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International Transfer of Knowledge: Translating Didaktik, Fachdidaktik, Allgemeine Fachdidaktik¹

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Abstract

The following contribution is divided into two parts, for reasons of space. The current article will deal with issues of translation and translatability from German into English in the field of *Didaktik* (didactics, subject didactics and general subject didactics). The starting point will be to gather information about the spread and acceptance of the concept of didactics as a cover term for a comprehensive theory of teaching and learning within school as an institution, in Europe and beyond. The multi-faceted reality of this concept in so many countries or educational settings and the different approaches to go with it, will have an effect on the demands of an appropriate rendering of *Didaktik* in English as a *lingua franca* and thus transferring it into another, essentially foreign socio-cultural context. The same is even more true for the notion of *Fachdidaktik* (= subject-matter didactics).

In particular, it will be shown that there are challenges and even limits in sharing didactic and subject-didactic knowledge, concepts and research findings internationally, when transmitting them from German into English and thus from a continental European into an Anglo-Saxon way of thinking and of organizing school education. The difficulty to establish a one-to-one equivalence is reflected on the linguistic level, where certain anglicized forms which do not originally exist in English, have been developed (e.g. *subject-matter didactics*, *general subject didactics*), for lack of appropriate translations. Also in many other cases of translation more than one version is possible, depending on context, focus or intention. This insight will be applied to individual notions or whole semantic clusters in the field (e.g. around key words like *Fach* or *Fachliche Bildung*).

In combination with the second part the overall goal is to bring *Didaktik*/didactics and curriculum theory into conversation again and widen the scope towards subject-matter didactics at the same time.²

Keywords

International Transfer of Knowledge, Translation, Translatability, English as a *lingua franca*, Didactics/Subject-matter Didactics in Europe and beyond

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¹ This contribution is based on a revised and expanded version of an oral presentation during the joint conference of GFD/ÖGFD (August 29-31, 2022) at the University of Vienna under the title “*Herausforderungen beim internationalen Wissenstransfer: Beispiel ‘Fachdidaktik’*”.

² In the second half of the contribution some linguistic features of translations will be unfolded in more detail. In this context, central notions for theory-building about teaching and learning in school (such as *Fachinhalt*, *Lehren*, *Lernen*, *Unterricht*) will be analysed as to their suitability and usefulness for translation purposes. But also some Anglo-Saxon concepts such as Education, Pedagogy or Curriculum and their ambivalent meanings for Europeans as non-native speakers of English will be looked at. Part 2 will end with an outlook on how to support especially young emergent researchers in the field of subject-matter didactics, in sharing their work internationally (cf. Vollmer, to appear).

1 Introduction

In the attempt to share subject-didactic knowledge beyond the immediate context from which this knowledge originated, a number of “transfer” issues arise. One of the most fundamental of these has to do with “translation” in the wider sense, including the mediation of one’s own research or that of others into a professional and socio-linguistic community, other than one’s own. This happens almost every day without too much thought when we present our findings in a paper (e.g. on an international conference) or interact with non-German colleagues: in each case we have to consider anew what exactly to say or present, how many details to share, which problems to address or to leave out. But on top of all of this, a lot of time and reflexion goes into considering *how* to say it, *how* to express an idea and *how* to make oneself best understood by a specific audience. This happens normally without thinking or effort (provided our command of the foreign language is sufficient) – but the processes behind our performance can be described as multiple translation and decision-making steps: adapting to the complexity of the topic, adapting to the assumed levels of knowledge in the reader/listener, adapting to the concrete situation. In ‘*going international*’, the issues of sharing knowledge and of seeking understanding become even more pointed. Some of these issues and their implications have already been identified and are being studied more systematically (cf., for example, Schweitzer, in this volume; also Schweitzer & Schreiner, 2021). The actual problems of an adequate linguistic representation in translations, however, and thus the transfer of concepts or findings from one language to another, from one socio-cultural context to another (without too much loss of meaning), are hardly topicalized or researched. Their functioning is largely taken for granted, and this is probably one of the reasons why they have so far been under-examined. Also, many German scholars are satisfied with sharing their knowledge and publishing their findings only nationally, within one and the same familiar unilingual network. These networks are often not really or little prepared to handle multilingual offers of colleagues nor to play an influential role on the international level. This may be particularly true for many subject didactics, being relatively young academic disciplines, struggling with complicated theoretical issues in the German language for the most part – yet we can witness the convincing opposite in mathematics didactics and their amazingly high level of language awareness and their ongoing reflection of linguistic diversity and translation issues within their field (cf. Barwell et al., 2021, for example).

Others like Schweitzer (in this issue) argue similarly: scientific work lives by and depends on making research findings transparent and accessible to colleagues world-wide as well as to the interested public. As a matter of fact, part of the self-definition of science lies in the commitment for sharing³ newly acquired pieces of knowledge with the rest of the professional world, of giving and receiving critical feedback and exchanging empirical or theoretical results in a rational way. On all of these levels adequate and successful translation plays a central role, since we do not dispose of a common world language (yet).

The article will turn to some of these translation issues which often occur tacitly, becoming obvious only in cases of misunderstanding. Many or most of these issues will have to be handled and solved by everyone who tries to map the meaning of complex concepts onto a different, strange system of communication, in our case English. But this variety of the English

³ We prefer to conceptualize that which is internationally referred to as “transfer” or transmission, as a process of sharing, of exchanging and of negotiating meaning.

language is seemingly not the same as the national languages of Great Britain or the United States, rather it is called English as a *lingua franca*⁴, used largely by non-native speakers of English for general communicative purposes and scientific exchange. These issues range from breaking down complex noun phrases (so typical of German scientific language) into smooth, easily readable units of meaning by choosing the right verb phrase in the attempt to create some sort of equivalence between the source and the target language, to managing specific terms for building a theory of subject didactics, embedded into a German way of thinking and expressing. Some consider certain terms such as “Didaktik”, “Fachdidaktik” or “Bildung” as more or less untranslatable (which implies that we cannot really converse about them). Yet for all of these terms some possible renderings in English will be suggested - whether or not they are appropriate will depend on a number of ‘local’ variables, e.g. on the respective context, on the justification given or the willingness of the interaction partners to accept them, among other things.⁵

Overall, the intention of the article is to raise awareness of the problems involved in translating subject-didactic research into English (a foreign language to most of us), but also to support the joy and satisfaction in mastering the challenges of translating and of presenting and publishing internationally. The paper will give examples of translations for some of the basic concepts in didactics and subject didactics and demonstrate that often more than one rendering in English are possible and appropriate. Another goal is to offer systematic linguistic considerations and solutions for translations or otherwise motivate readers to find them on their own.

We as Europeans have many insights and empirical data to share beyond our own communities (given the importance and role of (subject) didactics in many regions of the world): the paper will address some critical implications of sharing such subject-didactic knowledge and exchanging about it internationally and outline some future perspectives.

2 The language dimension

⁴ A *lingua franca* (as linguists call this variety) is defined as a shared language of communication between speakers of several other languages, just like in the times of the Frankish Kingdom, when a reduced variety of Latin (*Vulgärlatein*) served that purpose. At the end of the day this language variety of *English as a lingua franca* follows (almost) the same strict rules and expectations as the standard variety of English, at least in the international publication domain – to the disadvantage of the non-native speaker (see below).

⁵ Some words or concepts do not even make it from local usage into other languages or socio-cultural contexts. In mathematics didactics we read the following example:

“Our LPS colleagues (whose first language is not English) engaged in collaborative work that revealed differences in the way that classroom phenomena are described and interpreted. They found that there are some educational terms, particularly relating to classroom practice, that a.) have no reasonable English translation, or b.) have never made the transition and thus are absent from the educational literature in English.” (Mesiti et al., 2021, p. 1).

And it continues: “The examples above illustrate how the English translations of educational terms originating in non-English languages can misrepresent the meaning of the original terms, and potentially distort the educational practices that the terms are intended to represent. It also illustrates the handicap of doing all our writing and theorising in English (Clarke, 2001, 2006). In particular, the use of English as the international *lingua franca* of the research community in education denies use of many sophisticated terms developed in languages other than English. This means that however productive a collaborative analysis might be, the international search for effective classroom practice is hampered by the universal use of English as the classificatory, analytical, and communicative medium of international research.” (Mesiti et. al., 2021, p.2).

There is no successful transfer of knowledge without considering the language dimension. The language we use, the way we put things into words, the way we actually formulate things, strongly influences what is understood and comprehended on the recipient's side. Concretely, a good functional mastery of English as a common means of scientific communication worldwide is absolutely necessary, as a tool and a goal. But that in itself does not suffice. What counts is the actual language performance and the message delivered. Ever since English has become the language of global communication, also for sharing scientific knowledge across countries and cultures, each non-native scholar has to upgrade his or her competence in expressing one's thoughts and research findings in a proper grammatical form, so as to be accepted by the gatekeepers of English, the native speakers as experts of the language, not necessarily in the content area talked about. There are cases where contributions were rejected or met with distaste (e.g. in peer-reviews and professional evaluations), simply because some 'mistakes' or language slips occurred in that article. The current contribution could also fall under this verdict.

2.1 English as a *lingua franca*

This brings up two questions: 1. How native-speaker like do our presentations and interventions on the international level have to be? 2. How can we assure that the knowledge we have to offer (which is heavily embedded into local German thinking and expressions) is perceived positively or even welcomed globally, especially in the Anglo-Saxon world? The conditions for success are easier nowadays. We dispose of very differentiated, automatized translation programs, the newer ones all based on AI (artificial intelligence), so that with this help the production of an acceptable translation of a text from one language into another should be no problem. In addition, there are numerous native speakers around in our everyday or professional life who can be hired and who might possibly also be competent for subject-specific topics and translation checks.

The question is whether English as a *lingua franca* is different or supposed to be different from English as a natural or national language. The answer is Yes and No; in other words, the situation is ambivalent: in phases of acquiring the target language, there seems to be a more liberal attitude on the part of native speakers (and hopefully also on the part of teachers) towards acceptance of mistakes, through which learning can be fostered or even be accelerated. But once language mastery is advancing, there is little excuse for errors made. Indeed, the language use of a non-native speaker is expected to come close to that of a native speaker - which will and can hardly ever happen in reality.

In principle, the socio-political development points into the direction that English as a *lingua franca* follows the same norms and rules nowadays as the formal standard varieties, also on the level of international scientific discourse – the competing publishing houses will pay enough attention to this. One of the reasons might be, that many non-native speakers of English are highly fluent and competent in that language: a good command of English has almost become a basic skill in civilization, just like reading, writing and arithmetic. Additionally, translation programs make it look unnecessary to come up with problematic, clumsy or slightly ungrammatical linguistic constructions, not to talk of deficient ones. A proper use of English is also supposed to indicate the level of education on the part of the writer and sometimes even the validity of what one has to say. These variables of appropriacy and correctness in English

are probably more influential than often perceived; they are also the avenue for conservative, normative gatekeepers of the language, of their social power and their dominance.

2.2 Alternatives in translation

This contribution aims at pointing to some pitfalls in translating from one language into another. It also intends to raise an awareness about alternative possibilities in formulations and their potential belonging to different styles or levels of formality and with different connotations associated. On the other hand, one can also experience how smooth a transfer of meaning between two culturally loaded, linguistic systems can be, if we know and observe the basics of the source language (German) as well as respect those of the target language.

The data used in this paper is largely taken from my own extensive translation practice relating to the Teaching and Learning of Foreign Languages (Vollmer & Vogt, 2022), but also from the author's involvement in transferring knowledge about the German notions and concepts of Didactics, Subject Didactics and General Subject Didactics to a non-German audience, as a matter of fact to different international audiences through other English-speaking publications within the last years (Rothgangel & Vollmer, 2020; Vollmer, 2021a+b; Vollmer & Klette, in print) and through international conference participations over the years (e.g. the European Conference on Educational Research (ECER), esp. Network 27 "Didactics: Learning and Teaching" or the "Conference on the Epistemic Quality of Learning in Several School Subjects", that took place at the renowned London Institute of Education in December 2021). As such the examples introduced below are not representative of anything, but rather subjectively chosen. Nor is the focus of the paper on any one specific subject didactics, but rather on general issues concerning all translations within our field. The more detailed questions related to specific content areas, come on top. Yet it is hoped that the examples illustrate or underline certain points or arguments as such. Some of the data will explicitly be dealt with and explained, other samples will just be mentioned or listed. In any case, the empirical and theoretical reflections about translation problems in this article are meant to be valid cross-sectionally, because they are similar for many of the individual subject didactics, if not for all of them. But that will have to be checked more closely in the future: for the time being, I claim a general epistemological validity of the insights presented here.

2.3 The Concept of Transfer in the International Discourse

As already indicated before the author of this paper prefers to talk about "sharing" knowledge or "exchanging" of it (in an interactive mode), instead of using the terms 'transfer' or even worse 'transmission'. Transfer cannot be conceived of as a unilateral process, handing knowledge down from a sender to a receiver. In the best of all cases the sharing of knowledge can lead to some kind of individual or joint re-construction of the knowledge base or of co-constructing something new together. This has been acknowledged also by Schweitzer (in this issue). Yet the internationally established term remains 'transfer'.

For a sharing of knowledge to be really successful, it would require some sort of feedback on the part of the recipient, either explicitly or through written responses, preferably in a scholarly form, including a review and an evaluation of one's contribution presented internationally. The practice of feedback is still very underdeveloped; it would mediate

between professional silence (which is the norm) and direct personal response. Ideally, the feedback could turn into deeper exchange or even into the development of a common project, checking out what and how much of the new knowledge offered could contribute to enlarging the common core of knowledge shared or add to a global “cumulative knowledge base”. This, however, has to be seen as critical, since there is probably no such thing as ‘universal validity’ (however claimed or hoped for) nor a way to overcome the context-boundedness of all findings (see below).

So far we have little experience in studying and evaluating the effects brought about by foreign contributions to the expansion and reconstruction of knowledge in a specific field or to reactions otherwise, be it paraphrases or summaries of what we shared internationally. In addition to presenting something new to the rest of the world, it seems urgently necessary not only to get acknowledged for what was shared, but also to be taken up, addressed and critically dealt with in an ongoing discourse. Again, how such a feedback materializes, depends largely on the language used in the first place for presenting research findings internationally. Our very choice of linguistic means are an expression of our cognitive activities and mental actions, as we know ever since the formulation of the speech act theory.

Another criterion for potential success in the international transfer of knowledge is readability and comprehensibility of a text or contribution. Both depend largely on how an argument is built up, how separate ideas are linked, how a text is supported by data and visualizations and what the overall structuring of the message looks like that is to be transferred (cohesion and coherence of text). The issues at stake here are not linguistic only, but rather socio-linguistic in nature. They have to do with anticipating what the interaction partners might be interested in and think, what helps them understand, and how to make transparent the implicit assumptions on which an argument or a theory is based. There are limits for adapting to a listener, of course. Vice versa, the other side also has to show openness and willingness to try and understand. Otherwise international transfer of knowledge might end up in two solitudes confirmed. Again, there is too little research so far on how translated information and well-meant subject-based messages are processed and understood by the recipient.

Additional features of international transfer of knowledge (as compared to everyday interaction) are the necessary degree of formality and a particular explicitness of expression. What comes into play additionally is the degree of conviction on the part of the speaker about the relevance of his or her message and thus the subjective ‘validity’ of the transferred knowledge plus interest on the part of the listener. In my experience, it is only possible to engage into a productive co-construction of meaning, if the content seems relevant for both sides, for one’s own professional context - given the reality and limitations of academic and cultural “bubbles” each one is caught in.

3 *Didaktik, Fachdidaktik* – Didactics and Subject-Matter Didactics in Europe

As to the existence of subject-matter didactics in Europe and beyond, its role and acceptance in different countries, we have collected information either directly from those settings concerned or we rely on expert knowledge provided about relevant research activities and

the levels of institutionalization of subject-matter didactics, which is called “disciplinary” didactics in the Francophone and the Scandinavian context.

3.1 Didactics in the European Educational Research Association (EERA)

The concepts of *Didaktik* (based on German philosophy and particularly on the work of the educational scientist Wolfgang Klafki) and that of *Le Didactique/les didactiques* in French, originally based on the work of Yves Chevallard (2007, 2010) and Brousseau (2002) in mathematics didactics, are more and more spread over Europe, especially in German-speaking countries as well as in Western and Northern Europe. Ever since 2006 a special network was formed within the European Educational Research Association (EERA) with a specific focus on “Didactics – Teaching and Learning”. The sequence of the terms “teaching” first, then followed by “learning” was changed around at a later date, so to express the conviction that good teaching requires to start with analysing the needs and conditions of the respective learners, before one could think of teaching them, plan lessons or arrange learning situations accordingly. It can be considered a success that this network 27 was established next to all the other facets and special fields within education or rather within the educational sciences. Although the notion of ‘didactics’ was first largely guided by an understanding of didactics as a ‘general’ discipline (see, for example, Hudson & Schneuwly, 2007; Hudson & Meyer, 2011), the annual conferences in varying places all over Europe more and more allowed for topics and discussions on subject-specific differentiations. This meant acknowledging that subject-matter didactics were in the process of becoming academic disciplines in themselves, located somewhere “in-between” the scientific subject-matter disciplines at university on the one hand and the broadening area of educational sciences on the other hand. This professional opening towards subject-matter didactics (and their specific claims not only in terms of content, but also in terms of the necessary specialized approaches in teaching) challenged the more general views on teaching and learning as a whole: their theories, models and assumptions operated largely independent of subject-specific contexts or conditions and did not take important differences between the individual school subjects enough into account. In any case, the publications originating from the ECER conferences reflect by now a certain kind of balance between the general and the more specialised, content-oriented views on teaching and learning, also as an offer and a compromise to the international discourse on the topic.⁶

Brian Hudson as one of the founders of Network 27 “Didactics – Learning and Teaching” in 2006 within the European Educational Research Association (EERA) and then as major convenor (together with Meinert Meyer) was followed for many years up until today by Florence Ligozat (Geneva, convenor) and Jonas Almqvist (Uppsala, co-convenor). In these functions all of them co-edited collected volumes as results from the annual conferences, trying to overcome the fragmentation in the field, representing different perspectives on European didactics, including more and more also subject-didactic approaches (e.g. Hudson & Meyer, 2011; Ligozat & Almqvist, 2018; Ligozat, Almqvist & Klette, in print).

⁶ See Hudson & Meyer 2011 who were still largely focusing on general didactic issues, but then followed by Ligozat & Almqvist, 2018 with the Special Issue of the *European Educational Research Journal* (EERJ) on the topic, as well as Ligozat, Almqvist & Klette, in print, who opened the floor to subject-matter didactics.

This Network 27 was influential in establishing the term and the concept of didactics as indicators of an independent academic discipline, first within the educational sciences and then outside that framework in the narrow sense, supporting independent authentic didactic research across Europe. This self-understanding of didactics as a special field of its own within education has grown over the years, among other things through the annual European Conferences on Educational Research (ECER) in various places of our continent, but also through regular publications summarising the state of the art in certain, as mentioned above. In this way, “didactics” (with the English label for this scientific approach) became the European counterpart so-to-speak to curriculum theory and curriculum studies in the rest of the world.⁷

3.2 Distinct didactic traditions

By now, there are several distinct traditions of didactics at work within Europe: a German or Germanophone one (which is probably known to most of the readers), a French or Francophone one (comprising at least France, Francophone Switzerland, some Mediterranean countries, partly South America, Francophone Québec in Canada), and a Northern European one (somewhat closer to the German approach, yet with a different variety in each Scandinavian country).

Caillot (2007) describes the building of a new academic field in the case of French disciplinary *didactiques* as follows: “At the beginning, nobody could forecast the future and whether the *didactiques* would one day be recognised by the academic and instructional systems. The French *didactiques* are strongly based on school subject matters. Since the creation of *Institut Universitaire de Formation des Maîtres* (University Teacher Training Institutes) in 1991, they are completely integrated in French educational research and training systems: a major evolution in education that has taken about 40 years. More recently, a new field of research is developing in the French-speaking area: *comparative didactics* that groups together disciplinary didacticians in a true research programme” (2007, p. 125).

A research group, hosted in French-speaking Geneva and led by Florence Ligozat, is operating exactly under that label “*Groupe de Recherche en Didactique Comparée*”(GREDIC; see <https://www.unige.ch/fapse/gredic/>) . This group mainly cooperates across countries, particularly among French-speaking and Swedish scholars, following specific issues of classroom teaching in the sciences, in physical education or mathematics on the different levels of schooling in a number of case studies or joint projects in the last 20 years (cf., for example, Ligozat, Amade-Escot & Östman, 2015).

The didacticians in France themselves are organised in a cross-sectional umbrella organisation under name of “*Association pour des Recherches Comparatistes en Didactique*” (ARCD). As they clearly indicate in their Manifesto (see homepage of the ARCD), they focus on and support comparative work among different individual subject didactics (*didactiques disciplinaires*) – not necessarily with partners outside the country, but mainly within France. Accordingly, a number of projects are underway (often including didactics of physical

⁷ The acceptance of “subject didactics” as a collective term for the many individual subject-matter didactic strands or approaches happened only slowly and successively on a national as well as on the international level, as these subject-matter didactics became stronger as independent research units and recognized as academic disciplines within the scientific institutions (for Germany, cf. Vollmer, 2007, 2017).

education, the sciences and mathematics, but also first-language education (which cannot be called mother-tongue education any more). The label of “les didactiques disciplinaires” (similarly coined in Scandinavia as “disciplinary didactics” as an equivalent to what is called *Fachdidaktik* or rather *Fachdidaktiken* (pl.) in the German context) is somewhat ambivalent, since it could relate to the scientific disciplines taught at university as reference systems, but it could equally relate to school “disciplines” as subject-matter areas taught in school under one administrative roof.

Within the French tradition we find another programmatic strand from Francophone Switzerland, entitled “*Didactique en construction – Constructions en Didactique(s)*” (Dorier, Leutenegger & Schneuwly, 2013). In this project several Swiss subject-specific didactics entered into a common discourse for the first time. It remains to be seen what will develop from it (cf. Schneuwly, 2022).

Still within that general didactical framework of the French-speaking communities, a special, very influential theoretical approach has to be mentioned, that of the “Joint Action Theory of Didactics” (JATD), as developed at the University of Rennes in Brittany, mainly by Gérard Sensevey (2011a+b, 2012). This theory and its application is geared towards operating on the level of classroom observation, analysis and evaluation, focusing on the smallest units of action and interaction in real classroom situations, looking at concrete steps and behaviours within the teaching and learning framework. Equipped with new ways of analysing, interpreting and evaluating specific “didactical” situations, this approach has also borrowed categories from gaming theory and provides a tool box for assigning meaning to the smallest units of planning and observation.

It is not surprising that the JATD has been taken up and applied in several European countries by comparing very different concrete teaching and learning situations and ongoing processes in a number of different school subjects. But an even greater impact will probably come from an interdisciplinary project named “Knowledge and Quality across School Subjects and Teacher Education” (KOSS), a network with colleagues rooted in several academic disciplines from three cross-disciplinary educational research groups in three different countries, Sweden, Finland, and more recently, also from the UK.⁸ KOSS does not use the term ‘didactics’ or ‘disciplinary didactics’ explicitly, but rather draws upon the concepts ‘powerful educational knowledge’ and ‘epistemic quality’ as *goal definitions* for teaching and learning content in school - and thus focuses upon a vital aspect of didactic thinking, more concretely of *subject-didactic thinking*. Their aim is “to help us understand the qualities that knowledge building has when it is effective and empowering at all levels: individual students and teachers, classroom, school, and educational systems” (cf. homepage). Accordingly, some of research questions within KOSS are: How can the nature of powerful knowledge and epistemic quality in different school subjects be characterized? How can the transformation processes related to powerful knowledge and epistemic quality be described? How can the nature of teachers’ powerful professional knowledge be characterized and what are the implications for teacher education

⁸ The KOSS scholars largely originate from the ROSE research group (*Research On Subject-specific Education*) at the University of Karlstad, Sweden, and from the HuSoEd research group (Humanities and Social Sciences Education, focusing on the learning and teaching of subjects related to humanities and social sciences) at the University of Helsinki. Lately, KOSS was also joined by members of the *Subject Specialism Research Group* from the Institute of Education in London (see below).

policy and practice? The KOSS network group meets several times a year since 2019, which has led to two substantial publications so far. In the first one, the theoretical premises are applied and the goals tested empirically within several school subjects (Hudson, Gericke, Olin-Scheller & Stolare, 2022a). The second volume looks into the need to make changes in the curriculum of schools and of teacher training, if the principles of productive learning through guided, appropriate teacher-learner interaction are to be followed and realized in practice (Hudson, Gericke, Olin-Scheller & Stolare, 2022b).

Staying in Scandinavia, another research group *Studies of Comparative Didactics* (SCOD) works under the leadership of Jonas Almquist, Professor of Curriculum Studies at the University of Uppsala, Sweden. This group has been active for many years; in their research they focus on questions about the relationship between teaching and learning in various subjects. They participate in a number of research projects and networks, locally as much as internationally. A good example of their work can be found in Almquist, Orpwood, Lundquist & Lidar (2019), in which Swedish National Tests in year 6 of science education (Biology, Chemistry and Physics) are related to the national curriculum: several tensions between them are identified, having an effect on the validity of the tests. Another proof of their cross-national, intercultural orientation is the publication of Marty, Venturini & Almquist (2018). Almquist is one of the co-convenors of Network 27 “Didactics – Learning and Teaching” within the European Educational Research Association (EERA), in which he also functions as co-editor of several collective volumes representing European perspectives on didactics, including subject didactics (e.g. Ligozat & Almquist, 2018a; Ligozat, Almquist & Klette, in print).

Recently, Ellen Krogh (2022) from the University of Southern Denmark has presented a detailed overview of how didactics and subject-matter didactics have developed in her country over the last 20-30 years. She comes up with the insight, that on the one hand, theoretical debates in neighbouring Germany have shaped the discourse and the forms of institutionalizations of didactics and disciplinary didactics in Denmark. On the other hand, a strong theoretical impetus comes out of Denmark itself and of Scandinavia in general, namely through the seminal work of Frede Nielsen on music pedagogy (2011, 2012), then generalized by him in the direction of a superordinate theoretical framework for all subject-matter didactics. The other influential scholar was and is Sigmund Ongstad (last 2021) who developed the notion and approach of didactics as communication, based on Russian educational theorists such as Vygotsky and others. Both seem to have merged in Denmark into a type of comparative didactics of Scandinavian origin (cf. Christensen et al., 2021).

3.3 The wider spread of the concept ‘didactics’

Beyond these three cultural spaces of continental Europe mentioned so far (with a Germanophone, a Francophone and a Scandinavian variety of didactics and subject-matter or disciplinary didactics), we find the notion and term ‘didactics’ (though adapted to the respective national settings) also in Southern Europe, in countries like Spain, Portugal, Italy or Romania, all influenced by the French traditions and their ways of thinking and structuring formal teaching. But even beyond those cultural ties, we find the term anchored also in the academic discourse of the Czech Republic, for example, of Poland or in Russia (cf. Hnik, 2014; Vondrova, 2019; Konieczka-Śliwińska, 2016; Rakhkochkine, 2011). So the scientific concept (or at least the scientific term) is making its way through the educational landscape of continental

Europe. ‘Didactics’ in most of these countries, however, is applied primarily to first language teaching and learning in terms of a specific subject-based didactical reasoning. But even in South America we find approaches labelled didactics, again especially related to the didactics of “mother-tongue education” (Columbia, Chile or Brazil can be mentioned as examples here; see Schnewly, 2022). Finally, in the French-speaking part of Canada, in Québec, we also find a number of different initiatives at several universities more recently, claiming and defining didactics including explicit forms of subject didactics in their curricula. But there is no coherent theoretical framework at hand as yet, concerning the teaching and learning of school subjects in that province (cf. Potvin & Messier, 2022). Nevertheless, a new French-speaking journal entitled “*Didactique*” has been launched in Québec recently (since 2020). Overall, as we can see through this example, the dividing line between different ideas and approaches of didactics and subject didactics is not identical with country or geographical region; rather, the ties and lines of influence are culture-driven. This explains the fairly wide-spread presence of the term and notion of didactics in many parts of the world.

As to the German concepts of *Didaktik* and of *Fachdidaktik*, these are particularly strange to many international scholars. Indeed, they are not easy to understand or to translate. The question arises whether one has to become a specialist in studying German in order to deal with the relevant texts and theories and particularly those of W. Klafki (either in the original or in a translated version), before one can process the main ideas of *Didaktik*. Or whether one can accept the anglicized version of it (using ‘didactics’ or ‘subject-matter/disciplinary didactics’ as quasi-English cover terms), open to them and make peace with them. This seems to happen momentarily, given the increased use of those terms in the international educational literature, except in English-speaking cultures. Proposals to merge the two traditions of *Didaktik* and Curriculum Theory are not new, but the chances to bring the approaches closer together, by experiment or in the long run, might be slowly improving (cf. Muller & Hoadley, 2021; also Hordern, Muller & Deng, 2021). Certainly this idea of a ‘pedagogic compact’ is worth considering in more depth, explain it in more detail and substantiate it. In that context one would also have to update one’s knowledge on Klafki and his followers today, and confront them in their thinking, in their achievements as well as in their critical aspects with representatives from subject-matter didactics. This relates particularly to the work of Zierer and his instructionist approach (cf. e.g. Zierer & Seel, 2012; Zierer, 2020; also Cramer & Schreiber, 2018).

4 Translations into English – Anglo-Saxon perceptions and attitudes

In translating the German notion of *Fachdidaktik* we resort to a compound which is actually a neologism in the English language: “Subject-Matter Didactics”.⁹ This term carries, however, ambiguity, since “*Fach*” can designate the subject-matter of a scientific discipline as much as the content of a school subject. In the term *Fachdidaktik* both meanings and relations are actualized and drawn upon, that of *Fach* as a scientific category and that of *Fach* as a unit of institutional organization of school education. The majority of German native-speakers would probably interpret the term along the second meaning, but semantically speaking the first one

⁹ The short form ‘Subject didactics’ (instead of Subject-Matter Didactics), though very useful for quick reference, also offers too much of an ambivalence, since ‘subject’ could also relate to a person, to an individual which is not meant in this case.

is just as appropriate and applicable. That is why in the French setting, but also in the Scandinavian countries the particle *Fach* is deliberately rendered as “disciplinary didactics” and “didactique disciplinaire” respectively, leaving it open whether the references to the scientific disciplines or to the subject-matter ‘disciplines’ in school are stronger or whether both are meant in equal share and balance. The same is actually true for the interpretation of the notion *Fachdidaktik* in German, but in practice and conventional language use the connection with school subjects seems to be more dominantly associated: *Fachdidaktik* mediates between the scientific content disciplines on the one hand and the educational sciences on the other hand (cf. Abraham & Rothgangel, 2017). Yet it has become an academic discipline itself: it designates the science of teaching and learning within a specific content or subject-matter area as defined by the curriculum or school administration.

Didactics (and less so *Didaktik*) is a widely adopted and used term within many European educational contexts and beyond, as our overview has shown. The same is slowly beginning to develop for “Subject-Matter Didactics” or “Disciplinary Didactics”: they more and more become acknowledged as labels for new academic disciplines (in the plural), since there are many of them, according to content areas or school subjects. We have presented some details about the spread and the state of the art of Didactics as a science in Europe and beyond, in order to illustrate that there are manifold traditions and parallel conceptual frameworks existing by now and many facets to focus upon in a theory of teaching and learning, including the challenges of comparison (cf. Ligozat & Almqvist, 2018b). The same is true for subject-matter teaching and learning, which is even more fragmented than didactics across Europe and the globe in theoretical terms. This has consequences for translation and the transfer of knowledge insofar, as one has to be aware of which model of didactics one wants to promote for an international audience. One also has to reflect the potential obstacles in understanding and accepting of what one has to offer as knowledge in transfer (mainly one’s own theoretical foundations and the empirical results based upon it). These obstacles cannot be removed easily, certainly not on a verbal level alone; rather, it requires intense intercultural work. Many scholars like Gundem (1998), Westbury (2000), Hopmann (2015) or Biesta (2011) have tried before to function as mediators between Anglo-Saxon and European educational thinking, but without too much success, according to my perception. Recently, several books have been edited, trying to resume the transatlantic discourse, bringing it to life again, moving closer conceptually in a changing world. Could that work better than in the past, through intensified communicative means and based on differentiated translations? Or does it need joint and longer-range projects which are not easy to organize, yet which exist already (for example in mathematics education)?

There is some hope: there are first signs of a new perception and commitment, e.g. in the UK, that education for a specific school subject or for a specialized subject-matter area requires a specialized form of teaching and learning and thus a specialized way of training, in order to meet the specific intellectual challenges, implied in the structures and substance of that defined subject-matter area (cf. also Schwab, 1964). And that these fields of knowledge, dealt with specifically, also require specific avenues of research and possibly a specific research methodology. All of this can be illustrated by pointing to the establishment and existence of a relatively new “Subject Specialism Research Group” (SSRG) in the UK, hosted at the renowned Institute of Education in London since 2017 and devoted to specialized teacher education in which subject-matter orientation plays a central role. Here is an extract of their self-portrayal:

“Conducting and promoting research into subject-specialist teaching: We are interested in all areas of curriculum, pedagogy and assessment, and the role of knowledge in school teaching” (see their homepage).¹⁰ The focus of this research approach is not narrowed down any more to questions of simply improving the teaching methods for a particular topic area or school subject (as used to be the case in the past; e.g. in geography). Rather, issues concerning the contribution of a particular subject for the overall education of learners and for creating more social justice by working toward the goal of ‘powerful knowledge for all’ are introduced into the British discourse, based on the ground(-breaking) work of Michael Young & Johan Muller (2013, 2016). The SSRG research group is involved in two projects: GeoCapabilities, since 2016, and as co-operants in the KOSS project (*Knowledge and Quality across School Subjects and Teacher Education*, see above). Within that latter network the SSRG members play a key role as UK authors, contributing to the respective comparative publications on a number of school subjects (cf. Hudson et al. 2022a+b). The terms ‘didactics’ or ‘disciplinary didactics’, however, are still not used, as far as I can see.

Nevertheless, the presence of didactics and subject-matter didactics as concepts in certain parts of Europe, spreading in number and regions, and the increasing reflection about the need for a specialization in teaching and learning, depending on subject-matter, are clear indications of the fact that these concepts have reached the bottom-line of educational philosophy, at least outside the Anglophone world. Within that socio-cultural space, there still seem to be many reservations to be overcome against these (basically Germanic) terms and their conceptualizations of teaching and learning content in school subjects or in different sections of the curriculum.

Interestingly enough, two South African scholars already mentioned (Muller & Hoadley, 2021) recently made a new suggestion: they want to bring the educational foundations approach of preparing future school teachers in contact with what is perceived and understood as “Didaktik” by them, mediated through English translations of that concept (cf., for example, selected translations of the works of Wolfgang Klafki (e.g. 1995, 2000) and their specific reception within Scandinavia. They specifically rely on an understanding of “Allgemeine Didaktik”, as seen through the lens of one Swedish author in particular: Wilbergh, 2016).¹¹ This she is reflecting a state of theory-building which is not quite up to date nor in line with the discourse in Germany today about Klafki and his historical achievements in defining and choosing relevant content for schooling in the 21st century, independent of school subject or traditional structures of the curriculum. This illustrates once more, in how far a deeper understanding and a productive use of foreign educational thinking depends on good and available translations, at least to a large extent.

¹⁰ Cf. homepage at <https://www.ucl.ac.uk/ioe/departments-and-centres/departments/curriculum-pedagogy-and-assessment/subject-specialism-research-group>.

¹¹ The two South African colleagues propose a so-called ‘*pedagogic compact*’. This means to take the specific German approach (labelled *Bildung-centred Didaktik*), connected with the name of Klafki, and combine it with what is predominantly prevalent in Anglophone cultures around the world, a focus on teaching the *foundational sciences* such as psychology (of education), sociology (of education) or philosophy (of education) plus a full year or at least some months of planning and teaching practice for future teachers.

Summary and Outlook

The article tried to outline what is known and accepted of *Didaktik* and *Fachdidaktik* as concepts describing and analysing content-specific teaching and learning in school outside of Germany and the German-speaking countries. As demonstrated, this is the case in large parts of Europe, above all in Western and Northern Europe, but also beyond. In trying to share recent insights with other colleagues transnationally and exchanging about results of theorizing in the different fields of subject-didactic research, the mediation through a common language of communication is necessary. This can only be English as a lingua franca and that is exactly where certain problems occur: central notions of the approach are not easy to translate, if at all. The examples of “didactics”, “subject-matter didactics” and “general subject didactics” are a good point in case here, having no real equivalents in English. Other concepts require additional explanations or paraphrases on top of the actual translation offers (cf., for example notions like “Fach”, “Fachinhalt” or “Fachspezifik” etc.).

Overall, translating complex matters from German into English and going back and forth between these two communicative systems in view of highly context-bound research findings remains a challenge and requires a high degree of language awareness, of professional competence and of intercultural sensitivity. But re-examining our respective findings in the light of wanting to share them internationally and mastering the challenges of linguistic, intercultural transmission successfully can also be a very satisfying and rewarding experience after all.

In the recent past we succeeded to spread the global knowledge about the concept and theory of subject-matter didactics in the English-speaking world - through a number of substantial publications¹². Now it is time to motivate and support many other scholars and colleagues to organize their specific subject-didactic research, based on their individual subject didactics networks and the cooperative work done within those communities. At the same time, one has to be fully aware of the potentials, but also of the pitfalls of translation, in this case of translating from German into English, given the highly specific German terminology in our fields and the challenges of translatability. All the more did the current article try to outline aspects of both “the crux and the joys” (my own coinage) of such translation and publication endeavours. This can be even more appreciated by reading the second part of this contribution (to appear). Certainly, the German scholars of subject didactics could contribute substantially to a transatlantic conversation on the topic or add to the revitalization of such a discourse.

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¹² Cf. for example, Rothgangel & Vollmer, 2020; Vollmer, 2021a, 2021b; Vollmer & Vogt, 2022 and Vollmer & Klette, in print. See also the discussion in Hordern, Muller & Deng, 2021, and in Hordern, 2022.

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