

“Es waren die Stengel urr aufgewachsen.” Language/s in Education – Going Back and Moving Forward

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Abstract: The present contribution positions language/s in education in a Human Rights perspective. It is argued that language is an influential factor in achieving educational equity. Educational equity is linked to the pedagogical principle that all teaching shall start with the learners’ capacities. In super-diverse classrooms the linguistic capacities may vary significantly, whereas the competencies to be reached remain equal for all. In the background of Human Rights this calls for a strictly learner-centred approach that oscillates between what learners already know and the institution’s requirements. What this means for language/s in and for education is discussed in the light of scaffolding and translanguaging. Both approaches were developed specifically for institutional learning in the context of super-diversity. It is argued that they both only partially meet the challenge and may complement each other. This is illustrated with examples from action research in a sequence of biology lessons in a Viennese middle school.

Keywords: academic language, scaffolding, translanguaging, (in)equity in education, biology lesson

A staggering 40% of the global population does not have access to education in a language they speak or understand (UNESCO, 2016). The UNESCO’s Policy Paper 24 refers to this result from Walter and Benson (2012) and calls for close attention to language rights in the context of a new global education agenda (UNESCO, 2016). The key message of this Policy Paper is that children should be taught in a language they understand. The present contribution will, in a first step, show that Human Rights are an adequate frame for discussing language(s) in/for education. This argument is grounded in relevant documents pertaining to educational policy as well as in empirical research that strongly supports the relevance of language for education.

In a second step, the pedagogical implications are investigated. It will be shown that the Human Rights frame naturally matches the pedagogical principle of starting from the learners’ capacities. It is, however, less evident what this can mean for language in super-diverse classrooms. In the following, the ultimate linguistic aim of teaching towards the institutional requirements will be critically investigated in light of concepts such as “Bildungssprache” and academic language.

The challenge of moving from what learners already know to what they are expected to know has been addressed by language pedagogy in varying ways. Scaffolding and translanguaging are two approaches that specifically support the

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10 language development of multilingual learners. This paper asks in how far these approaches respond to the particular case of super-diverse classrooms within a Human Rights frame. Strengths and weaknesses are identified and allow a more complete understanding of teaching as a continuous move between already existing capacities of pupils and institutional requirements.

The last section exemplifies some central statements made about language/s in/for education on the basis of data from empirical research at school. The data collected during an action research project carried out by the second author of this contribution, Duygu Durmus (2016), allow for insights into the linguistic aspects of learning. They may support the argument that oscillating between what is already known and the objective of teaching is a rewarding enterprise that needs continuous and professional support.

1 A Human Rights frame for the language debate

1.1 Policy documents in focus

The *Universal Declaration of Human Rights* (1948, Article 26.2) assigns two basic functions to education: First, education “shall be directed to the full development of human personality and to the strengthening of respect for human rights and fundamental freedoms”; second, it “shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace”. In addition to the prohibition of discrimination on the basis of language in Article 2 of the *Universal Declaration of Human Rights* (1948), there is also a language component in Article 26 on education: Clearly, language is not only relevant to the access to education, it also relates to the idea of education itself as articulated in the *Universal Declaration of Human Rights*. This significant point has been more or less explicitly taken up by influential texts on education policy (for an overview, see UNESCO, 2006).

In general, the language issue often refers to the challenge of educational equity. Intercultural education may serve as an example for this link: Conceptualised by the UNESCO, a major player in the field of education policy, the Guidelines for Intercultural Education consider equity in public and social life the key to the governability of pluralistic, democratic societies (UNESCO, 2006, p. 8). Three principles of intercultural education are mentioned in the Guidelines: 1. culturally appropriate and responsive quality education for all, 2. cultural knowledge, attitudes and skills necessary for active participation in society, and 3. knowledge, attitudes and skills that enable learners to contribute to respect, understanding and solidarity. A closer look at the strategies through which the principles can be achieved clearly indicates the language component: Principle 1 shall be achieved through “the choice of a language of instruction which includes, where possible, the mother tongue of the learners” (UNESCO, 2006, p. 33). This aspect continues a policy that was made even

more explicit three years earlier in the Position Paper “Education in a Multilingual World” (UNESCO, 2003): Here, the UNESCO strongly supports mother tongue instruction (Principle I), bi- and multilingual education (Principle II) as well as language as an essential component of intercultural education (Principle III).

Another cornerstone for education policy was the Sustainable Development Goal 4 (SDG 4) on quality education. The global Sustainable Development Goals were agreed upon in 2015 in New York (UN, 2015) and are regularly monitored by the UNESCO. SDG 4 reaffirms commitment to inclusive, equitable quality education and lifelong learning opportunities for all. The importance of language becomes evident in the UNESCO’s monitoring reports, particularly in the Global Education Monitoring Report Policy Paper 24 (UNESCO, 2016): “If you don’t understand, how can you learn?” The rhetorical question in the report’s title explicates the underlying assumption: The language of instruction can hold back a child’s learning. This Policy Paper reiterates the call for mother tongue education and highlights the risks of poverty for education: The imposition of one language often represents a source of grievance linked to wider issues of social and cultural inequity. It is therefore not surprising that the use of the pupils’ home or first languages in primary education has become an indicator for the implementation of SDG 4 (UNESCO, 2015, p. 78). The most recent Global Education Monitoring Report 2017/18 (UNESCO, 2018, p. 41) reaffirms the importance of language for educational equity.

To summarise, policy documents in the domain of Human Rights and Education Policy acknowledge the importance of language. The UN views education as a Human Right. The “full development of human personality”, one of the basic functions of education, can be achieved only when the influence of language is acknowledged. This is the main message of education policy documents in this respect. More precisely, language is considered one of many influential factors in achieving educational equity. Here, the policy documents focus on access to education through language and strongly support mother-tongue education. In contrast, the role of education for participation in an inclusive, pluralistic and democratic society is less foregrounded in the Human Rights discourse.

1.2 Empirical research

There is abundant research on language and education. Although this work is informed by different theoretical and methodological traditions, it generally confirms that language is – together with socio-economic background – one of the features that are consistently linked to the educational success of pupils at school. Decades of research have given detailed insights into the multiple functions of language for the different dimensions of access to education and learning at school. Based on concepts with the aim to better understand the mechanisms of language at different levels, pedagogical approaches emerged in order to support pupils in this particular domain.

In the 1960s, Bernstein’s conceptualisation of “elaborated” and “restricted code” (Bernstein, 1964, 1977) resulted in a growing interest in language barriers for chil-

12 dren from the lower working-class. Going beyond monolingual scenarios, Cummins introduced the distinction between BICS (Basic Interpersonal Communicative Skills) and CALP (Cognitive Academic Language Proficiency) (Cummins, 1979, 1981, 2008). These concepts and Cummins' Interdependence Hypothesis have sparked a large body of critique over the last decades. Nevertheless, abundant empirical data widely confirmed the main assumptions of this approach. Thus, Cummins convincingly concludes that "the distinction between social and academic language is almost universally acknowledged by researchers, educators, and policy makers" and that hundreds of studies carried out over the past 35 years have proved "moderate but consistent relationships between L1 and L2 literacy related competencies" (Cummins, 2016, p. 941).

Research results are informative with respect to multilingual pupils: L1 maintenance proves beneficial to their educational success along with the study of the target language (August & Shanahan, 2006; Genesee et al., 2006). Time emerges as an important factor: Whereas interpersonal proficiency in a new language can be attained within two to four years, academic language takes five to seven (Thomas & Collier, 2002) and sometimes up to eleven years to develop (Levin & Shohamy, 2008). Research into achievement gaps between immigrants and their native-born peers reveals the complex interaction of factors relevant for the development of academic proficiency. These factors are demographic features such as ethnic background, socioeconomic status (SES), gender and arrival age as well as linguistic factors (e.g. exposure, language use) and social-psychological factors (e.g. attitudes, motivation, identity) (Haim, 2014). More recently, Orly Haim has extended the reach of academic proficiency in the context of trilingualism in concluding that dimensions of academic proficiency "can apparently be transferred not only from L1 or L2 to L3, but also in the reverse direction" (Haim, 2018).

Apart from quantitative studies, there is a growing body of ethnographic research using predominantly qualitative data from school contexts. These contributions converge in discussing the divide between the still monolingual mindset of educational institutions such as schools on the one hand and "diversified" (or super-diverse) learners on the other. With respect to language, this quite commonly leads scholars to reach for concepts that are better suited to super-diverse contexts as opposed to languages as discrete and bounded entities. Hence, ethnographic research tends to focus on linguistic practice in terms of code-mixing, translanguaging, code-meshing etc. Ethnographic research finally provides fine-grained and differentiated insights into specific aspects of the mechanisms of language in education. Taking newcomers to the French education system as an example, Pickel and Hélot (2014) explain how the absolute priority given to competence in the national language French silences the students' plurilingual competence and disempowers them on their way to further education. Martín Rojo's study on a similar group of learners (Martín Rojo, 2013) in a secondary school in Madrid includes a controversy about "respect": The imposition of Spanish is required by the teacher in terms of respect. A student resists this rule and calls for the inclusion of other languages in terms of respect. In both studies, the monolingual mindset of the institution is strongly questioned by multi-

lingual learners who strive for access to education. The institutional ideal of a single language is also questioned in the observation study carried out by Mick (2011) in Luxembourgish primary schools. Her work shows how the legitimisation of different voices in the learning process enables pupils to biographically contextualise their own learning and construct knowledge. Another example of such ethnographic work is Norton’s detailed analysis of literacy practices and their interrelationship with the learners’ identities (Norton, 2014). It suggests that meaning making is encouraged when learners are in a position of power and when their learner identities remain connected to their lifeworld. Plurality as key to participation at school is also stressed by Cummins et al. (2015): In their investigation into the subjects of literature and art, Cummins, Hu, Markus, and Montero (2015) impressively demonstrate the extent to which pupils benefit from using their multilingual and/or multimodal skills as cognitive tools in various domains. As a final example, Vetter (2018) indicates individual resistance to monolingual institutional norms: Looking to future possibilities and interactions, pupils adopt creative strategies in order to further develop those features of their multilingual repertoire that are not part of the institution’s monolingual mindset.

Quantitative and qualitative research into these complex issues is complementary. Although many questions necessarily remain open, research today can show that and – partially – how language is closely intertwined with other factors relevant to educational success. One general conclusion could be that the functions of language can only be understood if its complex interaction with other factors is taken into consideration. Another central conclusion indicates the influential role of school systems: Whereas in inclusive systems such as in South Tyrol or Canada the family background has no effect, Austria’s highly selective educational system can be characterised by achievement gaps related to pupils’ background, including the language used outside school (Herzog-Punzenberger, 2017, p. 14). Pupils with German as their L1 clearly outperform their colleagues with another L1 after eight school years; even accounting for the socio-economic background, a significant difference remains (BIST, 2017, p. 54). Research allows for a more nuanced understanding of access to education and reveals the interacting factors that need to be taken into account if particular goals such as equity in education are to be achieved. Research furthermore complements the challenge identified in policy documents: Inasmuch as it is crucial for access to and participation in education, language has been shown to be decisive for educational (in)equity.

2 Teaching and learning as a continuum

2.1 From what pupils already know...

An oft-cited pedagogic principle is to take the learners’ proficiency as the starting point for teaching and learning. It relates to a socio-constructivist understanding of

14 learning and can be theoretically grounded in Vygotskij's socio-cultural theory. Quite often, this principle is articulated in a paradigmatic way. The interesting questions here are, for one, in how far starting from what learners already know can inform a linguistic approach to teaching and learning, and, for another, what such an approach can achieve.

These are not new questions. Subject didactics and education have long been considering language when they seek to help learners understand. Science education, for example, looks back on decades of work on language. Today, this line of research culminates in extensive and interdisciplinary studies that allow for differentiated and detailed insights. Interdisciplinary teams have developed, combining linguists, educationalists and experts in the field. As a consequence, insights into which kind of language proficiency fits best with which kind of teaching approach have been gained. To give an example, Schüler-Meyer et al. (2017) have shown that bilingual German/Turkish teaching does not distract from learning mathematics and that proficiency in academic Turkish is not necessary but helpful for concept understanding. It seems that recent research has brought numerous, diversified results that require contextualisation. They all share, however, the conviction to start from what learners already know. In science education, this common denominator is often rooted in Wagenschein's pedagogical approach: Wagenschein defines "genetic learning" as based on and always connected with the original reality, the original thinking and speaking (Wagenschein, n.d.). The language dimension is most evident in Rule 7 of the genetic approach:

"Rule 7 (for all teaching subjects):

First the mother tongue, then expert language (but also back to the mother tongue again and again)

Therefore: to see the mother tongue not as something to be replaced or even to be eradicated, but as something to be wholly exhausted and yet to remain, besides and below expert language. The mother tongue is the language of understanding, expert language seals the result in a final step."

„7. Regel (für alle Fächer; ...):

Erst die Muttersprache, dann die Fachsprache (und immer wieder auch zurück zur Muttersprache)

Nicht also: die Muttersprache als ein zu Ersetzendes, oder gar Auszumerzendes ansehen, sondern als ein ganz Auszuschöpfendes und doch Bleibendes, neben und unter der Fachsprache. Die Muttersprache ist die Sprache des Verstehens, die Fachsprache besiegelt das Ergebnis in einem letzten Arbeitsgang."

(Wagenschein, 1970, Bd. I p. 487 ff.; 1970 Bd. II 99 ff., 158 ff., 1971, p. 209 ff)

When describing the mother tongue as the language of understanding that should not be replaced by the language of the discipline, Wagenschein does not mean L1 or native language, concepts that are increasingly questioned in times of globalisation. Indeed, Wagenschein opposes the mother tongue to the expert language of a particular discipline such as the symbolic language used in mathematics. A viable option is to understand "mother tongue" in Wagenschein's sense in terms of everyday language practice, i.e. language used for direct world experience. It is interesting that

Wagenschein warns against moving away too early or not coming back to everyday language. In fact, he conceptualises learning as a continuous process of moving forward and coming back. Learning can therefore break down if it only moves forward without getting back. Hence, Wagenschein supports anthropomorphic wording that is radically criticised by scientists. During the process of understanding, language should be free. He himself uses a metaphor to illustrate this continuous movement between everyday language and expert language: On their way to expert language, teachers and pupils should not “burn the ships” that allow them to go back again (Wagenschein, n.d.).

Not only should everyday language be taken as starting point, learners should also regularly get back to it and use it for understanding. From a linguistic perspective, this principle begs the question what everyday language, i.e. “mother tongue” in Wagenschein’s wording, means today. In the context of super-diversity, we can safely assume that the question is not about fixing one language as “mother tongue” but rather about investigating everyday language practice in more detail.

This shift of perspective is in line with a theoretical shift characteristic of looking at language in post-modern, mobile times. Numerous terms have emerged that share a particular perspective on language as mobile resource and practice: translanguaging (Canagarajah, 2013), flexible multilingualism (Creese & Blackledge, 2010), polylingualism (Jørgensen et al., 2011), metrolingualism (Otsuji & Pennycook, 2011) or heteroglossia (Bailey, 2012). In the words of Canagarajah (2017, p. 3), this perspective seeks “to index the more intense forms of contact that transcend labelled, territorialized, and separated languages, and the synergy of new meanings and grammars being generated through this mobility of codes”. Blackledge and Creese confirm that “meaning making is not confined to the use of languages as discrete, enumerable, bounded sets of linguistic resources” (Blackledge & Creese, 2017). Canagarajah argues that such a practice-based perspective on language has always been there in the history of human communication, although for a long time it remained hidden due to monolingual ideologies, particularly in Western nation states (Canagarajah, 2013).

For the identification of learners’ capacities, such a focus on practice appears to be a promising endeavour. There is no longer a need to reduce the learners’ language proficiency to L1, family language or mother tongue, concepts that are increasingly questioned in times of globalisation. Focusing on everyday practice as an approach to where learning starts from may also include features from different languages. It may thus also be a more adequate concept for research on super-diverse learners.

2.2 ... to institutionally required language

What is the destination of the approach that starts from everyday practice? What should be the linguistic goal of the learning process? There is no doubt that institutionally required language is crucial for educational success and that it represents an instrument of power. It is, however, still not clear what “institutionally required

16 language” means and how it can be described linguistically. Five decades of linguistic research have not brought about a clear definition but suggest three preliminary remarks: First, decontextualisation, preciseness and explicitness are characteristic features of institutionally required language. Second, everyday practice and institutionally required language should be considered the extreme points of a continuum rather than clearly distinguishable, binary categories. Third, proficiency in the institutionally required language is not equally distributed among learners.

In Bernstein’s early conceptualisation, the ‘elaborated code’ (in contrast to ‘restricted code’) is characterised by explicitness, decontextualisation and preciseness (Bernstein, 1964, 1977), and is attributed to children from middle-class families. Similarly, Cummins’ distinction between BICS (Basic Interpersonal Communicative Skills) and CALP (Cognitive Academic Language Proficiency) (Cummins, 1979, 1981) relates to context-embedded vs. context-reduced language proficiency and is, moreover, based on differences in acquisition and developmental patterns between BICS and CALP. Another influential conceptualisation referring to institutionally required language is “Bildungssprache” (academic language, translation used in this contribution): Gogolin draws upon Habermas (1977) and defines “Bildungssprache”/academic language as the linguistic register in which education is transmitted in institutions and “with whose help one can use the means of school education to obtain orientational knowledge” (Gogolin, 2010, p. 29; Gogolin & Lange, 2011, p. 108). Gogolin also refers to Cummins and highlights the crucial function of academic language for cognitively demanding tasks. She concludes that academic language is particularly relevant for educational success, since it represents the register in which knowledge is transmitted, acquired and certified (Gogolin, 2010, p. 29).

A functional description of academic language is also one of the main results of Morek and Heller’s (2012) overview of predominantly germanophone research. The authors conclude that academic language has three functions, i.e. communicative, epistemic and social: The communicative dimension focuses on the functionality of academic language for the respective social activity, e.g. linguistic decontextualisation serves the transmission of complex information. The epistemic function indicates that language also functions as a tool for reasoning and learning, and relates to acquiring new knowledge and skills. The social function refers to the hierarchical order of language in terms of cultural capital. Similarly to earlier studies, this recent and mostly germanophone body of research predominantly investigates the gate-keeping and selective function of academic language in the context of educational success.

What is difficult about academic language is not only its linguistic description, but also the relative isolation and fragmentation of research. Influential concepts such as CALP or the German “Bildungssprache” are rarely explicitly linked to each other, despite their conceptual similarities. Moreover, translation still appears to be challenging: Even if the present investigation limits itself to German and English – which is an ultimate untenable reduction of the conceptual reality since it ignores, e.g., the discussion about “langues de l’éducation” and others – there remains

considerable risk for confusion. Morek and Heller (2012), e.g., opt for “academic language” and “academic discourse” to translate “Bildungssprache”. Schüler-Meyer et al. (2017) create different boundaries and distinguish three registers, i.e. everyday register, academic school register and the technical register of specific subjects (e.g. mathematics). Each of these registers is considered in the language of instruction and in the home language. Although the concepts vary significantly, there seems to be an agreement that there is a kind of language or register that is institutionally more valued than others. There is, however, no common understanding of what this institutional requirement means in linguistic terms.

Moreover, there is fundamental disagreement over the epistemic function of academic language. Genetic learning, as developed by Wagenschein, highlights the epistemic function of everyday practice. A distinction is drawn between the language of understanding and the language of the understood. The perspective linked to the notion of genetic learning indicates the need to draw on everyday practice for understanding. This aspect is ignored by research on academic language that focusses on the epistemic function of academic language alone. The present contribution cannot solve this discrepancy and adopts a critical position: Despite the remaining conceptual difficulties, the institutionally required kind of language will be named “academic language” here. It is defined as the formal register of the one or more language/s of instruction and as different from everyday practice. Academic language is close to but still distinguishable from expert language. It is assumed that academic language has a communicative, epistemic and social function and that these functions require specific linguistic features. As to the epistemic function, it is assumed that this is not necessarily exclusive to academic language.

3 Between everyday and academic: translanguaging and scaffolding

Translanguaging and scaffolding are two pedagogical approaches that developed quite independently. They are commonly albeit not exclusively linked to different research traditions. Whereas translanguaging is quite often associated with the North American tradition following the work of García and others, scaffolding established itself in the germanophone tradition of subject didactics and German as a Second Language. Both approaches aim at empowering learners and explore the continuum between the learner’s proficiency, here everyday practice, and the institutionally required language, here academic language, although with a substantially different focus.

Translanguaging is informed by cognitive and psycholinguistic models of bi- and multilingualism and Cummins’ work on the interdependence of languages. Rooted in a practice-based understanding of language, translanguaging pedagogy is “centered not on languages, but on the observable communicative practices” of multilinguals (García & Flores, 2014, p. 155). Multilinguals flexibly draw on their linguistic resourc-

18 es when making sense of their complex worlds. The main principle of translanguaging pedagogy is that both teaching and learning start with the full linguistic and semiotic repertoire of the learners.

Translanguaging questions numerous assumptions and models on which education is traditionally based. One such assumption is the idea of school language regimes rooted in one (or more) single linguistic norm/s or convention/s. From a translanguaging perspective, these regimes disconnect language from interaction, experiences and knowledge building, and function in terms of “narrow linguistic passageways that schools construct” (García 2017, p. 257). Instead of shaping everyone’s experience and knowledge, language in schools only serves those whose language practices can easily pass through. Those who do not pass through are denied access to knowledge and to many of the ways of understanding the world. Translanguaging pedagogy also goes beyond additive models of bilingualism since languages are not separated: It emphasises the fluid and dynamic use of linguistic resources pertaining to differently labelled languages for teaching content and for literacy (García & Menken, 2015). Finally, translanguaging impacts our understanding of learners’ identities: Instead of looking at bi- and multilinguals in terms of two or more cultures and histories, translanguaging encourages the affirmation of bi- and multilingual identities that differ from identities based on the unity of language, territory and ethnicity.

The term translanguaging goes back to Cen Williams’ unpublished dissertation on teaching and learning methodologies in bilingual secondary education (Williams, 1994, cited from García & Flores, 2014, p. 166). The Welsh term originally used by Williams was translated as “translanguaging” into English and refers to the practice of asking students to alternate languages for receptive or productive use, i.e. to read in English and write in Welsh or vice versa (García & Flores, 2014, p. 155). Since then, the scope of translanguaging has widened and empirical research has yielded in numerous insights: García and Menken, for example, analysed 23 city schools in New York City that had adopted translanguaging pedagogy. Their research clearly demonstrates the benefits of the active preservation of students’ L1 (García & Menken, 2015). Others report on positive results for translanguaging in terms of moving between formal and informal language (Prediger et al., 2016). There is also a certain conceptual proximity to other concepts for multilingual contexts, such as multilingual communication (House & Rehbein, 2004), that has not been fully explored yet.

Translanguaging pedagogy has not produced a strict set of rules, but develops flexibly alongside the learners’ needs. Indeed, plurality is an important feature of translanguaging, and García frequently uses the plural noun, i.e. translanguaging pedagogies. She identifies five purposes of translanguaging: 1. motivation for learning, deepening of meaning, understanding and knowledge; 2. metalinguistic awareness and (critical) sociolinguistic consciousness, 3. affirmation of bilingual identities, 4. social interaction and communication (e.g. home-school cooperation), 5. empowerment. However, translanguaging is not conceived of as a strategy for all language-related issues in education. It is part of a well-planned instructional design, within which it has to be used “strategically” (García, 2017, p. 261).

Similarly to translanguaging, scaffolding developed as an array of strategies. Its purpose, however, is to foster the learners’ academic language, its focus is on teaching. Although specific scaffolding strategies may occasionally include other languages and language practice as well, e.g. when working with multilingual word lists, scaffolding still represents a monolingual approach towards learning.

Following Gibbons (2009, p. 15), scaffolding is a socio-cultural approach to teaching that represents situated support for closing the gap between what learners can do unaided and what they are able to accomplish with the help of a more knowledgeable person. Scaffolding is particularly intended for pupils whose L1 differs from the language of instruction. Its purpose is to promote the learning of new content, concepts and skills (Kniffka, 2010, p. 1). Some authors stress that scaffolding should not be mistaken for any kind of pedagogic support for Second Language Learners (Quehl & Trapp, 2015, p. 27).

The search for conceptual conciseness is particularly pronounced for scaffolding in germanophone pedagogy and subject didactics (Quehl & Trapp, 2015, p. 26). Following Hammond and Gibbons (2005), scaffolding is closely connected to socio-cultural theory (Vygotskij, 2002) and Systemic Functional Linguistics (Halliday, 1978). Although Vygotskij did not explicitly introduce the concept of scaffolding, Hammond and Gibbons consider it as constitutive of Vygotskij’s Zone of Proximal Development (ZPD). The most effective learning occurs when learners need task-specific support, i.e. when they act within their ZPD, the educational basis for a child’s development. This is seen as enabling learners to independently complete the same or similar tasks in new contexts (Hammond & Gibbons, 2005, p. 8). In line with Systemic Functional Grammar, scaffolding considers the social function of language: Using language is a purposive activity of the speaker or writer in a particular event with a particular type of role interaction and relating to a particular register (Halliday & Hasan, 1994, p. 22).

The conceptualisation of scaffolding in germanophone research is systematically presented first by Quehl and Trapp (2015, p. 26). Following Hammond and Gibbons (2005, p. 12ff.) a macro- and micro-level are identified. The notion of ‘designed-in macro-scaffolding’ indicates the common agreement that all teachers are language teachers and that linguistic proficiency should be explicitly promoted during subject teaching. Hence, scaffolding at the macro-level refers to knowledge about the language proficiency that learners bring with them. Moreover, it includes the systematic planning of subject teaching with regard to the linguistic means needed for achieving the subject-learning goals, and it considers the relationship between academic language and the other registers available to the learners. In contrast, scaffolding at the micro-level, i.e. ‘interactional contingent micro-scaffolding’, means the concrete interaction with learners during the lesson.

It must be noted that there is an impressive amount of work that adapts the scaffolding approach for subject didactics. One of its key outcomes has been the precise description of lesson plans (see, e.g., Tajmel & Hägi-Mead, 2017). Moreover, it should be noted that in countries such as Austria scaffolding has been integrated

20 into vocational training for in-service teachers (Vetter, 2014). This relative success of the approach is probably also due to the fact that it serves the overall political aim at present, namely to foster the language of instruction, here: German.

In practice, scaffolding has remained a monolingual approach at heart, since it does not systematically draw on the pupils' full repertoire (OESZ, 2012). One of the many scaffolding strategies available is to use a glossary in several languages known to the learners. This kind of strategy is rare and does not take into consideration the multi-facetedness of the learners' repertoires, i.e. that the learners might not be able to write the language(s) they use in everyday interaction.

From a comparative perspective, translanguaging and scaffolding have complementary features. Nevertheless, the fundamental theoretical differences must not be overlooked. Whereas translanguaging pedagogy adopts a practice-based understanding of language and questions languages as bounded entities, scaffolding works towards the institutionally required register of a clearly identifiable language. The pedagogical perspectives are different as well. Although learning and teaching are always interrelated, the focus of translanguaging pedagogy is on learning and understanding, whereas scaffolding is about teaching and developing lesson plans. Despite these differences, both can be positioned on the continuum between what learners already know and what they are institutionally required to know with respect to language. The two approaches' complementarity stems from this position: Translanguaging is particularly active in going back and activating the full range of the learners' linguistic resources. Scaffolding pursues a clear focus on academic register and is creative in devising strategies to provide learners with adequate linguistic means. Translanguaging might run the risk of losing sight of the power hierarchy responsible for the particular capital associated with one particular register. Scaffolding, however, risks to "burn the ships" and to not sufficiently conceptualise the way back towards lifeworld practice. In the following, both risks will be illustrated with extracts from a sequence of biology lessons studied in an action research project (Durmus, 2016).

4 Examples from an action research project

In a study on scaffolding in biology lessons, the second author of this paper (Durmus, 2016) adopted all steps of the scaffolding approach. The aim of her sequence of biology lessons was twofold: Learners should be able to evaluate the conditions (water, light etc.) for plant growth and describe its developmental phases. Of course, learners should have acquired the necessary linguistic means to reach these aims. The study was realised as an action research project with the researcher also acting as the teacher.

The project was located in an urban secondary school (Neue Mittelschule – NMS) in Vienna with a high proportion of pupils from migrant families from Turkey. All but one pupil of the project class were proficient in Turkish (to varying, unspecified

degrees). According to the pupils’ statements in informal conversations, they use Turkish (alongside German) at home. The dominance of Turkish is representative of the chosen school, but it is not representative of linguistic diversity in Viennese schools of this type (NMS). Although Turkish (alongside Bosnian/Croatian/Serbian) is one of the most widely spoken and wide-spread languages among pupils in Vienna and Austria, such an overwhelming dominance of one particular language is extremely rare. Moreover, we can safely assume on the basis of statistical data summarised in Herzog-Punzenberger (2017) that the observed classroom is most probably part of the only 9% of Austrian classrooms of this school type (NMS) in which more than three thirds of the pupils use a language other than German (but together with German) at home (Herzog-Punzenberger, 2017, p. 8).

As to methodology, the pupils’ linguistic proficiency in German was analysed via qualitative observation of classroom interaction (Bortz & Döring, 2016, p. 332). The evaluation of the pupils’ proficiency represents the basis for lesson planning which integrates the subject goals (conditions for and developmental phases of plant growth) and the linguistic means associated with them. Lesson planning was supported by a biologist. The researcher carried out the sequence of lessons and took notes in a diary after each lesson. In each lesson two to four university students were present for observation. These student observers were future teachers of different subjects and at the time participated in a university course on multilingualism in education. Their notes complemented those of the researcher. Beyond the notes from observation and the researcher’s diary, various other data were collected: Pupils documented the research process and their observation on plant growth in diaries and completed a qualitative questionnaire. Moreover, informal contact with the school’s headmaster and teachers was maintained over the entire project period.

In the following, three critical incidents from observation and one extract from the pupils’ diaries are discussed. The incidents are chosen to illustrate the process of understanding during task-fulfilment. The written diary entry represents a rather final state of the learning process and communicates what was understood. They are written individually at the end of each biology lesson. They summarise the task, the observation and the discussion of the results. The examples illustrate possible moments on the continuum between everyday practice and academic language and demonstrate how pupils go back and forward when striving for understanding.

The first example is documented in the notes taken during participant observation. It is situated during a phase of task fulfilment. The task is equal for all pupils: They are to formulate hypotheses on the conditions for plant development. One girl asks the teacher if she is allowed to ask a question during this phase. The teacher agrees and then asks a fellow pupil in Turkish what “tohum” means in German. A third pupil intervenes and suggests the German word for beans (“Bohne”). In this moment the teacher seems to feel that they won’t solve their problem alone. She translates “tohum” into German “Samen” / “seeds”. Having received this help, the girl continues working on her task in German. This is a rather classical example of going back and forward. It happens between languages like in the present case, but

22 also between different registers. The girl cannot achieve understanding through the language of instruction alone. She successfully moves back to a familiar name for the phenomenon under investigation. What is interesting here is that the linguistic rule of the project school would not have allowed this process. German is strongly recommended for all kinds of interactions at school and particularly during the lessons. During the project this rule was changed. Having internalised the German only rule, the girl possibly wanted to be sure of the teacher's permission, because her question related to Turkish. The example also proves that prohibiting this short translanguaging process would have held back learning in this particular case.

The second example also relates to notes from participant observation. It is about preciseness, which is commonly considered a key feature of academic language. Although precise language relates to all categories of words, our data seems to indicate that new nouns are taken up more easily than verbs. To give an example, the precise definition for the object in which the pupils place the seed, i.e. "Samenschälchen", was less problematic than the various linguistic realisations for meaning "to add" (German: "geben", "dazugeben"). When pupils are asked to orally describe the experiments, these processes within the ZPD become visible. It seems that the differentiation between "streuen" / "to scatter" ("Samen auf das Papier streuen" / "Scatter the seeds on the paper") and "sprühen" / "to spray" ("Wasser auf die Samen sprühen" / "Spray water on the seed") is not yet part of the pupils' everyday practice and particularly difficult to apply. The correct use of these verbs can be interpreted as an extension of what they already know. This extension is not systematically successful, of course. In searching for the new verb, pupils may ultimately rely on what they already know: "Wir müssen jetzt jeden Tag Wasser s... eh... geben" / "We now have to ... give water every day". This is neither academic nor correct German, although the example shows that the learner has understood how the process works, i.e. that water has to be added in order to let plants grow. The use of the hyperonym "geben" / "to give" here points to a discrepancy between the language of understanding and the language needed to communicate the understood. The hesitation in this example possibly indicates learning on the way to fulfilling the communicative function of academic language.

The third example relates to formal correctness and incorrect use: "Wir haben dann drauf Wasser gestreut" / "We then scattered water on it". Here, the learner has used the correct form of a new verb, but has used it inadequately. It is possible that this learner has simply confused "streuen" / "scatter" and "besprühen" / "spray" in trying to use the new verbs, and that the use of these verbs indicates a step from everyday to academic language. These three examples from spoken interaction illustrate different cases. They all have in common that the linguistic means to communicate the understood are not available to the learners. In the first case, going back to a feature pertaining to another language is successful, whereas in the second and third example the move is situated within the language of instruction. They all illustrate in how far linguistic features from everyday practice are activated for and helpful during the process of understanding.

The last example, taken from the diaries, illustrates translanguaging between different registers of a single language. It is not surprising that the written texts in the pupils’ learning diaries articulate less linguistic evidence of translanguaging. Most of the written texts are more “academic” than their spoken interactions, although some pupils draw upon other registers as well. However, the other language, Turkish, is not overtly present in these texts. “Wir haben am Anfang Erde rein gegeben und die Samen gestreut.” / “At the beginning we put earth in and scattered the seeds.” It is remarkable that in this text “streuen” is used correctly, while “rein” is part of a colloquial register. A few lines later in the same text, another feature associated with colloquial language is used: “Es waren die Stengel urr aufgewachsen.” / “The stems had grown up awesome.” It must be noted that the intensifier “urr” is strongly associated with youth language and conceptual orality. Although it cannot be denied that these extracts do not correctly communicate the experiment, they represent a moment of understanding. The growth of the plants, for example, is linguistically marked as surprising and impressive. Although the written text is positioned at the end of understanding, it still includes traces of the linguistic move between everyday practice and the institutionally required register.

The four examples given above can be interpreted as evidence of processes that are difficult to access. Understanding and communicating the understood are crucial for learning. Both processes are often associated with academic language. The examples, however, reveal that everyday practice is also an important resource for both. This supports the assumption that the activation of everyday practice is highly beneficial to understanding and that the continuous move between everyday practice and academic register cannot be handled efficiently without integrating both ends of the continuum. Hence, the examples call for not “burning the ships” in the sense of Wagenschein. At the same time, they point to a discrepancy between epistemic and communicative aims and the failure of everyday language practice to communicate the understood. This underlines that the communication of the understood requires particular support in order to be successful.

5 Concluding remarks

The present field of research is characterised by diverse and not always compatible theoretical and methodological approaches. If we start out from the most general description possible and agree that it is all about language/s in education, Human Rights and social equity represent an adequate frame for the discussion. Policy documents clearly recognise equity in education as influential for societal well-being, and language is acknowledged as highly relevant for access to education. Research shows that the language component is also pertinent to participation in institutional education. In the context of super-diversity (within still existing nation-states) the policy that pupils should be taught in a language they understand needs further investigation. We have limited our contribution to the process of learning in terms

24 of a move between the learners' already existing proficiencies and the institutional requirements. Focusing on language and despite unresolved conceptual questions, we found that this move is best described in terms of everyday practice and academic language. Everyday language is open to the full set of resources that learners bring with them and hence most appropriate also in the context of Human Rights. So is academic language, the most powerful register in institutional education, since it allows for participation in education and society.

There are many reasons to question the concept of academic language. Beyond the vague linguistic description, one could ask in how far societal change should inform institutional norms. In the present case, this rightly points to the growing discrepancy between multilingual societies and the still monolingual mindset of educational institutions. The focus of the present contribution is, however, to look closer at the linguistic component of the learners' participation in the educational enterprise. We did so through the lens of two influential pedagogic approaches that developed in the context of multilingualism, translanguaging and scaffolding. The examples from our empirical study on a sequence of biology lessons support both approaches. Translanguaging means the regular move back to everyday practice, which promotes and sometimes even enables learning. Indeed, the examples suggest that everyday practice has an important epistemic function: In analogy with the policy statement, this means that children learn in a language they understand. Scaffolding is best placed when the understood is to be communicated. Our examples illustrate the strong need for particular linguistic support.

Through the lens of educational policy, our contribution suggests a closer investigation of how institutional conditions encourage or hinder the activation of everyday practice. From a research perspective, the need for further investigation and empirical as well as conceptual insights is evident.

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