A FRAMEWORK OF LANGUAGE COMPETENCES
ACROSS THE CURRICULUM:
LANGUAGE(S) IN AND FOR INCLUSIVE EDUCATION IN
NORTHRHINE-WESTFALIA (GERMANY)

EIKE THÜRMANNN, HELMUT VOLLMER

Despite serious efforts on the side of German school authorities, educational opportunities for students from a migrant background have not significantly improved over the years. Although the recently published 8th integration report by the German government\(^1\) shows some encouraging results, the situation of immigrant students remains critical in the field of education. On the one hand, immigrant students are slowly catching up when it comes to school graduation. More children from families with a migrant background achieve higher school leaving qualifications. On the other hand, 43 percent of migrants are leaving school with lower qualifications compared to 31 percent of students with an ethnic German background. More devastating is the fact that in 2008, 13.3 percent of immigrants between the ages of 15 and 19 dropped out of school without graduating - a dropout rate twice as high as that of students with an ethnic German background. And the number of migrants dropping out of school has risen: In 2007, it was only 10 percent.

1. Performance gaps between immigrant and non-immigrant students

According to the “Progress in International Reading Study” (PIRLS)\(^2\), in Germany performance gaps between immigrant and non-immigrant students are already apparent at the primary level of formal education. In the course of lower-secondary education this performance gap widens across the curriculum. In mathematics, for example, Germany scored the largest disparity among educational systems participating in PISA 2003 – with one and a half proficiency levels. Petra Stanat and Gayle Christensen (2006: 32) comment: “This is particularly disconcerting, as these students have spent their entire school career in Germany.” In other words, Germany is among the few OECD countries in which the second-generation students from a migrant background perform at a significantly lower level (in mathematics, science, reading) than their first-generation peers. The situation is particularly challenging at the lower end of the performance scale. Low-performing immigrant students often do substantially worse than low-performing native students, which makes the former extremely vulnerable to exclusion. 20 percent of second-generation students are found to be below level 1 on proficiency scales (= PISA) for mathematics and reading. Stanat & Christensen (2006: 54) rightly analyse: “They can be considered at serious risk of not having the reading and mathematics literacy skills necessary to help them tackle real-life situations, to continue learning and to enter successfully into the work force.”

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\(^1\) Die Beauftragte der Bundesregierung für Migration, Flüchtlinge und Integration (Juni 2010).

\(^2\) The German side of the PIRLS-project is called IGLU, cf. for results see Bos et al. 2003.
Compared to the situation in other countries, there are certain characteristic organisational as well as socio-cultural features of the German education system which might explain why disparities in academic performance are so pronounced:

- There is evidence that it is more difficult to close performance gaps in tracked systems. Other countries with large gaps between immigrant and non-immigrant students also have tracked systems.

- Institutional factors (grade retention, tracking decisions) and community effects (settlement patterns, (self-) segregation) have a significant impact on migrant students’ school career.

- The family’s socio-economic and educational status, and - above all - their academic orientation (reading and writing in their home language and culture) seem to be most relevant background factors for school success. In Germany, parents of immigrant students have generally completed five (!) fewer years of schooling than parents of native students and they range at the lower end of the SES-scale. Thus, their “children are likely to face a double disadvantage in education related to their own immigrant status and to the educational and / or financial handicap of their parents. These two disadvantages are often closely intertwined as many migrant groups experience higher levels of poverty than the mainstream native groups” (Nusche 2009: 7).

- Immigrant students who do not speak the language of instruction at home tend to be performing at lower levels. Even after accounting for parents’ educational and occupational status, the performance gap associated with the language spoken at home remains significant. In Germany, a comparatively high proportion of immigrant students speak a language other than the dominant language of schooling within their families.

- Despite serious efforts in a few of the 16 German Lander, the educational system has not adapted to new demographic patterns in such a way that bi-/multilingual background competences of students from a migrant background are valued as an asset and that they are systematically supported by adequate provisions.

The conclusions which can be drawn for the German educational system from the OECD’s comparative review of the PISA 2003 results are quite clear:

Countries where there are either relatively small performance differences between immigrant and native students or the performance gaps for second-generation students are significantly reduced compared to those observed for first-generation students tend to have well-established language support programmes with relatively clearly defined goals and standards.

(Stanat/Christensen 2006: 3)

The OECD’s advice for countries with a strong relationship between the language students speak at home and their performance in mathematics and/or other subject areas like science and reading, is to consider strengthening targeted language support. This urgent demand for targeted language support is confirmed by the Council of Europe’s (CoE) large international project “Languages in Education – Languages for Education”. However, the CoE’s perspective is not limited to language support in the migrant students’ L2 as the dominant language of schooling. Instead the CoE’s attention is focused on both - the plurilingual competences of students from a migrant background and the specific language register normally used in formal education. There is strong

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3 Cf. the Council of Europe’s project website (2009).
evidence that targeting support at the specifics of this register in language education across the curriculum (i.e. in all language subjects including L1 as home or heritage languages and also in so-called non-language subjects) will lead to a considerable enhancement of academic achievement. A number of suggestions how to reach this goal have been made within the sub-project of the CoE entitled “Linguistic and educational integration of children and adolescents from migrant backgrounds” (2010), especially in Thürmann, Vollmer & Pieper (2010).

Until recently, German school authorities allocated additional resources to schools for the support of migrant students predominantly according to demographic data. The number/proportion of immigrant students was the crucial criterion for assigning additional teaching staff. Besides special programmes in L2 for newly arrived students, these resources were spent in an across-the-board fashion and mainly used for reducing the size of mainstream classes. This rather expensive approach may have made it easier for teachers to shoulder the burden of teaching, but – as can be safely said – it did not prove to be very effective for the advancement of underachieving students, since it did not take into account individual language biographies and individual needs for support in the language(s) of education.

2. Recent projects in Northrhine-Westfalia: Supporting the language(s) of schooling

Northrhine-Westfalia, the largest of the 16 German Länder (with 18 Mio. inhabitants and approximately one third of 5 year-olds from immigrant backgrounds), has initiated a number of projects which acknowledge the crucial function of the school language(s) for academic achievement and which take advantage of the preliminary results of the Council of Europe’s international project “Languages in Education, Languages for Education”. In particular, the following projects should be mentioned:

a) **Large-scale screening of L2-competences at the pre-school level:** In order to ensure that all children have acquired sufficient language competencies to follow mainstream classes taught in German, large-scale screening has been introduced for children at the age of four. Since 2007 almost 200,000 children have gone through stage one of the test every year. Those children whose scores do not clearly indicate age-adequate development in the dominant language of education go through stage two which assesses more deeply the need for individual language support.

b) **Mandatory language support courses at pre-school level:** On the basis of stage two of the assessment procedure under a), children with retarded language development in German as L2 have to attend special language courses at kindergarten level. State authorities pay € 340 per capita for these courses, so families do not have to carry the extra financial burden.

c) **Plurilingual competencies and native language tuition:** Northrhine-Westfalia continues to offer additional language maintenance courses on the level of primary and lower secondary education in order to expand immigrant students’ individual plurilingual profiles. Approximately 800 native heritage language teachers are employed by Northrhine-Westfalian school authorities to teach these courses in more than 15 different languages on the basis of a curriculum framework which co-ordinates L1-teaching and -learning with mainstream education in L2 and with the German as a subject. Additionally, L1-courses (Turkish, Russian) have been upgraded and integrated into the mainstream curriculum as equivalents for a mandatory or optional foreign language course. This option is also offered to students of the lower ability range (= in the German Hauptschule).

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4 Technische Universität Dortmund (2007): Delfin
d) **Initial teacher training:** Recently, Northrhine-Westfalia has reformed initial teacher training programmes according to the standards of the Bologna process. This reform also implies the requirement that all teachers – including the so-called non-language specialists – have to successfully complete a mandatory training module which focuses on individual learning needs of immigrant students in the dominant language of schooling. Thus, future teachers of subjects like mathematics, history, chemistry etc. will become more aware of the challenges and chances of plurilingualism, they will know basic strategies to support the acquisition of a second language through non-language subjects as well as understand the necessity of subject-specific scaffolds for classroom communication and cognition.

These highly desirable and indispensable programmes for inclusive education may already be considered a conceptually sound multilingual and cross-curricular approach to language pedagogy, but they are still rather pragmatic. There are two further promising initiatives by educational authorities in Northrhine-Westfalia which might lead to a more coherent language-focused approach for school- and classroom development as well as for teacher training. These two approaches described below in sections 3. and 4., explicitly refer to current exploratory and conceptual work done within the framework of the Council of Europe’s project “Languages in Education, Languages for Education” and to similar initiatives in German-speaking countries (FörMig 2009, Gogolin 2009) and across Europe.

### 3. Language Support Coaches

**Training advisors for whole-school language learning programmes:** Many schools with an above-average proportion of vulnerable learners (especially in the lower-ability range, so-called Haupt-schulen) lack in expertise how to manage change, develop adequate cross-curricular programmes for language support and for expanding individual plurilingual student profiles – and thus reduce barriers to academic success. About 100 senior teachers have undergone a comprehensive training as advisors for schools which are ready to establish their own whole-school language learning programmes and policies. On behalf of the Ministry of Education the Institute for School Development (IfS) at the University of Dortmund\(^5\) co-ordinates the project “LanguageSupportCoaches” (= “SprachFörderCoaches”) and has assembled a consortium of experts from other universities (mainly Essen and Cologne) who have organised the training of these coaches in eight 1.5 day modules (seminars) which are listed below:

- **Many kinds of German – the particular language of schooling**
  Awareness of registers/varieties of the German language and their distinctive functions and features – classroom interaction as a web of linguistic and cognitive activities – the distinction of Cummins’ Cognitive Academic Language Proficiency (CALP) and Basic interactional Communicative Skills (BICS) – the concepts of literacy and the conceptually literal use of oral language in the classroom – basic discourse functions and their use in associated text types / genres …

- **How children and young people acquire language(s)**
  Artificial and natural acquisition of language competences – acquisition of languages in monolingual, bi-/multilingual social contexts – relevant background factors for the acquisition of language competences – individual language biographies and plurilingual profiles …

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*5 Director: Prof. Dr. Wilfried Bos, project coordinators: Ulrike Platz*
• What children and young people should be able to do with their languages – educational standards and the empirical basis for language-sensitive classroom development

Language-relevant results of inter-/national large-scale assessment studies (TIMSS, PISA, PIRLS, DESI) – results of national/regional central student assessment and how to interpret these results – different approaches towards educational standards (content, performance, opportunity-to-learn standards, minimum/average/maximum standards etc.) – national framework of educational achievement standards \^6 - development, implementation and evaluation of school-based language support programmes ...

• Differentiated and individualised instruction: School- and classroom-development strategies and models focusing on language support

Basic principles of plurilingual education \^7 - strategies and instruments of diagnostic testing – error analysis of oral and written usage - language development screening – effects of mixed-ability teaching, banding, streaming and setting on language development – methods and instruments for assessing language support demands – contract learning, individual language support contracts – co-ordinated L1- and L2-team teaching – tandem learning – speech clinics ...

• German as a subject and its specific contribution to a whole-school language support programme

Curricular profile and objectives of “German as a subject” – functional communicative as well as structural approaches towards language awareness and knowledge about language – methodologies for supporting the acquisition of the German language as L2 – strategies and techniques of scaffolding in language education ...

• The subject area of social studies and its specific contribution to a whole-school language support programme

Curricular profile and objectives of subjects such as history, geography, civics, social studies, economics – subject-specific language requirements for academic success – subject-specific contributions to language education and language support – scaffolding strategies and techniques ...

• The subject areas of mathematics and science and their specific contribution to a whole-school language support programme

Curricular profile and objectives of subjects such as biology, physics, chemistry, engineering, mathematics – subject-specific language requirements for academic success – subject-specific contributions to language education and language support – scaffolding strategies and techniques ...

• The special language support needs of “late comers” (immigrant learners arriving at an advanced age)

Methods and instruments of evaluation/assessment of competences in the German language as L2 – organisational options for language support – team-teaching - advantages of multilingual programmes – L2-specific scaffolding strategies and techniques ...

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\^6 E.g. Sekretariat der Ständigen Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland 2005

\^7 Cf. Council of Europe 2006
By the end of 2010, all 100 LanguageSupportCoaches had gone through these eight qualification modules and are now in operation contacting individual schools and discussing their specific language support approaches with them. They give advice to schools how to implement, evaluate and improve their programmes, provide instruments and supportive materials and offer in-service teacher-training seminars. External evaluation of the whole LanguageSupportCoaches project has shown beneficial effects. It remains to be seen whether the programmes is stepped up by the education authorities and extended to other age groups and types of schooling.

4. Cross-curricular toolkit for literacy education in the dominant language of schooling

In addition to the training of LanguageSupportCoaches, the Ministry of Education of Northrhine-Westfalia has commissioned a curriculum reform for schools with a high intake of lower ability learners ("Hauptschule" as the lowest of the three track system). In preparatory discussions, the need for a comprehensive and coherent cross-curricular language support policy became quite evident. Helmut Vollmer and Eike Thürmann informed the Ministry’s officials who are responsible for the curriculum reform about the Council of Europe’s large international project “Language(s) in Education – Language(s) for Education” and outlined available preliminary results. The view was shared that individual schools as a whole (and not only departments for “language as a subject”) are responsible for language education and language support, which means that all subjects and subject areas should make their specific contributions to a coherent language support programme.

During these preliminary discussions, the need for a coherent and transparent framework of language competences in (German as) the dominant language of schooling became quite evident. Without such a framework it would not be possible for subject specialists to specify cognitive and communicative competences and their specific contribution to a coherent cross-curricular language support programme. Thus, Vollmer and Thürmann were asked to conceptualise an inventory of language elements, skills, strategies and competences for the end of compulsory schooling at the age of 15/16 (in Germany called “Mittlerer Schulabschluss”) which are relevant for the continuation of formal academic education and/or qualified vocational training. The resulting list of language elements, skills, strategies and competences as presented in the Appendix to this paper is based on an extensive empirical analysis of language requirements as specified or indicated:

- in current curricular documents from five different German Lander for various school subjects in primary and lower secondary education
- in textbooks and other academic materials
- in relevant policy documents e.g. language requirements for the vocational training of school leavers (“Ausbildungsreife”) agreed upon by trade unions, the federation of employers and government officials in a document called “National Alliance for Vocational Training and qualified trainees”
- in pertinent pedagogical publications and memoranda by professional bodies.

The repertoire of linguistic competences for formal education (see Appendix) can be considered as minimal rights or entitlements of each and every learner to successful content learning across the curriculum. It is structured into five areas, which have been

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8 Bundesagentur für Arbeit (2008)
9 See, for example, Gesellschaft für Fachdidaktik (2009)
justified and explained elsewhere (see Vollmer et al. 2008 and Vollmer/Thürmann 2010), in the following way:

1. **General classroom interaction: negotiation of meaning and participation**
   Oral teacher-learner as well as learner-learner interaction, informal and more formal classroom language patterns – also written components (e.g. taking notes, black-/whiteboard notes, understanding tasks and textbook presentations) …

2. **Information retrieval and processing:**
   Reading-, watching-, listening comprehension activities – specifics of different text types / genres – methods and techniques for identifying, retrieving and processing relevant information from documents/materials and other media …

3. **Basic communicative-cognitive strategies and discourse functions:**
   Thinking skills structuring and fine-tuning mental concepts – six core macro-functions and their linguistic/textual representations … (primarily related to non-linguistic subjects)

4. **Documenting, presenting and exchanging of learning results:**
   Production of oral/written statements/texts/presentations, also with supportive non-language material – specifics of different text types / genres - compliance with conventional basic patterns of academic writing …

5. **Availability of linguistic means and language elements for the realisation of the above-listed competencies:**
   Pronunciation, vocabulary, morpho-syntax, pragmatics – awareness of linguistic form and function - expanding available repertoires - awareness of differences in register and style …

This breakdown into five complementary dimensions allows for flexible approaches to language support across the whole curriculum. Language experts (L1, L2, foreign languages) will make use of all five dimensions when organising targeted language support and will especially focus on the availability of the learners’ individual linguistic means and strategies in a more systematic way. Non-language experts will rather choose a functional and pragmatic way whenever reaching curricular objectives and the language background of the learners make scaffolding necessary. They will leave the more systematic linguistic approaches (dimension 5) to language experts. When it comes to scaffolding they will probably have to concentrate on presenting language exponents and “chunks” to learners at risk as part of the content (the topic or thematic issues) and as options for subject-specific purposes.

Curriculum working groups on all levels (on the level of the central, regional, local administration as well as in the individual schools) can now draw on elements from this structured inventory which might serve as a framework for cross-curricular co-ordination or division of labour and possibly for considerations of systematic language transfer from one subject to another. It might also turn out to be a valuable resource document for the definition of minimum language requirements at certain age/competence levels, for defining literacy or relevant exit criteria and for organising language support programmes.

For the future, it seems to be advisable to break down this exit inventory of language competences into a scaled set of minimal standards for different age groups. However, such projects will have to be backed by empirical developmental research and careful validation.
References


APPENDIX

Language skills to be acquired by the end of year 9/10

1. General classroom interaction: negotiation of meaning and participation

Students can clarify conditions for handling and completion of tasks, organise their work procedures effectively and arrive at results.

This entails mastering the following language skills in particular:

- listening carefully
- answering properly
- putting relevant questions and asking for clarification where necessary
- reacting appropriately to statements by other peers or teacher
- looking carefully at instructions for work and tasks to be carried out in order to be certain what is expected and under what conditions
- organising one’s own written notes to ensure that they are clear and reflect the current state of one’s own work
- presenting the results of one’s work in a structured, clear form
- agreeing with others about aspects of team or group work related to the subject and accepting one’s function within the group (e.g. chairing discussions, acting as rapporteur)
- making proposals concerning work procedures in a linguistically appropriate form, while expounding one’s own needs and interests…

2. Information retrieval and processing

On the basis of their own interests and/or tasks to be carried out, pupils can do targeted research for information or, where appropriate, extract relevant information from documents and other media.

This entails mastering the following communicative, and sometimes linguistic, skills in particular:

- acquiring the necessary information through targeted investigation
- conducting simple searches
- using a diverse range of information sources
- preparing, carrying out and making use of surveys or interviews
- finding one’s way around a library and tracing literature or, where appropriate, media dealing with a theme relevant to the subject
- recognising the structure and the function of standard printed documents and finding out about developments in current affairs
- extracting information from news, reports and articles available in the media about topics of relevance to the subject

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10 In Germany school starts at the age of 6 with year 1. Primary school lasts four years (years 1 to 4) and secondary education starts in year five. Year 10 is the first year of upper secondary education. It usually signals the end of general secondary education for pupils attending Hauptschule or Realschule.
conducting research on the Internet, using search engines efficiently and making analytical comparisons of the information provided

identifying the main points in spoken or written texts

understanding the general outline and reasoning of complex texts

distinguishing relevant information from non-relevant information

establishing appropriate links between texts

identifying statements in a text revealing the author’s intentions, arguments and outlook

taking account of the context of the publication when using information (e.g. time of publication, target audience and form of publication)

understanding important information provided through simply laid-out diagrams, tables, drawings and charts

extracting specific information required for a task or one’s own fields of interest from maps, diagrams, tables, drawings and charts, while taking account of any accompanying information (such as legends or source references)...

3. Basic cognitive-communicative strategies and discourse functions

Pupils can use appropriate linguistic strategies and tools to process information, experience, comments and ideas applying basic discourse functions.

This entails mastering the following cognitive and linguistic skills in particular:

Naming, defining

- appropriately labelling living things, objects, processes, events, topics and viewpoints
- assessing and specifying their specific characteristics

Describing, portraying

- making relatively concise and consistent oral contributions without excessive use of body language or gestures so that listeners can understand without having to ask for clarification
- describing living things, objects, processes, events, topics or viewpoints related to the specific subject area through features related to their appearance or function, whether directly observable or emerging as the result of experiments
- when describing living things, objects, processes or events related to the specific subject area, referring to “facts” which are obvious or at least understandable to others
- comparing living things, objects, processes, events, topics or viewpoints related to the specific subject area on the basis of single, predefined characteristics (such as appearance, nature or function)...

Reporting, narrating

- giving an account of past events or experiences
- making the distinction between narration, which offers a subjective viewpoint, and reporting, which attempts to give an objective account
- differentiating between the basic types of text that may be used for reporting (such as minutes or transcripts, test descriptions, reports on work experience, press articles, media reports and accident reports) and taking account of their features in one’s own writing
• matching the information provided and the order in which it is presented to the specific purpose of the report
• recognising the respective roles of narrating and reporting in an argument…

Explaining, clarifying
• identifying the causes or reasons behind moderately complex subject-related processes or events and explaining them with reference to a small number of influencing factors
• establishing relations of cause and effect based on a limited number of factors, taking account of both direct and indirect causes and linking them to past or future events with a view to identifying general patterns
• expressing ideas and forming theories about relations of cause and effect…

Assessing, judging
• clearly and convincingly backing up one’s own opinions and viewpoint
• assessing and judging facts, events and conduct on the basis of one’s own knowledge of the subject, ethical principles and personal experience
• drawing conclusions on the basis of personal observation concerning the appropriateness of conduct adopted and the validity of supposed relations of cause and effect
• weighing up the appropriateness of forms of conduct and positions while taking account of various perspectives (interest, needs, conditions)
• expressing criticism, giving reasons for it and taking a critically-minded approach to one’s own position…

Arguing, taking (up) a stance
• making the distinction between “asserting” and “arguing”, and “talking s.o. round” and “convincing”
• when assessing arguments, making the distinction between statements and assumptions supported by fact on the one hand and suppositions on the other and taking account of this distinction when making one’s own arguments
• clarifying the advantages and drawbacks of differing facts and ways of behaving, weighing up and discussing the pros and cons to arrive at a personal viewpoint
• following the course of an argument in a discussion or a text, examining its accuracy and, where necessary, rejecting it on the basis of one’s own knowledge and/or experience
• undermining others’ arguments by advancing counter-arguments
• looking into one’s opposite number’s arguments and recognising remaining differences…

4. Documenting, presenting and exchanging of learning results

Pupils can describe or present their own ideas and the findings of their own work in an appropriate form and communicate on the subject using the basic language functions listed below.

This entails mastering the following cognitive, and sometimes linguistic, skills in particular:
• reporting on or summarising orally or in writing what has been read, heard or seen according to instructions
presenting complex facts and actions using audio-visual material (such as diagrams, sketches, pictures and maps)

reporting on the results of group work or a project using visual aids suited to the audience (such as posters and mural newspapers)

reporting on processes or arguments in their chronological or logical order using key word charts

using these as the basis for coherently structured oral or written presentations

presenting the results of one’s work in a brief, coherently structured form making use of visual material and taking account of the audience’s interest and prior knowledge

making intentional use of stylistic devices when reading aloud or making a presentation (mastering intonation, volume, speaking rhythms, pauses, mime and gestures)

reviewing written work alone or in a group, paying particular attention to certain aspects such as formal accuracy, compliance with the underlying concepts of the subject, planning, exhaustiveness and consistency in the order of the information or arguments presented, and using checklists where appropriate …

5. Availability of linguistic means and language elements for the realisation of the above-listed competences

At a general level

In everyday situations pupils can use linguistic tools in a broadly appropriate and correct manner.

This entails, in particular, having the following abilities that help to apply linguistic means and appropriate strategies in keeping with the situation:

- expressing oneself clearly in standard German
- drafting simple texts clearly and as far as possible without any mistakes
- dealing with everyday situations with appropriate vocabulary
- finding out the meaning of previously unknown words and hence extending one’s own vocabulary
- producing legible handwritten texts
- observing basic rules on sentence construction and sentence and word order (for instance in connection with differing sentence types)
- applying basic spelling and punctuation rules
- making the distinction between every-day and colloquial language and the language to be used in academic contexts and between oral and written usage
- observing usage conventions (such as choice of words, polite phrases and appropriate forms of writing) when representing one’s own interests in dealings with institutions, officials or formal committees…

At the level of individual words, collocations and idiomatic expressions

In highly formal communication contexts dealing with specific subjects and content, pupils can use linguistic tools and strategies that enable them to be properly and precisely understood.
This entails, in particular, having the following abilities helping them to choose linguistic means and appropriate strategies in keeping with the situation, at various levels:

- using the basic concepts for specialised and subject-related communication and explaining their meaning using everyday language
- understanding the meaning and function of nominalisation and the substantivisation of infinitives which are typical of the language used in this subject area (in German)
- using one’s knowledge about the structure of composite nouns and adjectives to decipher the meaning of words (e.g. brenn-bar [burn-able=inflammable], sauerstoff-reich [rich in oxygen], säure-fest [acid-resistant])
- breaking down words to identify their component parts (e.g. roots and modifiers and common suffixes and prefixes) and using this method to understand texts (e.g. Zylinder-kopf-dichtung [cylinder head gasket] and abstract words ending in –heit, -keit and –ung)
- identifying the meaning of parts of words of Greek or Latin origin that are frequently used in academic subject teaching (e.g. “hydrographic”, in which “hydro” = water and “graph” = writing, and prefixes such as auto-, hyper-, inter-, intra-, meta-, max-, min-, multi-, sub-)
- understanding common abbreviations in a particular subject area along with words composed using figures, letters and special signs (e.g. DGL = Differentialgleichung [just as DE = differential equation], T-Träger [T-girder = a T-shaped metal girder], and 60-Watt-Lampe [60-watt bulb])
- portraying and setting out semantic relationships in the form of semantic fields and thus extending one’s vocabulary in the subject area
- recognising the importance of function words for the accuracy, clarity and logical cohesion of communication in the subject area and extending the available repertory of words (focusing in particular on prepositions and the grammatical cases they take, as well as conjunctions, pronouns and modal verbs)
- recognising common usage patterns, idiomatic expressions and functional verb structures in the subject area and using these in one’s own writing
- indicating the degree of certainty of statements (using modalising words or expressions such as “perhaps”, “(very) probably”, “possibly”, and “I believe/ suspect/ presume/ consider that”)
- drawing readers’ or listeners’ attention to the place and the role of following statements in relation to what they are intended to communicate using formulas to introduce what follows (such as “I will now attempt to demonstrate that …”, “this may be illustrated by an example taken from …” or “this is meant to imply that …”)

At sentence level

- breaking complex sentences down into several parts when deciphering texts to understand their content in every detail
- indicating exactly when or for how long a process lasts (using appropriate prepositions such as “from”, “between”, “within”, “since” and “during”, yielding expressions such as

\[\text{11 In English, it is better style to use verbs when possible, even in formal or academic contexts (English translator’s note)}\]
“during the heating process”, using clauses introduced by conjunctions such as “while heating the glass flask” or using adverbs such as “at that time”, “afterwards”, “later”, “tomorrow”, “the day after next”, “yesterday”)

- giving precise details of location – introducing and more closely defining reasons (causal, instrumental, conditional, concessive, final)
- highlighting statements about ways and means (such as degree/extent, composition)
- indicating the timelessness of statements by using the right verb forms (present, indicative)
- indicating the impersonal nature of statements through the use of the passive or other appropriate forms of expression (such as “X can be measured” and “it should be added that”)
- accurately describing features (for example by adding attributes and attributive clauses)
- making comparisons and establishing exactly how prevalent certain features are
- avoiding subordinate clauses (through, for example, the extension of nominal groups) to make texts more compact (e.g. “nach Abkühlen des Materials” or, literally, “after cooling of the material” to avoid a longer clause with a verb)…

At the level of the text as whole

- laying out and arranging one’s own texts to take account of the aim being pursued and the target audience (for example, indicating which passages of the text relate to particular subjects using paragraphs, indents and subheadings)
- structuring oral statements for example, using pauses)
- gathering individual units or paragraphs under the same topic
- in written texts reviewing the sentence structure from an editorial viewpoint or, where appropriate, introducing some variety into this structure in such a way that the reader does not feel that the text is monotonous
- identifying what makes the text consistent in terms of content or, where appropriate, reasoning, and what linguistic tools can be used to reflect this consistency
- avoiding presuppositions and introducing new subjects in a well-ordered fashion
- avoiding references to facts outside the realm of the text
- using techniques to guide the reader
- locating and replacing informal, colloquial words and phrases (especially jargon) in one’s own texts…