1). There is no doubt that this is not the only justification of grammar teaching. But “Bildung” clearly is used as a concept for defining contents by the actors who, by the way, were strong defenders of the ongoing democratization process at that time.

Grammar teaching serves development of humanity

Let us have a look on the parallel evolution of grammar teaching in French-speaking Switzerland.¹² Père Grégoire Girard makes the first step from a purely logical analysis of language in school toward a more integrative one. He criticizes the fact that, in order to analyze language, each sentence is transformed in the form of a judgment subject-copula-predicate like: “la fille dort” into “La fille est dormante,”¹³ a form based on the classical Port-Royal Grammar and very largely practiced in primary schools (for French-speaking Switzerland, Tinembart, 2015; for France, Chervel, 1977). The critique by Girard is formulated from a point of view that is of the type of Bildung. His book *On Regular Teaching of Mother Tongue* (1844) is based, as he shows, on a deep tradition of language theories (“Beauzée, Girard, Dumarsais, Roubaud, Tracy, Sicard, Girault-Duvivier, Lemare, Boniface, etc., etc.,” he says, p. 32) and on a long lasting practice in primary schools in Fribourg (Switzerland), crowned by the *Académie française*. It also deeply influenced schools grammars in France.¹⁴ Père Girard claims from the beginning on that language teaching has “to make the teaching of language to serve the culture of the young minds and this latter to the ennoblement of the heart and of life” (1844: 25). He severely criticizes traditional grammar teaching: “These exercises are so abstract and so rigid that they do not speak to the humanity that yet lives already totally in the students and that by its nature tends to develop oneself more and more in all respects” (p. 20). No doubt that this wording is very close to the Humboldtian concept of “Bildung” presented above. One has to serve the “the noble mind that by itself thinks, perceives, loves, wants and acts, and by itself again forms the speech on the lips, or places it on the end of the plume in order to redraw it for the eyes” (p. 19). This implies at least two things: 1) integrating grammar into a larger whole called “Cours de langue maternelle” [Course of mother tongue] in combining three dimensions in function of the above-mentioned overarching purpose – grammar, vocabulary (for thinking about contents) and composition (for learning to express thinking); 2) changing grammar – real sentences have to be understood, analyzed and combined. Vocabulary brings the material to syntax; syntax is developed into composition. With this perspective, the subject “French” is organized in a very new form, with grammar as a central part. Its purpose goes far beyond this place as the founder of the French “republican” school, Jules Ferry, explicates particularly clearly in addressing himself to the inspectors of primary school and directors of teacher education seminars: “What we ask you all is to make for us human beings instead of making for us grammarians. Therefore, you have

to develop in our students above all the *culture générale*.”¹⁵ The French “*culture générale*” is another word for speaking about *Bildung*, reminding of the “*allgemeine Menschenbildung*” which all schools, following Humboldt, have to have as their end.

Grammar teaching as transformation of ones relationship to oneself (Vygotsky)

In his reflections on teaching grammar, Vygotsky proposed in a certain sense the underlying psychological substrate for the ways of thinking about teaching grammar developed during the 19th century. “But the child learns at school [...] to become aware of what he does and consequently to use his own know-how voluntarily” (1985: 285). And more generally: “A child who has managed to become aware of case [in the grammatical sense] has effectively mastered that structure, which is then transferred to other areas not directly linked to case or even to grammar as a whole” (p. 269). The basic idea is that grammar transforms the relationship to his or her own language. And this transformation goes in the same direction as the ones performed by other school subjects. Knowledge – here grammatical knowledge – does not function only as an auxiliary to another action or thought. It is itself a condition for the transformation of the relationship to the processes themselves as well as to the knowledge already present, and this for two interconnected reasons. First, it is a knowledge that generalizes the knowledge already here and that integrates the latter in a new, more powerful system; this system contains the other one in that it represents it at a more general level, which gives greater freedom compared with the knowledge already there and enables it to be used more consciously and more voluntarily. Second, entering into the more general systems – which are systems of systematic knowledge derived from scientific or expert systems – requires a systematic teaching that essentially does not follow the needs and motives of the student, but the logic of the knowledge itself, taking into account, of course, of the zone of proximal development which defines the possible contents and the method by which they are taught. This is another way of taking into account “*Bildung*” in the domain of grammar and more generally in language teaching.

Bildung at the root of all subject didactics

The second move in our exploration of the status of *Bildung* in subject didactics is a more theoretical one. It provides the basis for exploring more systematically, in a bottom-up procedure, how subject didactics contribute to *Bildung* and in this way contribute to a possible general theory of subject didactics (in the singular). We will approach this in two steps. In a first one, we distinguish two processes – learning and *Bildung* – in order to clarify the specificity of this latter concept. This allows us later – in a second step – to define three levels of the effect of school subjects that can be distinguished in a general theory of subject didactics.

Bildung and learning: two related concepts

It seems necessary to distinguish systematically between learning and *Bildung*. Learning, at least in school, is above all the result of teaching, in other words of a purposeful, intentional instruction the effect and success of which can be planned and envisioned to a certain extent. The results can be observed and appreciated to a certain degree, if not even measured. *Bildung*, however, from the point of view of the process and the product, has constitutively an uncertain outcome. Although it can be part of the intention of the teacher, it develops only under favorable conditions and if the students take part. We therefore distinguish rightly between learning and *Bildung* (for more details and justification see Abraham et al., in preparation).

Bildung through school learning can activate mental and socio-cultural processes or reinforce them and lead to dispositions or potentials that are possibly not or only partially observable, but that can be described following different points of view. There are indeed indicators that show that certain dimensions are present in the behavior, in the everyday performance. But finally, only the individual him- or herself is able to inform about the inner processes of Bildung or about its status and the temporary or momentary results.

Concerning the construct “Bildung through the subject” that we will describe in more detail below, one can assume, at least, on which kind of experience it is founded or on which it relies and also to some extent how it might develop, but not when it will take place. At least from the outside, one can only determine *ex post* if or that Bildung has developed on a certain level that has been theoretically postulated and which potential has been built up. Hypothetically, one can claim that the learning in a subject (e.g. in-depth processing of a task or a topic and the knowledge and competencies that have been acquired through these activities) constitutes the substrate from which the process of Bildung arises, and going beyond that. The ways of acquiring and processing an insight and relating it to already known pieces of knowledge plus its epistemological implications lead beyond the immediate content or subject, but they are still linked to it through their becoming. In the course of those significant experiences that are initiated in the subject and through the deep treatment of these experiences, an individual can unfold its potential of Bildung and form him- or herself as a person from the point of view of mental, emotional/attitudinal and socio-cultural identity and of action-oriented individuality.

Thus there is a necessary and close link between Bildung and subject content and knowledge. Bildung is largely mediated through a confrontation with the fundamentals of subject knowledge and the established or newly invented/discovered ways of dealing with them. In other words, both the relevant problems, linked to the discipline, and the methodological procedures, largely linked to patterns of scientific rationality, penetrate the individual to the extent that he or she, on his/her side, transforms those problems or even creates them or constructs new ones. It is difficult to determine the role of robust learning in the subject during this process of confrontation and appropriation. But there are good reasons to think that the construction of competencies in the subject and their generalization through application to new problems as much as their transfer on manifold questions inside and outside school generate generalized surplus of knowledge and know-how, that are elements and functions of Bildung. From this point of view, school subjects contribute fundamentally to the Bildung of human beings. They make it possible to face concrete experiences that are already structured and transformed in the subject and the diverse forms of knowledge.

In this way, subjects create conditions that cannot be replaced by something else, for the appropriation of “world” in its diverse aspects and functions and for the acquisition of fundamental competences of various sorts. At the same time, they create the conditions for potential processes of Bildung on different levels of knowledge, knowing, reflection, action, and evaluation that are all characterized by generalizing, linking and systematizing of experience and critical distancing toward it.

Thus, teaching and learning a subject is much more than acquiring knowledge *of or within* that subject. The majority of subject didacticians would agree that this process of acquisition is one of co-construction in meaning-making and that it should be studied as such. There is not yet much consensus (not even in parts of the overall German community) on a specific didactic theory that would allow for a rational analysis and design of planning and teaching moves (all the way down to the micro level). Nevertheless, it is largely believed that subject matter learning always implies the acquisition of transferable skills and categories to be used in other contexts of the same subjects or in another subject altogether; also, that subject learning leads to the development of general educational values, skills, and competencies (like precision, openness, rationality, language

awareness, or evidence-based thinking). In other words, we can or could identify a specific set of additional cross-curricular (non subject-specific) goals and competences involved in or triggered by school learning (what can be summarized under the notion of subject-based *Bildung*).

Subjects – three levels of transforming (potentially) learners: a bottom-up method for defining Bildung

The complementary movement is that of comparing individual subject didactics as to their self-understanding and their self-claimed outcomes. This gives us another opportunity to arrive at a possible common core among all subjects as much as to identify their specifics and general differences. The procedure followed here is one of description and of classification of any subject-related specifics (in terms of teaching outcomes, either planned or real) on a number of levels, before comparing them on a more abstract categorical level and processing them for generalized features.

The first level of this bottom-up procedure relates to what might be considered the normal learning goals or outcomes within any one specific subject (characterized as learning *of* a subject or *within* a subject). This level reflects the shared goals of all or most didacticians of a particular subject in terms of the basic elements or structures of knowledge, of competences strived for or skills necessary to be acquired. For the subject of *History*, for example, this could comprise factual knowledge about the Who, How and When as well as the ability to relate historical incidents to one another or to be able to read a historical map.

The second level of this model relates to the competences and skills which have been acquired within a specific subject-matter context, but which are possibly transferable to other contexts within the same subject or which can be applied to new learning incidents outside the original subject. Potential candidates for such competences are procedural ones (like the ability to read between the lines, to interpret a graph or a text along certain criteria) and of becoming aware of something (like the ability to compare, to look for similar or analogous structures of something or to reflect about implications of something, i.e. in grammar, in semantic meaning, in physics, in musical patterns or in art). Competences of this type are not acquired separately from the ones on level 1, but rather simultaneously; they are and remain available after a learning incident is over; they form the basis of a cross-curricular pattern of skills and qualifications.

The third level of subject learning finally implies educational processes and results which can only be strived for, but not guaranteed for any student. These outcomes relate to the underlying potentials of “*Bildung*” which are inherent in subject-specific knowledge, procedures and competences and which can be captured only within or through a theoretical framework as outlined below. This framework tries to define some of the most relevant educational dimensions which might be involved in subject-specific teaching and learning – independent of whether they are made explicit or not. These dimensions can be characterized as *anthropological* on the one hand and *socio-cultural* on the other hand. They describe what learning a specific subject (or dealing with a concrete issue/topic) could or should lead to in terms of individuation, personality development, perceptive and/or cognitive differentiation and better mastery of the world as much as increased qualification as a socio-cultural being and a participating democratic citizen.

These developmental dimensions qualifying the third level are provisional for the time being; they will be spelt out in more detail at another place (see Abraham et al., in preparation; Bayrhuber et al., 2017). They are implied in all learning, but in concrete subject-based learning experiences in particular. They build themselves up in close connection with level 1 and 2 – they are just another (additional) quality embedded in or attached to subject matter learning: whether they unfold and how specifically so cannot always be anticipated or observed on a smaller time scale, for example,

within the immediate classroom. Certainly the learning individuals have to be involved in the evaluation of each dimension.

To sum up, the three levels of subject learning can be distinguished as follows:

1. Learning *of* or *within* a subject (knowledge, skills, subject-specific competences). This means the reconstruction of content and practices that are specific to a subject.
2. Learning alongside *with* a subject (transferable skills and competences). This means identifying and using what is generalizable and applicable in other contexts.
3. Learning *through* a subject (long-range educational effects that result in Bildung). This means the construction of the individual and social self in dealing, while dealing or through dealing with a specific subject or problem/topic.

These hypothetical distinctions allow us to describe the different outcomes of subject-based learning processes and their effects in terms of educational impact. At the same time, they allow us to develop categories and criteria for identifying the commonalities and differences between subjects and highlight their specifics in each case. Especially through the introduction of level three, it seems possible to evaluate the contributions of different subjects and their topical components for the overall formation of the learners in terms of individual, mental, social as well as cultural development. In turn, this gives us access to the core of all subject learning and how the different subjects in school as well as the related subject didactics correspond to one another and to the overall goals of initiating and qualifying the younger generation for life, for the workplace as well as for democratic citizenship and social participation as a whole (Vollmer, 2014).

Could this be a way to compare subject didactics (in the plural), to define theoretically a possible common nucleus of all individual subject didactics, that is, to consider the question of Bildung as their core business to which they contribute individually, but also to determine their differences? It is at least one possible and efficient way to proceed. In a recent attempt to define the common core among the different school subjects and the different subject-specific didactics dealing with them, a group of German scholars (subject didacticians) have set out to discover and describe the possible unifying forces among them in practical and theoretical terms – without neglecting their differences. While striving for a shared understanding and definition of *Fachdidaktik* as a whole (in the singular),¹⁶ they also tried to capture and acknowledge the remaining specificities of each single subject-related didactics at the same time. This could only be done through a joint effort among several representatives from different subjects and thus from different schools of thinking, with the goal of establishing and defining a generalized *Fachdidaktik* (as a metatheoretical agency). In this context, the overarching concept of Bildung has been taken into account and used as one possible path and criterion for substantial comparison in this direction (for details and results see Abraham et al., in preparation).

Some conclusions

We have shown two different ways in which the concept of Bildung appears in subject didactics research. First, we have explored through an example how this concept of Bildung – in a larger sense – orients and legitimizes the transformation of knowledge in the long-term history of didactical transposition of grammatical knowledge. Then, on a more theoretical level, we have proposed a conceptual framework that allows to determine the place of Bildung as a form of extended or deepened learning in relation to the functioning of different subjects: Bildung appears to be a possible effect of learning in all subjects and through the subjects themselves. Both ways of approaching the question illustrate how subjects in school as ways of subdividing and organizing bodies of

knowledge in a wider sense (including procedural know-how and many other skills and competencies), obviously profit from having *Bildung* as a superordinate focal point. These results are promising, even more so as the two contrasting approaches lead to insights that are by no means contradictory. But of course, the studies presented are just at their starting point and much deeper and more detailed research is necessary in the future.

Acknowledgements

We would like to acknowledge the groundbreaking work of a German group of scholars to which one of the authors of this contribution belongs. They have embarked on analyzing and modeling in great detail the functions and operations of “Fachdidaktik” (in the singular and the plural) and are in the process of formulating a subject-based theory of *Bildung* of which parts already exist (Bayrhuber et al., 2017).

Conflict of interest

The authors declare that there is no conflict of interest.

Funding

Part of this paper is funded by the Swiss National Science Foundation (CRSIII_141826): *Die gesellschaftliche Konstruktion schulischen Wissens – Zur Transformation des schulischen Wissenskorpus und dessen bildungspolitischen Konstruktionsprinzipien in der Schweiz seit 1830* [The social construction of school knowledge in Switzerland since 1830].

Notes

1. We will use this term without translation and generally without typographical marking (e.g. through italics), as if it would be a normal English noun, but we will write it with a capital letter at the beginning, like in German.
2. As to the term “subject,” we will use it in this contribution exclusively to designate what is called “Fach” in German, “discipline” in French, and “content area/matter” or “school subject” in English (= a specific sub-area of knowledge to be taught at school).
3. The whole text in an English translation can be found under <http://oll.libertyfund.org/pages/humboldt-government>; the quote is from the beginning of Chapter 2. In German, the original quotation is to be found in Humboldt (1792/2010).
4. The whole text of Humboldt’s “Theorie der Bildung” in English is to be found under <http://blogs.ubc.ca/nfriesen/files/2015/01/Humboldt-on-Bildung.pdf>. For the German original, see Humboldt (1793/2010).
5. In the following, all translations are ours, if not otherwise stated.
6. This is the reason why we limit ourselves to the dimension of mimesis in *Bildung*, to the question of personal formation and do not take into account other possible perspectives.
7. As the morphological agreement “is” shows, the grammatical plural of didactics is in fact a singular in meaning. Since we will play with singular and plural like in French “didactique(s)” or German “Didaktik/Didaktiken” – referring on the one hand to general or generalized subject didactics and on the other hand to the individual or particular subject didactics(es) – we will use other languages, if necessary (Vollmer, 2013). Let us say also that “subject” in English refers to “school subjects”; in French we call it “school discipline” using the same word as the one for “academic disciplines”; in German the equivalents are “Schulfach” and (adakemisches) “Fach” on the tertiary level – an analogy of concepts that has of course deep social roots (cf. Vollmer, 2011). We will come back to that at a later point.
8. For overviews, see for instance Bayrhuber et al., 2011, 2012; Dorier et al., 2013; Elalouf et al., 2012; Gundem, 2010; Heitzmann, 2013; Hudson and Meyer, 2011; Thévenaz and Sieber, 2005; Vollmer, 2007, 2011, 2017.
9. Since “mother tongue” is the term of the period analyzed, we employ it here. Note that it was in use until recently: it was only in 2015 when the International Association for the Improvement of Mother

- Tongue Education (IAIMTE) became the International Association for Research in L1 education (ARLE).
10. This sub-chapter relies partially on data prepared by Rebekka Nänni in the course of her doctoral dissertation in the project mentioned in the following note. See also Erlinger (1991), Köpcke and Ziegler (2013), Vesper (1980).
 11. This part is based on results of a project financed by the Swiss National Science Foundation (CRSII1_141826): *Die gesellschaftliche Konstruktion schulischen Wissens – Zur Transformation des schulischen Wissenskorporus und dessen bildungspolitischen Konstruktionsprinzipien in der Schweiz seit 1830* [The social construction of school knowledge in Switzerland since 1830]. More details can be found in Leseforum/Forum Lecture, 2016, 2 (in press) (www.leseforum.ch/).
 12. The following part relies on Darne (in press), Tinembart (2015) and on the corpus of all grammar school books used in French-speaking Switzerland they have collected in the project mentioned before.
 13. This transformation, which seems quite natural to an English speaker, is completely artificial in French. One also finds the same practice in Germany, even in Diesterweg's famous *Praktischer Lehrgang* from 1828, the sentence "Otto schläft" being transformed into "Otto ist schlafend" (Erlinger and Knoblauch, 1991), an approach that Wurst's above-mentioned one overcame.
 14. Darne (in press) shows nevertheless that the evolution in French-speaking Switzerland differed from the one in France in following more narrowly Girard's conception
 15. Conference of Jules Ferry in 1880 to primary inspectors and directors of teacher training institutions (quoted by Chervel, 2006: 65).
 16. There are of course other attempts in this direction like, for example, Hopmann, 2007; Raisky and Caillot, 1996; the anthropological theory of didactics elaborated by Chevallard, 2010.

References

- Abraham U, Bayrhuber H, Frederking V, et al. (in preparation) *Konturen einer fachbezogenen Bildungstheorie [Working title]*. Münster: Waxmann.
- Applebee AN (1974) *Tradition and Reform in the Teaching of English: A History*. Urbana: National Council of Teachers of English.
- Bayrhuber H, Harms U, Musynski B, et al. (eds) (2011) *Empirische Fundierung in den Fachdidaktiken*. Münster: Waxmann.
- Bayrhuber H, Harms U, Musynski B, et al. (eds) (2012) *Formate Fachdidaktischer Forschung. Empirische Projekte – historische Analysen – theoretische Grundlegungen*. Münster: Waxmann.
- Bayrhuber H, Abraham U, Frederking V, et al. (2017) *Auf dem Wege zu einer Allgemeinen Fachdidaktik*. Münster: Waxmann.
- Chervel A (1977) *Et il fallut apprendre à écrire à Tous les Petits Français: Histoire de la Grammaire Scolaire*. Paris: Payot.
- Chervel A (2006) *Histoire de l'enseignement du français du XVII^e au XX^e siècle*. Paris: Retz.
- Chevallard Y (2007) Readjusting didactics to a changing epistemology. *European Educational Research Journal* 6: 131–134.
- Chevallard Y (2010) La didactique, dites-vous ? *Education and Didactique* 4: 139–147.
- Chevallard Y and Bosch M (2014) Didactic transposition in mathematics education. In: Lerman S (ed.) *Encyclopedia of Mathematics Education*. Dordrecht, The Netherlands: Springer, pp.170–174.
- Comenius JA (1648/2005) *Novissima linguarum methodus*. Genf: Droz.
- Darne A (in press) Enseigner la grammaire pour maîtriser l'écrit: Histoire de la grammaire scolaire en Suisse romande (1845–1970) *Forum Lecture* 2.
- Dorier J-L, Leutenegger F and Schneuwly B (2013) Le didactique, les didactiques, la didactique. In: Dorier J-L, Leutenegger F and Schneuwly B (eds.) *Didactique en construction, constructions des didactiques*. Bruxelles: De Boeck, pp.7–35.
- Elalouf M-L, Robert A, Belhadjin A, et al. (2012) *Les didactiques en question(s) Etat des lieux et perspectives pour la recherche et la formation*. Bruxelles: De Boeck.
- Erlinger HD (ed.) (1991) *Muttersprachlicher Unterricht im 19. Jahrhundert*. Tübingen: Niemeyer.

- Erlinger HD and Knoblauch C (1991) Diesterweg und der muttersprachliche Unterricht. In: Erlinger HD (ed.) *Muttersprachlicher Unterricht im 19. Jahrhundert*. Tübingen: Niemeyer, pp.29–129.
- Frank HJ (1976) *Geschichte des Deutschunterrichts. Von den Anfängen bis 1945*. München: Hanser.
- Frederking V and Bayrhuber H (2016) Fachliche Bildung. Auf dem Weg zu einer fachdidaktischen Bildungstheorie. In: Bayrhuber H, Abraham U, Frederking V, et al. (eds) *Auf dem Wege zu einer Allgemeinen Fachdidaktik*. Münster: Waxmann, pp.205–247.
- Girard G (1844) *De l'enseignement régulier de la langue maternelle dans les écoles et les familles*. Paris: Dezobry and Magdeleine.
- Grimm J (1819) *Deutsche Grammatik*. Göttingen: Bei Dietrich.
- Gundem B (2010) Didactics, Didaktik, didactiques. In : Kridel C (ed.) *Encyclopedia of Curriculum Studies*. Thousand Oaks, CA: Sage, pp.293–294.
- Heitzmann A (2013) Die Situation der Fachdidaktik in der Schweiz. *Beiträge zur Lehrerbildung* 31: 6–17.
- Hopmann S (2007) Restrained teaching. The common core of Didaktik. *European Educational Research Journal* 6: 109–123.
- Hudson B and Meyer M (ed.) (2011) *Beyond Fragmentation. Didactics, Learning and Teaching in Europe*. London: Sage.
- Humboldt W (1792/2010) Ideen zu einem Versuch, die Grenzen der Wirksamkeit des Staates zu bestimmen. In: von Andreas F and Giel K (eds) *Wilhelm Humboldt. Werke*. Darmstadt: Wissenschaftliche Buchgesellschaft (WBG), pp.56–233.
- Humboldt W (1793/2010) Theorie der Bildung des Menschen. In: von Andreas F and Giel K (eds) *Wilhelm Humboldt. Werke*. Darmstadt: Wissenschaftliche Buchgesellschaft (WBG), pp.234–240.
- Humboldt W (1809/2010) Der Königsberger und der Litauische Schulplan. In: von Andreas F and Giel K (eds) *Wilhelm Humboldt. Werke*. Darmstadt: Wissenschaftliche Buchgesellschaft (WBG), pp.168–195.
- Köpcke K-M and Ziegler A (2013) *Schulgrammatik und Sprachunterricht im Wandel*. Tübingen: Niemeyer.
- Raisky C and Caillot M (eds) (1996) *Le didactique au-delà des didactiques. Regards croisés sur des concepts fédérateurs*. Bruxelles: De Boeck.
- Rüegg HR (1871) *Der Sprachunterricht in der Elementarschule*. Bern: Dalp.
- Rüegg HR (1985) *Die Pädagogik in übersichtlicher Darstellung*. Bern: Verlag von Schmid, Francke and Cie.
- Scherr Th (1847) *Schulbüchlein zur Uebersicht, Wiederholung und Anwendung des grammatischen Unterrichts in den obern Klassen der Primarschule*. Zürich: Orell and Füssli.
- Schneuwly B (2011) Subject didactics – An academic field related to the teacher profession and teacher education. In: Hudson B and Meyers MA (eds) *Beyond Fragmentation. Didactics, Learning and Teaching in Europe*. Leverkusen: Budrich, pp. 275–286.
- Schneuwly B (2012) Didactique des disciplines et profession des enseignants: transformations récentes d'un duo ancien de la professionnalisation. In: Mellouki M and Wentzel B (eds) *Que faut-il penser de la professionnalisation de la formation des enseignants aujourd'hui?* Nancy: Presses Universitaires de Nancy, pp.29–52.
- Tenorth HE (1994) “*Alle alles zu lehren*”. *Möglichkeiten und Perspektiven allgemeiner Bildung*. Darmstadt: Wissenschaftliche Buchgesellschaft.
- Tenorth HE (2006) Fachdidaktik im historischen Kontext. *Der Mathematische und Naturwissenschaftliche Unterricht* 59: 387–394.
- Tenorth HE (2012) Forschungsfragen und reflexionsprobleme - zur Logik fachdidaktischer analysen. In: Bayrhuber H, Harms U, Musynski B, et al. (eds) *Formate Fachdidaktischer Forschung. Empirische Projekte – historische Analysen – theoretische Grundlegungen*. Münster: Waxmann, pp.11–27.
- Terhart E (2009) *Didaktik. Eine Einführung*. Stuttgart: Reclam.
- Thévenaz Th and Sieber P (eds) (2005) Didactique(s) – entre continuité et reorientation. *Revue suisse des sciences de l'éducation*, 27.
- Tiberghien A and Sensevy G (2014) Transposition didactique. In: Gunstone R (ed.) *Encyclopedia of Science Education*. Berlin: Springer, pp. 1–4.
- Tinembart SN (2015) *Le manuel scolaire de français, entre production locale et fabrique de savoirs: Le cas des manuels et de leurs concepteurs dans le canton de vaud au 19e siècle*. Doctoral Thesis, Genève: Université de Genève.

- Vesper W (1980) *Deutsche Schulgrammatik im 19. Jahrhundert. Zur Begründung einer historisch-kritischen Sprachdidaktik*. Tübingen: Niemeyer.
- Vollmer HJ (2007) Zur Situation der Fachdidaktiken an deutschen Hochschulen. *Erziehungswissenschaft* 18(35): 85–103. Available at: www.fachdidaktik.org/cms/download.php?cat=Ver%C3%B6ffentlichungen&file=Situation_der_Fachdidaktiken.pdf.
- Vollmer HJ (org.) (2011) Fachdidaktik – European Perspectives ? Symposium (Part 1 + 2) at the European Conference on Educational Research (ECER), Berlin, 13–17 September.
- Vollmer HJ (2013) Didactique disciplinaire en Allemagne: développement et perspectives. In: Dorier J-L, Leutenegger F and Schneuwly B (eds) *Didactique en construction – Constructions en didactique(s)*. Bruxelles: De Boeck, pp.39–62.
- Vollmer HJ (2014) Fachdidaktik and the Development of a Generalised Subject Didactics in Germany. *Éducation et Didactique* 8(1): 24–34.
- Vollmer HJ (2017) Zur jüngeren Entwicklung der Fachdidaktiken in Deutschland. In: Bayrhuber H, Abraham U, Frederking V, et al. (2017) *Auf dem Wege zu einer Allgemeinen Fachdidaktik*. Münster: Waxmann, pp.11–14.
- Vygotski LS (1985) *Pensée et Langage*. Paris: Editions Sociales.
- Wurst RJ (1838) *Praktische Sprachdenklehre für Volksschulen*. Reutlingen: Johann Conrad Mäcken.

Author biographies

Bernard Schneuwly is full professor of didactics of languages in the University of Geneva in the Department of Educational Sciences. He conducts research the history of teaching first language, of didactics as an emerging research field in Europe and on sciences of education, on methods of teaching written and spoken language, on the construction of objects taught in ordinary practices of first language in classroom and on the relationship between teaching and development in a historico-cultural perspective. He was President of the Department of Sciences of Education, Dean of the Faculty of Psychology and Sciences of Education, and Founder and Director of the University Institute of Teacher Education. Some of his relevant publications are: *Les sciences de l'éducation. Emergence d'un champ de recherche dans l'après-guerre* (Presses universitaires de Rennes, 2015), *Deux exemples prototypiques sous la loupe: Les sciences de l'éducation et les didactiques des disciplines* (Academic Press, 2014), *La Faculté de psychologie et des sciences de l'éducation, héritière de l'Institut Rousseau et de l'ère piagétienne* (Georg, 2012), *Zur Geschichte der Erziehungswissenschaften in der Schweiz. Vom Ende des 19. bis zur Mitte des 20. Jahrhunderts* (Beiträge zur Lehrerbildung, 2011, 31, 18–30).

Helmut Johannes Vollmer is Professor (emeritus) of English and Applied Linguistics at the University of Osnabrück, Germany. He received his doctorate in 1981 and his “Habilitation” in 1994 from the University of Osnabrück. He has also taught at the University of Bremen and Leipzig (Germany) as well as Webster College, St. Louis, USA. He has published widely in Germany and North America (200+ publications), was an expert at the Language Policy Unit of the Council of Europe (until 2015), educational advisor, e.g., for the accreditation of university study programs. He is a co-editor of the journal “Research in Subject-Matter Teaching and Learning” (RISTAL). Last academic posts and activities comprise the following: 2007–2014 Member of the Governing Board of the “German Association for Fachdidaktik” (GFD); 1998–2006 Director of a Post-graduate Program in Bilingual Teacher Education; 2003–2006 Coordinator of larger research project (DFG-Project) entitled “Fachlernen und (Fremd-)Sprachlichkeit: Aufgabenbasierte Kognition, Kooperation, Kommunikation” (= comparing monolingual and bilingual geography learners; supervisor of several dissertations. Since 2002: Director of a Research Unit on “Bilingualism and Multilingualism” in Osnabrück; Co-founder and Member at large of the “German Association for Foreign and Second Language Research (Deutsche Gesellschaft für Fremdsprachenforschung) (DGFF)). He is a recipient of many travel and research grants from the Deutsche Forschungsgemeinschaft (DFG), the Canadian Government, the British Council and the European Union.