Integrated Reading and Writing Support in Vocational Education

VG-SPS-RP-15-36-013584

Intellectual Output 2: Framework

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

Project consortium

Associatia LSDGC Romania
Cluj-Napoca, Romania
https://www.alsdgc.ro
office@alsdgc.ro

Berufsbildende Schule Wirtschaft 1
Ludwigshafen, Germany
https://www.bbsw1-lu.de/
christina.scheins-schacherer@bbsw1-lu.de

Centrum Ksztalcenia Ustawicznego w Sopocie
Sopot, Poland
https://www.ckusopot.pl/
cku-projekty@wp.pl

Colegiul Tehnic Energetic
Cluj-Napoca, Romania
http://www.energetic-cluj.ro/
energeticcj@yahoo.com

Foundation for lifelong learning development
Tallinn, Estonia
https://www.innove.ee/en/
kadri.peterson@innove.ee

Pädagogisches Landesinstitut Rheinland-Pfalz
Speyer, Germany
https://berufsbildendeschule.bildung-rp.de/
stefan.sigges@pl.rlp.de

Regionalne Centrum Rozwoju Edukacji
Opole, Poland
https://rcre.opolskie.pl/
bniespor@rcre.opolskie.pl

Tallinna Lasnamäe Mehaanikakool
Tallinn, Estonia
http://www.tlmk.ee/
kool@tlmk.ee

Zürcher Hochschule für angewandte Wissenschaften
Winterthur, Switzerland
https://www.zhaw.ch/en/university/
hoef@zhaw.ch

Project website: www.rewrvet.de

Editing team:
Maria Kovacs, Associatia LSDGC Romania (ALSDGC)
Ariana-Stanca Vacaretu, Associatia LSDGC Romania (ALSDGC)
Prof. Dr. Joachim Hoefele, Zurich University of Applied Sciences (ZHAW)
Prof. Dr. Liana Konstantinidou, Zurich University of Applied Sciences (ZHAW)
Stefan Sigges, Pedagogical State Institute Rheinland-Pfalz (PL)

April 2018

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

This report was written as part of the ERASMUS+ project *integrated reading and writing support in specialised teaching for vocational training*, KA 2 collaboration to promote innovation and exchange best practices. Strategic partnerships in the field of school education. Project number VG-SPS-RP-15-36-013584. The report is based on the methodology used in the project.

This project was funded with support from the European Commission. The responsibility for the contents of this publication reflects solely the views of the author. The commission is not liable for any further use of the information contained therein.

Outputs of the project

Overview of the outputs which have been created in the project "Integrated Reading and Writing Support in Vocational Education", the present output is marked in bold letters and blue color, other outputs are in grey:

Output 1: Report impact reading writing (cancelled)

Output 2: Framework "Integrated reading and writing support in vocational education"

Output 3: Needs analysis & evaluation instruments

Output 4: Guidelines – Planning reading and writing activities within scenario-based learing in VET

Output 5: Scenario-based reading and writing classroom materials

Output 6: Workshop for teachers: "Integrated reading and writing support in vocational education"

Output 7: Handbook: "Integrated reading and writing support in vocational education"

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

Content

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

Introduction

What is the purpose of the Framework?

This framework has been developed by educational scientists, in-service-teacher trainers and teachers in vocational education and training (VET). It is based on scientific findings and practical experiences from teacher training and vocational schools. The framework explains didactic-methodological principles, which are considered necessary for the successful implementation of integrated reading and writing support. Subsequently, the areas of reading and writing support are presented, and on this basis the advantages of joint reading and writing support. The framework is the theoretical basis of the project. All other outputs are based on the framework. The framework delivers scientific background knowledge, which is essential to understand and implement the project.

Who could use the Framework?

The framework has been created for scientists, teacher trainers and teachers, who would like to know more about the concepts behind the project. The framework explains the success factors of the project and helps to build a better understanding about the success factors on a metacognitive level.

How does the Framework relate to other outputs of the project?

Output 2 “Framework” is the basis of the entire project. It provides the necessary theoretical basis in term of reading and writing concepts and the interaction of these both. Output 4 “Guidelines” is based on the framework and delivers practical aid for teachers. The framework and the guidelines are linked very closely. Output 3 “Needs analysis instruments & evaluation instruments" provides information about the students’ needs in reading and writing that teachers have to take into account when creating scenarios. Output 5 “Scenario-based reading and writing classroom materials” can not be implemented without understanding the framework and using the guidelines. Output 6 „Workshop for teachers: Integrated reading and writing support in vocational education” is based on the theoretical concepts of the framework and helps teachers to implement the integrated reading and writing approach and to create scenarios for their students. In addition, teachers have to take into account the students’ reading and writing needs when creating scenarios. The framework assists them to develop an appropriate didactical and reading and writing understanding to create scenarios and to support the learners. Output 7 “Handbook” pulls everything together in a comprehensive publication containing the resources produced within this project, and illustrates instances of the partners’ efforts to promote and implement the integrated development of reading and writing skills in VET.

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

General comments

Reading and writing skills are not only important prerequisites for participation in professional and social life, but also a basis for participation in a democratic society. Inadequate linguistic skills are also the cause of school and education absences, equality of opportunity, poverty, and social exclusion.

What are the options for teachers at vocational schools to provide reading and writing support that is integrated into the lesson, will have a lasting effect, and take into account the concept of process orientation. In this context, integrated means that reading and writing is taught in the classroom while professional content is taught in vocational education and training. *Sustainable* in the sense that it allows the learner to apply the strategies independently and in a self-regulating way after a certain time.

In order to answer the initial question, approaches are shown in the framework which provide teachers with background knowledge about reading and writing. Some of the reading and writing strategies are explained. For many other strategies, there is extensive literature, which is noted at the appropriate point.

Through the approaches presented in this framework, the non-language teachers can extend their pedagogical repertoire through reading and writing strategies and their integrated application in scenarios, thereby supporting the students in professional and linguistic development. The scenario approach is fundamental to implementing the framework in the classroom. A scenario is a description of a real or working life orientated situation, which serves the professional and linguistic learning. The students address the scenario in a work-oriented manner using reading and writing activities.

In many traditional reading events, the student only expects certain reading sessions, the most frequent being to answer questions about a text. Important factors, such as the formation of global text coherences or reading management (motivation), are therefore only conditionally achievable. PISA 2018 thus also applies a scenario-based assessment approach.

In order to give the present project a feasible framework, the focus is on the areas of reading and writing. However, particularly in class, reading and writing are carried out in isolation only in rare cases. Only by speaking and hearing are linguistic aspects completely covered. In many of the lesson plans, which are based on this framework, the feedback method is an essential aspect, underlining the importance of speaking and listening.

A further consideration for this project on reading and writing support was the question of which teachers should be in the target group. Since language teachers can hardly make a lasting change with the hours available to them, the target group was also expanded to include non-language teachers, which also takes account of current demands in science and language support practice. Of course, this approach also entails risks, in particular due to the challenge of how teachers can be motivated and qualified in order to be able to make a valuable contribution to reading support and especially writing support for the students. When you consider the teaching materials that are created according to this framework, you find that the focus remains on the subject matter; reading and writing are the vehicles which help to open up professionalism, stimulate cognitive processes, and extend and deepen knowledge. The non-language teacher is thus still the expert and not an assistant to the language teacher. In the area of writing advancement, this project is not based on the field of orthography, as some studies suggest that it may even have a negative impact on the development of writing literacy (Philipp, 2015, 44-47).

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

Within the framework of the project it was repeatedly shown how different the teachers' previous knowledge of linguistic and didactic concepts are. The chapter "Didactic-methodological principles" shows ways to deal with the various previous knowledge within the framework of the project.

The framework presented here is the result, which was conceived in the course of the project together with all project partners, tested, evaluated, and revised in lessons at vocational schools in the participating countries. The aim of the framework was to offer structured support in the field of integrated reading and writing support in specialised teaching for vocational training. The partly very different educational policy requirements and occupational requirement structures in the partner countries made it necessary for the concept to allow great degrees of freedom in some places. Nevertheless, a clearly recognisable structure emerged. The framework is the basis of the entire project.

Project background and project objectives

This project for integrated reading and writing support in vocational education and training uses transfer effects between the two areas of skills as it promotes a more lasting learning effect from the promotion of receptive and productive literary skills (reading and writing). The primary target group is focused on learners who often have only a few tools and strategies to develop and write texts. However, professional learning is not possible without adequate reading and writing skills. The secondary target group are the teachers of all subjects in vocational education and training who are supported by the framework in promoting these skills to their students.

This framework is based on the project and it has been developed and tested in serveral European countries. Therefore the concept takes account of national and institutional characteristics such as curricula, educational assignments, educational programmes, the heterogeneity of the students, etc. and allows adaptation to national or institutional requirements.

Objectives

- Needs assessment
- Providing a framework for integrated reading and writing support according to available scientific, theoretical-didactic, and teaching-practical knowledge.
- Development and testing teaching units and materials.
- Providing good-practice examples.
- Dissemination of the project results.

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

Didactic-methodological principles

In order to successfully implement new approaches in the school sector, certain overriding didactic-methodological principles must be taken into account. This is always about supporting the learning processes. The presented principles do not always directly relate to support for reading and writing. It has shown that new approaches often fail in classroom because such overriding didactic-methodological principles are neglected. Knowing these principles alone is not enough; they must be used in teaching and in further training (see Output 4 „Guidelines").

Scaffolding

Scaffolding (Gibbons, 2015) refers to supporting the learning process by the provision of auxiliary assignments. This includes materials, structures, instructions, and provoking thoughts. These auxiliary assignments are used for a limited time, the goal is the gradual dismantling of the scaffolding activities until the moment the student can fulfil the task completely independently.

Every learner has the ability to solve problems at a certain level without the help of others. If the student is offered support and the educational purpose of the support is explained, they are most likely able to reach the next level. This corresponds to Vygotski's zone of the next development. The goal of scaffolding is to build a bridge between what the learner can do alone and what they can do with support. The use of scaffolding measures is a crucial success criterion because the application of process-oriented teaching, the knowledge of reading and writing strategies, and language competency in the language of the class are very different within the European education systems. Scaffolding thus plays a decisive role in successfully implementing the framework for learners with different previous knowledge within a learning group and in the various countries.

However, scaffolding is not an independent category of didactic-methodological principles; rather, all approaches aimed at helping the learners to gradually reduce this support are seen as scaffolding. This will be explained by using the following reading strategy. Learners should assign predefined subheadlines to defined text paragraphs. As soon as a learner can easily do this, he or she should write subheadings for further texts paragraphs on theirself. In this way, the help is reduced individually and gradually, enabling the learners to gain skills and success.

In this context reading can be seen as a kind of scaffolding for writiting and vice versa. One supports the other. This approach is explained in more detail in the chapters "Reading", "Writing" and "Relationship between reading and writing".

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

Cognitive and metacognitive strategies

A cognitive learning strategy leads to an extensive analyse of the learning materials in order to achieve learning progress (Kaiser, 2015). They are used for direct information acquisition, processing, and storage (Wild & Klein-Allermann, 1995). Cognitive strategies are often used when working with texts and can be divided into areas such as organisational and elaboration strategies.

Organisational strategies are used to translate texts into a better form. Examples: Identification of important text points, summaries and outlines, creation of tables, diagrams and graphs.

Elaboration strategies are used when new knowledge needs to be integrated into prior knowledge. Examples: Linking new knowledge with personal experiences, elucidating concrete examples, and application opportunities.

All cognitive learning strategies are not mutually exclusive in the specific learning process. Various cognitive learning strategies can be combined according to the individual learning behaviour and the respective situational requirements.

Metacognition means "thinking about thinking" and thus controls or supports the cognitive learning processes. For example, a metacognitive strategy is to look closely at the nature of the information, to clarify what is already known and what is new. Which of the known cognitive strategies could be helpful in processing the information is then analysed. Metacognition requires accuracy in thinking, the thinking processes can be classified into three overriding strategic fields: planning, managing, and controlling (Kaiser, 2015). Writing research and reading research also use these fields of strategies, but they use different terms for largely comparable processes.

Area	*Strategy field*	*Strategy field*	*Strategy field*
Reading research	Before reading	During reading	After reading
Writing research	Planning	Formulation	Revising
Metacognition	Planning	Steering	Controlling

Naming the fields of strategy in the involved areas

Below is an explanation of the strategy fields by using the metacognition terms planning, managing, and controlling. However, these explanations are applicable as well to the areas of writing research and reading research.

Planning is about getting an overview, rather than pursuing quick, but not well thought-out solutions. The aim is to understand the tasks and the related objectives and to get an overview of the available information. The necessary work steps are analysed and arranged.

In the *steering* phase the detailed work begins. Here, cognitive strategies such as emphasising, comparing, visualising, defining interim headings, etc. are used. If the cognitive strategies are not effective, they are going to be corrected.

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

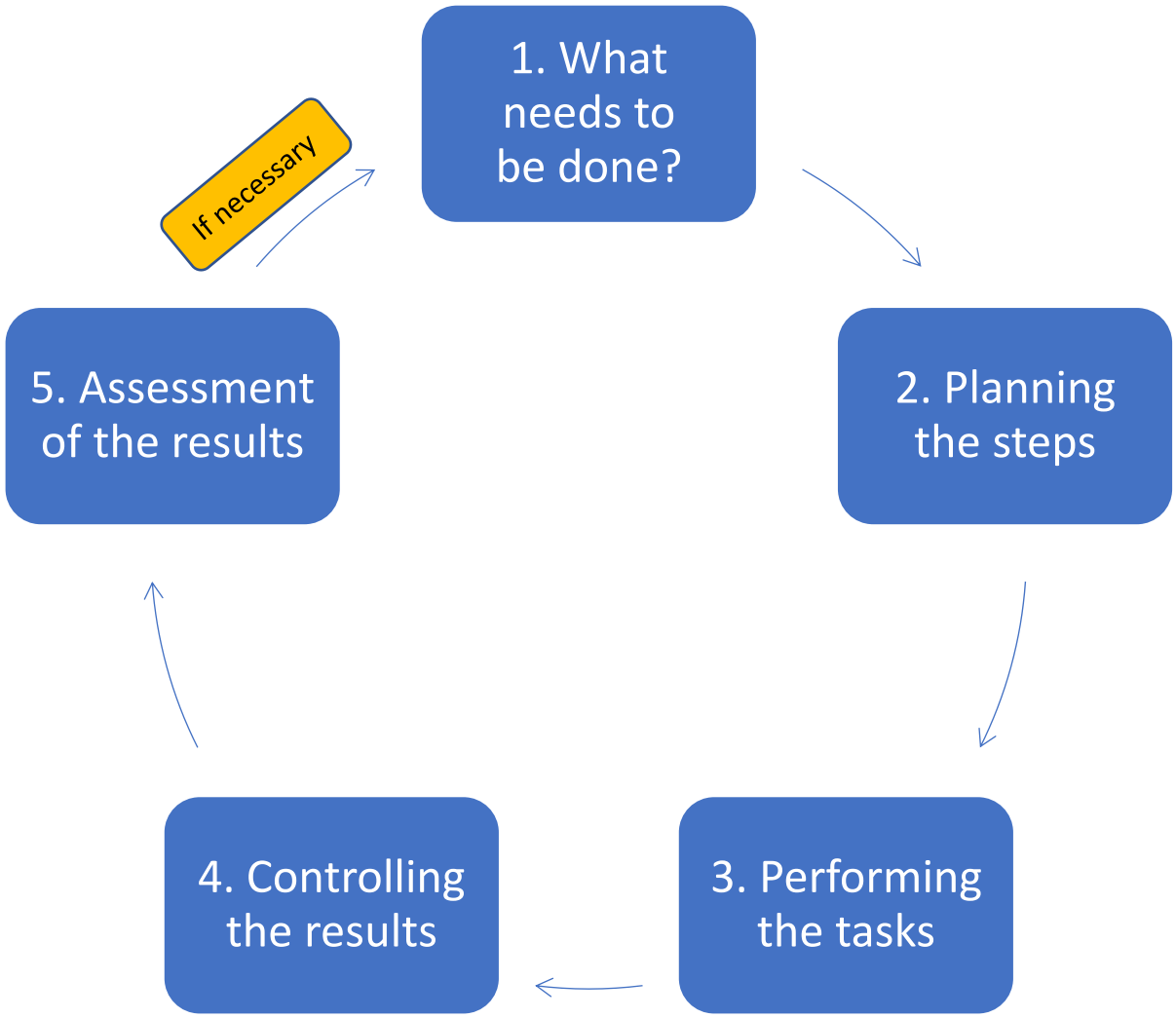
The *control* can be regarded as a request not to classify the work result hastily as correct. Possible questions: Has all the information been taken into account while doing the task? Do the materials contain information that do not match the results?

Metacognitive strategies are needed in order to lead learners to independence and self-regulation with regard to reading and writing strategies. Particularly weaker learners have deficits in this respect, which ultimately lead to inefficient reading and writing behaviour.

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

Model of the complete action



The modul of the complete action is based on the knowledge that learning is structured into the steps of an action similar to that students have to take in the workplace or their private life. Confronted with a new task, students would need to independently gather information, plan and decide on their approach, implement it, control their performance and assess the outcome with a teacher/colleague/superior. In vocational education, these steps serve as a structure that students can follow to autonomously complete the action and, thus, acquire new knowledge and skills.

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

Scenario-based-learning

In general a scenario can be seen as a description of a situation that could possibly happen. It focusses peoples' attention on certain issues and initiates thinking and action processes. To master these processes successfully, there may be a need for *scaffolding*, *cognitive and metacognitve strategies* and the *model of the complete action*.

Scenario-based-learning approach can be applied in the different fields of vocational educational and training include: project method, exploration method, guiding text method, case (study) method, construction assignment, experiments and role play. Although scenario-based-learning processes can be realized through a variety of methods, all of them share certain characteristics (Nurkholis & Petrick, 2014):

- Authentic, practice orientated tasks
- Students' activation and students' independent performance of work tasks
- Mixture of group and individual work to promote solidary behavior
- Creation of a specific action material or product as results of the learning process (such as a presentation, a model, a work piece, a website, an event, a play etc.). The students' identify with the material resulting from their work and use it as the basis for discussion and assessment.
- Prior knowledge is re-activated and new information is introduced
- Teacher becomes a learning facilitator and advisor instead of an instructor
- Learning serves as the preparation for the future workplace but should also develop the personality
- Consideration is given to the subjective interests of the students' (self-directed, explorative learning).

In educational context scenarios can be highly effective to enhance students' motivation to work on a certain topic. Reading and writing activities should have a clear communicational function.

Example: You are a carpenter and should built a table for a customer. Tomorrow the customer will come over to your joinery for first talk. You have never done such a customer dialogue before. To prepare yourself for this talk, you create a list with questions you have to ask the customer in order to clarify what kind of table he would like to have.

As in the context of this project we focus on the fostering of reading and writing skills, the developed scenarios should demand reading and writing activities in order to accomplish the task. Thereby reading and writing activities support each other and lead to a deeper understanding of texts and better writing products (reading to write / writing to read).

Scenarios are authentic, or at least semi-realistic prompts, relevant for students' life or specialization. They must include content and language goals. The scenario must be meaningful and achievable, it should offer students the opportunity to express themselves and reflect on their activities. Often scenarios offer opportunities for collaborative learning and peer-feedback.

The teachers' role is different than in teacher-centered classroom. In scenario-based learning the teacher should be an activator, provide students with challenging tasks, support students' with modelling, direct instructions and scaf-

Co-funded by the Erasmus+ Programme of the European Union
ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

folding. For additional information about the scenario-based approach see also Output 4 “Guidelines”, page 6.-9.

Text types

It is important for students to develop awareness of the variety of text types they can encounter in school - whether in textbooks or in authentic reading materials - as well as in life. This knowledge helps them approach each type with the appropriate reading strategies, and it also provides them with structures they themselves can rely on when they have to produce their own texts, whether for school or for real life purposes.

“Text types further describe the diversity of texts in a way to cover a wide range of types of reading that students would encounter: description, narration, exposition, argumentation, instruction and transaction. Texts as they are found in the world typically resist categorisation, as they are usually not written with text type rules in mind, and tend to cut across categories. For example, a chapter in a textbook might include some definitions (exposition), some directions on how to solve particular problems (instruction), a brief historical account of the discovery of the solution (narration) and descriptions of some typical objects involved in the solution (description).” (Source: PISA 2018)

To collect more informations about essential text types in vocational education, teachers and students have been questioned in this project. The participation teacher have been ask which text type students have to read and to write. For reasons which have been explained in the PISA text above, it was difficult to identify all relevant text types. However, three text types used for reading activities are more often mentioned:

- Descriptions (in variations of: “descriptions and explanations of…”; “description of processes”; “descriptive texts”):
- Instructions (in variations of: “safety instructions”; “documentation and technological worksheet”)
- Legal acts (in variations of: “legislative texts”; “contracts”)

It is recommended that teachers should use similar text types for writing and reading so that students can be able to develop expertise in writing based on the exposure to read texts. The improvement of the writing performance does not only improve the literacy level of the vocational students but it also opens new directions of specialization in their further careers: for instance, if students read description / instruction texts intensively, they might be conceiving written instructions for own products as part of new horizon-opening jobs.

A second recommendation is that teachers can introduce text types to students in more systematic teaching scenarios in which general-functional writing (CVs, motivation letter) is taught separately from communicative genres (e.g. emails, webpages) and discipline-specific text types (e.g. safety instructions). The importance of the exposure to literary text types (e.g. poems, narrative texts) should be evaluated correctly. If the curriculum requires literary text types they can used as literacy intervention, as writing exercises to help students to improve their general writing skills.

There are several discordances between what students have to read and write and what they really read and write. Several literary text types (e.g. fantasy books, song texts) are mentioned by students to be read in the classroom

Co-funded by the Erasmus+ Programme of the European Union
ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

whereas they are not in the curriculum-recommended list of readings mentioned by teachers. The difference is even more visible for texts to be produced by the students, which include e.g. blog / blog entry.

The range of answers in the questionnaire indicating the wishes that students might have related to read and written text types (as reported by teachers) indicated one major motivational deficit: students might associate high motivation for reading with hobby-induced reading activities. That is why text types such as crime stories, youth magazines, entries on Facebook/Twitter/Instagram appear in the list.

One recommendation emerging from the list of texts mentioned by teachers to be appealing to their students is that teachers could identify and/or conceive didactic scenarios in which appealing text types play an important role. For example, if students like Facebook entries, teachers could try to ask study-related topics to post on Facebook and launch debates about those topics.

Another interesting conclusion which can turn into a recommendation for teachers is that students would like to have access to more up-to-date materials (e.g. modern technologies materials), more sophisticated information (e.g. professional literature) and well-structured and concise information. This can be seen as motivation to improve specialist skills.

At the same time, there is a general impression of students being overwhelmed with activities (maybe too many vocational-typical lessons) that they either prefer reading and writing activities that focus on the essentials, i.e. being concise, or focus only on relevant information, i.e. only modern up-to-date informative materials, or they wish they had more time for extra-curricular reading and writing applications such as stories or blog entries. Teachers might try to balance highly motivational reading and writing activities and vocational-curriculum requirement in their classes so that literacy development does indeed support and enhance professional development of students.

As for text types that have a high potential of investigation and implementation in the VOCATIONAL context, except those already described above, which are also repeatedly mentioned in all sections of the report, the text type *report* might also be of use since it is also placed on the list of desired competences.

One successful technique of introducing text types is to make students read standard samples (e.g. legal texts), analyse text specifics and try to re-write similar text types on different topics.

For more information about all PISA text type categories see Appendix.

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

Model for reading and writing

The most important reading and writing models will be described below. They show what emotional-motivational, cognitive, linguistic-communicative knowledge and skills are required when reading and writing texts. The models also reveal that reading and writing are complex processes that are divided into different process phases (before, during and after reading and writing).

Conclusions can then be drawn as to which skills (vocabulary, text knowledge, etc.) are needed in which phases of the reading and writing process in order to succeed in reading and writing texts; they also provide the basis for understanding reading and writing strategies that enable learners to understand and write texts independently.

Hayes writing model (1996)

This model was created by Hayes & Flower in 1980 and revised by Hayes in 1996. The model shows the cognitive processes which should reflect the recursive nature of writing. It can be divided into two areas, the task environment and the individual.

The task environment is influenced by the social and physical environment. The individual consists of the areas of motivation/affects, working memory, long-term memory, and cognitive processes. Due to its limited receptivity, the working memory is seen as a bottleneck, which has a particular effect on the writing process and the writing speed.

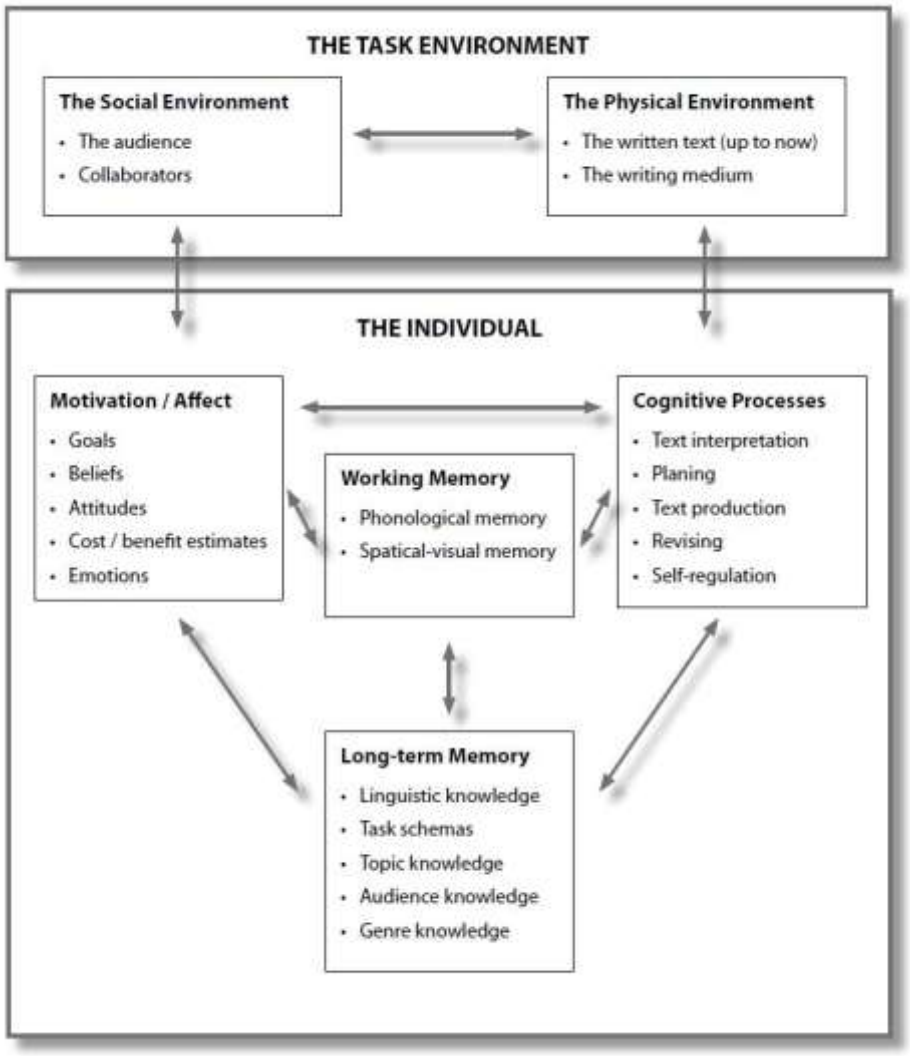
Flower and Hayes had hoped that this model would lead to a clearer understanding of the key steps involved in writing and to show patterns that would occur during the writing process. They hoped that scientists could use this knowledge to find effective ways to instruct inexperienced writers so that they could better use learning and strategies that promote the process of revision and thus develop literacy skills.

With a clearer understanding of how different cognitive abilities interact during writing, especially the role of evaluation and working and long-term memory, it would be much easier to determine what types of instructions help inexperienced writers to develop effective revision strategies and thus also fluidity in writing.

Although this model can only be used very limitedly for the framework with its original intention, it nevertheless offers some useful explanations and support.

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.



Hayes & Flower-Model (1996) Referring to: Becker (2006)

Rosebrock & Nix Multi-Level Model (2008)

The multi-level model of Rosebrock & Nix (2008) for the design of learning processes in the classroom names various dimensions of reading - the measurable at the level of specific reading process (cognitive process level), but also those on the subjective and at the social level. According to Rosebrock & Nix the reading process is divided into three parts.

The model describes in concentric imaginary circles temporal simultaneous dimensions on the same hierarchy during the reading process and makes so clear at what level the promotion of reading skills should be used systematically.

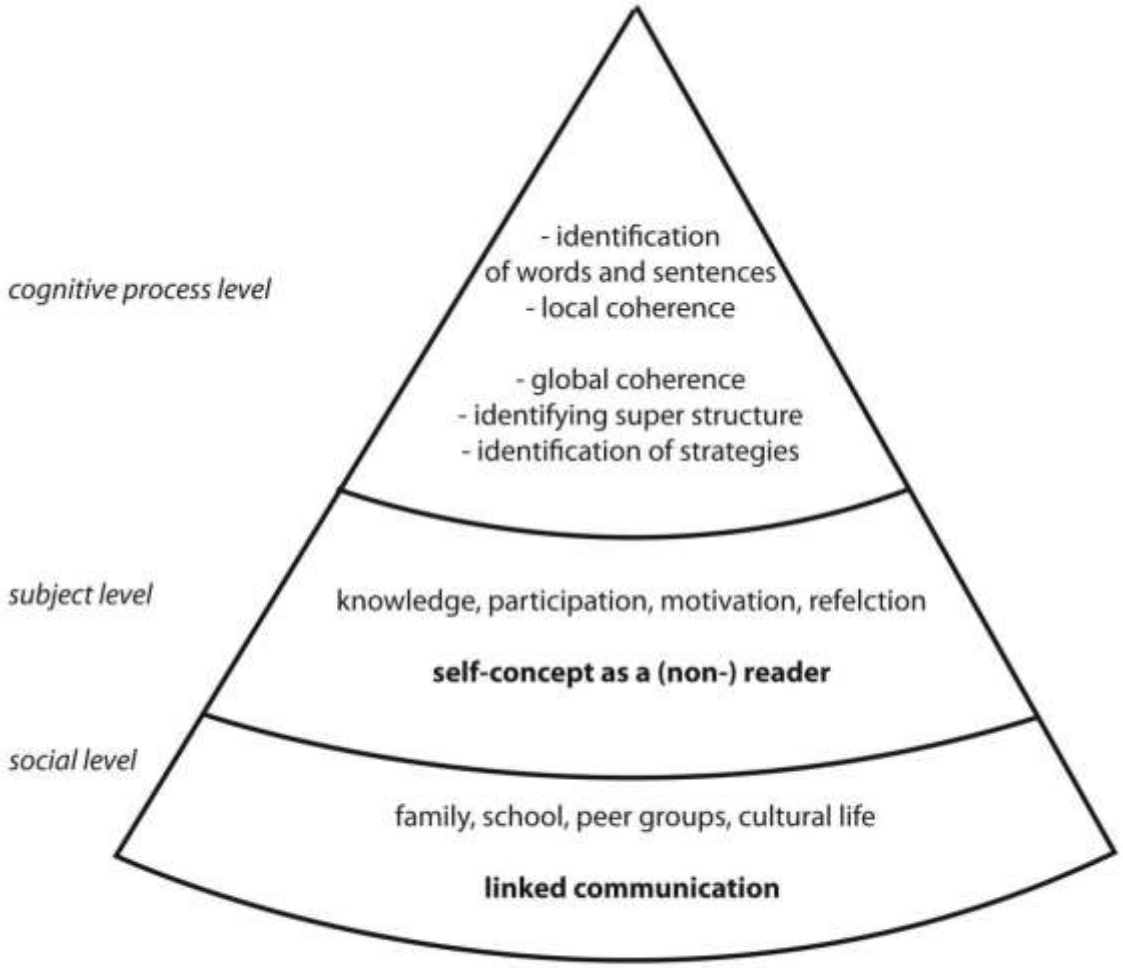
The cognitive process level is located in the inner circle. On the cognitive process level the creation of local coherence by linking letters and words and of block sequences also takes place and the understanding of contexts through language knowledge and world knowledge.

Co-funded by the Erasmus+ Programme of the European Union
ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

For competent readers these processes are automated, inexperienced readers must be encouraged at this level. On the cognitive process level also more complex reading comprehension takes place.

The reader is creating global coherence while reading. So he gets an idea of what is mentioned in the text, what theme and content of the text. Existing text pattern knowledge is used to sort the text into so-called super structures.

On the subject level in the center circle, in addition to the aspect of motivation (level of involvement on the text), there are also settled more components. This includes beside expert knowledge / world knowledge and the reflection of the read also the inner participation that means the relation of the text to one's own life and wishes. Individual reading-related positive or negative self-concept has a strong influence on the reading motivation (Rosebrock & Nix, 2008).

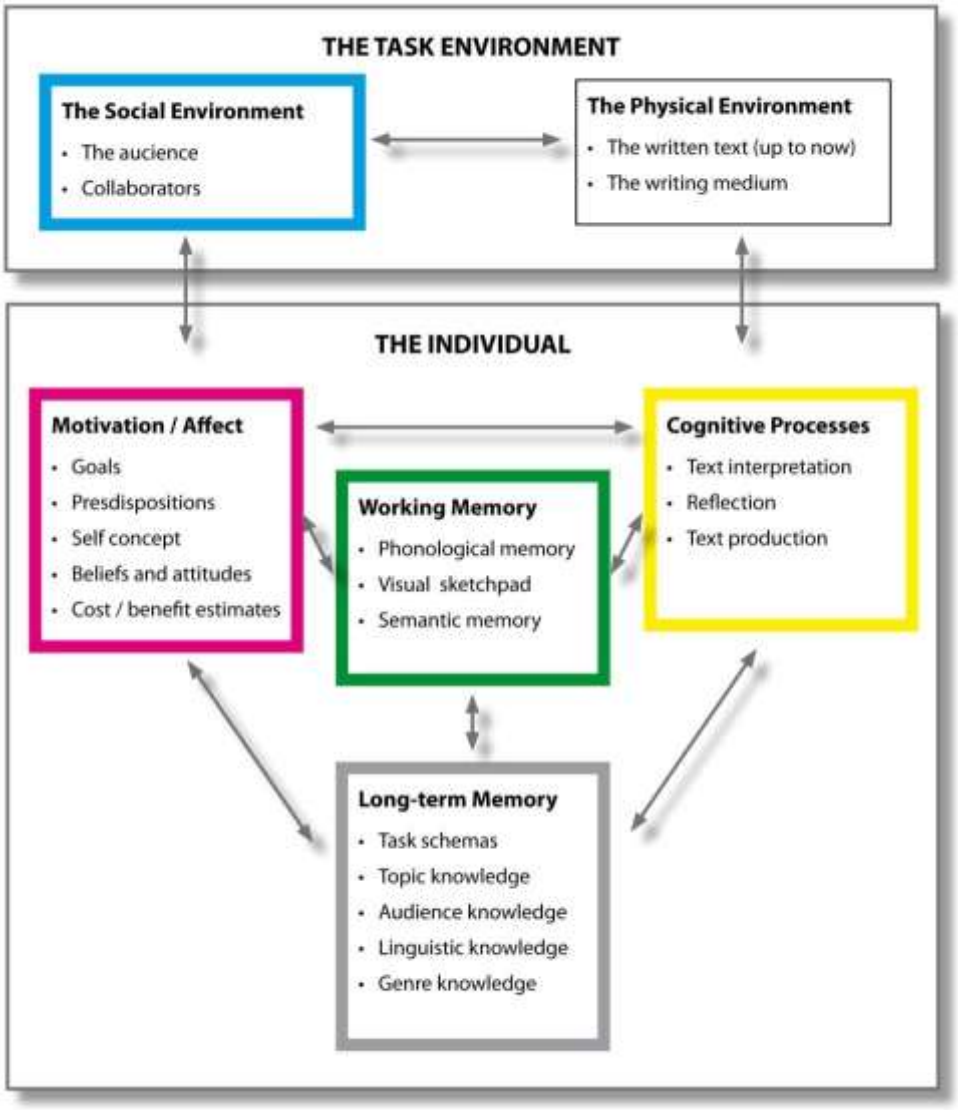


Rosebrock & Nix multi level model

The outer circle describes the social level of the reading process. The linked communication (follow- up communication) about text read in the family, at school or with the peer group, provides for an intensification of text comprehension; on the other hand it provides a strong occasion for reading.

Co-funded by the Erasmus+ Programme of the European Union
ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

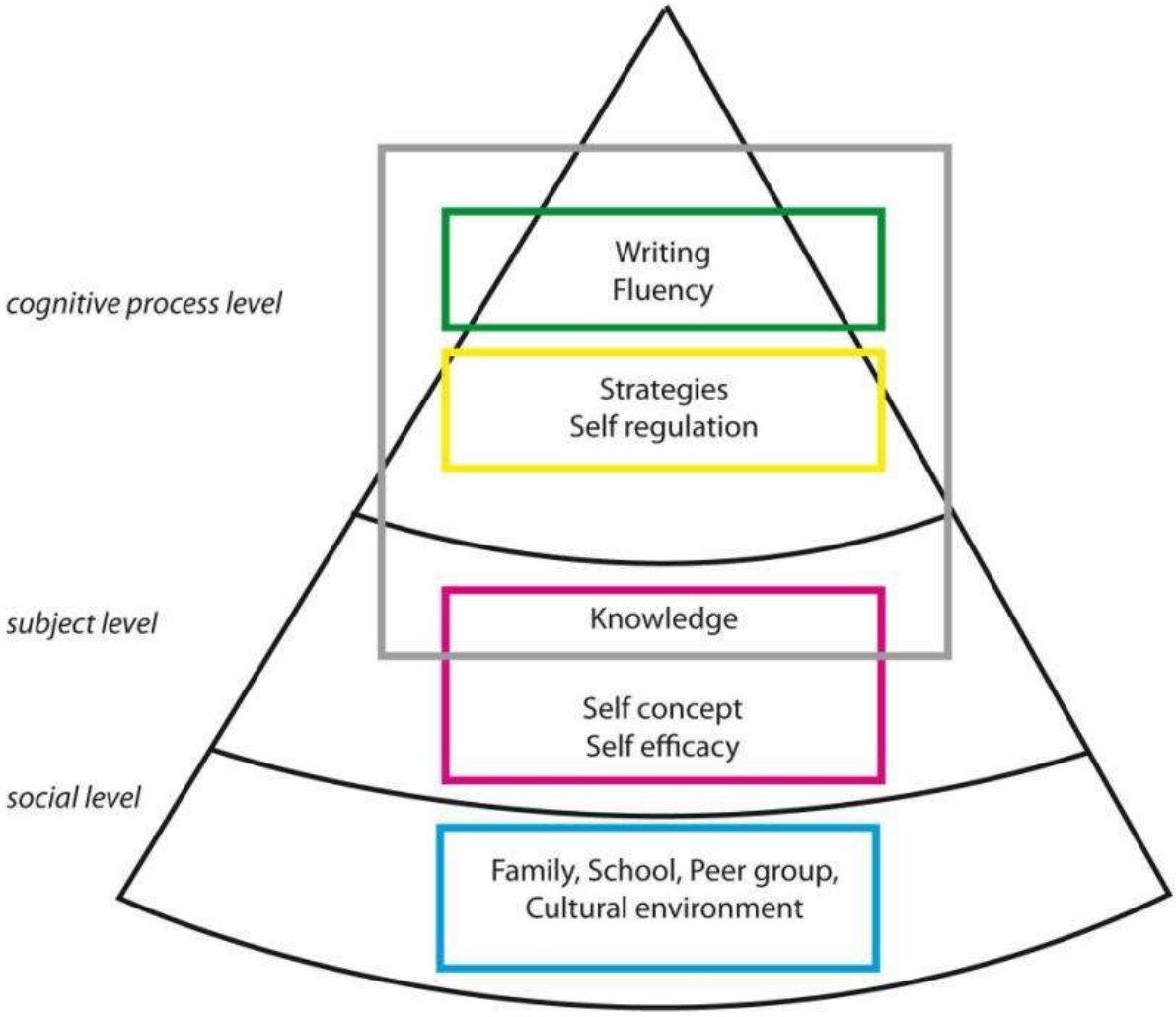
Reading and writing come together



Reading-and-writing-model according to Philipp (2015)

Transferring the fields of the Hayes & Flowers (1996) writing model into the levels of Rose-brock & Nix (2008) multi- level reading model (see next page), it displays didactical fields for writ-ing support, which most likely can also be used in a similar way for reading support. To highlight the relationship between read-ing and writing, the similar areas are marked in the same color. Factors such as fluency, strate-gies, self regulation, know-ledge, self concept and social environ-ment are important for both reading and writing.

Co-funded by the Erasmus+ Programme of the European Union
ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.



Referring to Schreibförderung an QUIMS-Schulen (Afra Sturm et al., 2013)

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

Promoting Literacy in Vocational Education and Training

'Literacy' in the narrow sense is understood as the ability to read and write (Olson, 1996, 7, European Commission, 2018). In the broader sense, it means everything that enables people to participate in the written language culture. Literacy development in VET schools is a field that has only recently begun to attract research (Becker-Mrotzek et al., 2006; Efing, 2008). In fact, it is shown that reading and writing are built on common interdependent skills (e.g. text structure knowledge), and suggest therefore an integrative promotion of reading and writing skills (Graham & Perin, 2007; Graham & Hebert, 2010). Research on integrated reading and writing support has shown that there is great "evidence for how writing can improve reading" and vice versa how "reading can improve writing" (ibid.). This Erasmus project, which works towards the integrative promotion of reading and writing skills in vocational education using transfer effects between the two competences, aims to achieve a more sustainable learning effect by promoting receptive and productive written skills.

For the majority of VET students, reading and writing are complex cognitive and linguistic challenges that they do not always master successfully (Nodari, 2002, 11). The formal requirements and conventions of school or professional language and text types, and the expression of ideas in written form are demanding for them. Furthermore, VET students are not overly motivated to confront writing-related tasks, since they have often been unsuccessful writers in their previous educational experience (Konstantinidou et al., 2016, 74).

In addition, many VET students come from families with a modest level of education and/or a migration background (ebd.). Adolescents with an immigrant background have usually grown up in multilingual environments using several languages simultaneously (in family, in school, etc.). In literacy education within VET schools, the diversity of students' linguistic backgrounds is not sufficiently taken into consideration. To address this inadequacy, concepts are needed to promote literacy skills that meet the heterogeneous needs of VET students (ibid.). This chapter describes the approach to the teaching of writing with that is suitable to cope with the students' heterogeneous social and linguistic backgrounds.

Reading

In the following chapter the most important approaches to text understanding as well as reading strategies are presented. Effective reading is a complex process of problem-solving. Readers need to make sense not only of words and sentences they see, but of the ideas and knowledge they themselves connect to those words and sentences (Schoenbach et al., 1999). As readers, we generate meaning in response to text by building on prior knowledge and a range of socially and culturally derived cues. Competent readers go through various processes to locate information, to monitor and build understanding, and to critically assess the relevance and validity of the information they encounter. These processes and the readers' strategies vary with context and purpose as they interact with multiple types of texts. In the scenario-based approach to learning, students do ample reading with the purpose of solving a real-life problem related to their professional or personal life. They need to use, understand, evaluate, engage with and reflect on texts to achieve their goal of solving the problem posed in the scenario. In order to do this, they need to deploy "a wide range of cognitive and linguistic competencies, from basic decoding to knowledge of words, grammar and larger linguistic and textual structures for comprehension, as well as integration of meaning with one's knowledge about the world." (OECD, 2016, 11)

Over 20 years ago, Pressley and Afflerbach (cited in Pressley & Gaskins, 2006) reviewed research available at the time, and defined what *good strategic readers* do before, during and after reading. Even before starting on a text, such readers set a purpose, assess the text in terms of length, structure, and relevance for the purpose they have in

Co-funded by the Erasmus+ Programme of the European Union
ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

mind, decide whether they need to read the whole text or only parts of it, and in broad lines anticipate some of the idea they are about to encounter in the text. During reading proper, with their purpose and knowledge-base in mind, strategic readers may go over parts of the text more rapidly but slow down and perhaps re-read passages where they encounter the new ideas or specifics they are more interested in, mark the parts they find essential, make notes of things to remember and connect these ideas to what they knew by interpreting them in light of their prior knowledge, checking them against mental references and translating them to fit these references, figuring out implications of the ideas, spotting author biases and perhaps inconsistencies. In addition, they become aware of an evolving framework for understanding, of the features of the text that make it easy or difficult to follow, engaging in a mental conversation with the author, planning to read up on some of the ideas from other sources. After reading, good strategic readers review the marks and notes on the text (or just set the text aside as worthless of further attention), ask themselves questions, make decisions about what to do next with the ideas learnt, reorganize their mental representations of the concepts encountered, and perhaps engage others in a conversation about the ideas or write down their own response.

Proficient adolescent readers, those who engage in reading texts critically and deeply, share some key characteristics (Baumann & Duffy, 1997, cited in Schoenbach et al., 1999): they are mentally engaged and motivated to read and learn from their reading, as well as socially active around reading tasks, and strategic in monitoring the interactive processes that help comprehension (by setting goals for reading, developing awareness of their emerging interpretation of the text and using helpful comprehension strategies). This engagemend and the described characteristics can all be supported by using the scenario-based approach to learning.

On the other hand, “(a)dolescents may struggle with text for a number of reasons, including problems with a) vocabulary knowledge, b) general knowledge of topics and text structures, c) knowing of what to do when comprehension breaks down, or d) proficiency in monitoring their own reading comprehension” (Lee & Spratley, 2010, 2). They cannot summarize a simple passage, cannot use context to determine the meaning of unknown words, and have difficulties making text-based inferences. In addition, poor fluency limits many struggling readers' ability to process text efficiently, compromising basic and inferential comprehension (Cantrell et al., 2013; Flynn et al., 2012, cited in Kim et al., 2016).

In terms of reading for content learning and real-life problem solving, in the context of scenario-based approach to learning, metacognitive awareness of text structure (Dymock, 2005; Buehl, 2001), as well as automated use of a variety of comprehension strategies (Block & Duffy, 2008) and vocabulary skills, especially for second language learners (International Literacy Association, 2017) are all important.

Developing awareness of text structure: teaching students to recognise text frames

The term “text frame” (Buehl, 2001) is used to describe sets of questions that are expected to be answered in a specific text. The frame thus provides a sense of structure and coherence, a certain manner of organising the information and ideas included in the text. Researchers have highlighted six text frames typically used by authors to organise content. In the table below, we list the text frames along with the defining characteristics of the text (major questions the text answers) and metaphors (frame of mind) for the type of thinking that the author of each type of text engages in.

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

#	Text frame	Focus of the text	Frame of mind/ thinking like a …
1	Cause / effect	Why things happen; Why or how something works / happens	Scientist
2	Concept / definition	What something is or looks like; How something can be described / classified	News reporter
3	Compare / contrast	How things are alike / different; positive / negative;	Shopper
4	Goal / action / outcome	How to do something, what steps / directions / procedures to follow; Who is trying to do something;	Coach
5	Problem / solution	What is wrong and how it can be taken care of; What needs to be improved / changes / fixed / remedied; Who is confronting problems	Troubleshooter
6	Proposition / support (PSu)	Why accept an opinion / hypothesis / theory / argument; What viewpoint is being expressed; How conclusions are based on studies / evidence	Judge

Developing mastery of major comprehension strategies

The following strategies relevant for disciplinary literacy have been proven to improve comprehension and are therefore recommended (Block & Duffy, 2008, 22):

1. *Predicting or anticipating text content* by looking at titles, text features, sections, pictures and captions, continuously updating and re-predicting what will occur next in a text.

2. *Monitoring*, i.e. pursuing own understanding and developing awareness of meanings derived.

3. *Questioning* when the meaning is unclear or inconsistent with what has been known.

4. *Generating mental pictures* as a way of constructing meanings expressed in text.

5. *Rereading and problem-solving* by reflecting on the text before, during, and after reading, continuously deciding how to shape the knowledge base for personal use.

6. *Inferring* by connecting ideas in text with personal experiences and general world knowledge.

7. *Identifying main ideas, summarizing, concluding and synthesizing*.

Developing students' vocabulary

Students who have large vocabularies can understand new ideas and concepts more easily than students who have limited vocabularies. Researchers have found a high correlation between word knowledge and reading comprehension, which means that if students do not adequately and steadily develop their vocabulary knowledge, their reading comprehension will be affected. In fact, vocabulary experts agree that adequate reading comprehension depends on a person already knowing between 90 and 95 percent of the words in a text (Hirsch, 2003). Knowing at least 90 percent of the words enables the reader to get the main idea from the reading and guess correctly what many of the unfamiliar words mean, which will further help them learn new words.

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

On average, students should add 2,000 to 3,000 new words a year to their reading vocabularies (Beck, McKeown & Kucan, 2002). For some categories of learner – such as students who have a limited knowledge of the language of instruction or those who do not read outside of school, etc. – there are significant obstacles to developing sufficient vocabulary to be successful in school.

While it is acknowledged that vocabulary knowledge is not a development skill or one that can ever be conceived of as fully mastered, but rather it can be expanded and deepened across a lifetime, effective vocabulary instruction in schools is key to successful learning. There is no one best method for vocabulary instruction; however, it is widely accepted among practitioners that vocabulary should be taught both directly and indirectly. *Direct instruction* means teaching specific words, such as pre-teaching vocabulary prior to reading a text. It is estimated that students can be taught explicitly some 400 words per year in school (Beck, McKeown & Kucan, 2002). However, one cannot teach students all of the words they need to learn. Vocabulary instruction must therefore also include *indirect instruction* methods, such as exposing students to lots of new words and having them read a lot.

Multiple exposure to words is required as the growth of word knowledge is slow and incremental (Hirsch, 2003). Rather than simply repeating the word and a definition or synonym, this means seeing the word in different contexts. Every time we encounter a word in context, we remember something about the word. As we encounter a word repeatedly, we gain more and more information about that word until we have a vague notion of what it means. As we get more information, we are able to define that word.

It is helpful for students to understand how they gradually learn words. Teachers should encourage students to actively construct links between new information and previously known information about a word. Being active and aware of this process will result in better learning of new words.

When students really know a word, they know more than the word's definition. They also know how that word functions in different contexts. Knowledge of a word includes knowing how it sounds, how it is written, how it is used as a part of speech, and its multiple meanings. Stahl (2003) makes the distinction between definitional knowledge (similar to that included in a dictionary definition), and contextual knowledge (understanding how a word's meaning adapts to different contexts). In order to fully learn a word and its connotations, a student needs multiple exposures to the word in different reading contexts.

Background knowledge is a student's experience and knowledge of the world. Research has established that readers' existing knowledge is critical for them to comprehend what they read. People who know a great deal about a topic also know its vocabulary. However, more than vocabulary is needed to understand most texts. It is possible for students to know all the words in a passage and still not make any sense of it if they have no prior knowledge of the topic. To make constructive use of vocabulary, the students also needs a threshold level of knowledge about the topic. This enables them to make sense of the word combinations and choose among multiple possible word meanings (Hirsch, 2003).

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

Integrated reading and writing support

In this chapter, methods for supporting reading through writing (writing to read) and writing through reading (reading to write) will be shown. Reading and writing activities are part of the action-oriented problem-solving process that is set in motion by the learning scenario. By reading and writing specific content knowledge and (linguistic) skills can be acquired, built up and supported by exercises (see scaffolding) that learners need to successfully master the reading and writing process.

The integrated promotion of reading and writing skills (cf. Philipp, 2012, 58) is seen as useful for the general and professional classroom in VET (cf. Schneider et al., 2013, 77). Hereby "Reading to Write" (cf. Philipp, 2012, 58; Graham & Perin, 2007, 18) serves the development of content, vocabulary, text structure, text type characteristics, etc.; vice versa "Writing to Read" (cf. Graham & Hebert, 2010, 56) can help increase text comprehension. This appears useful insofar as the integrative promotion of "literacy" uses transfer effects between reading and writing (cf. Fitzgerald & Shanahan, 2000).

According to metastudies from Graham & Perin (2007) and Graham & Hebert (2010), approaches to the explicit promotion of writing strategies, peer support, the writing of summaries, processing the materials read (e.g. by writing down personal reactions, by taking notes and writing short summaries) are most effective. As shown by the most effective summery of texts, reading and writing activities cannot be separated from each other (cf. Philipp, 2012, 57). A metanalytic overview on the effectiveness of concepts in promoting writing can be found in Philipp (2013, 186-198); the age range of VET students is rarely taken into consideration, and the differences in the vocational education systems across European countries hinder the validity of comparisons.

However, it can be stated that "…writing and reading instruction will be even more effective when they are designed to work together to achieve common goals and reinforce the reciprocal acquisition of central literacy knowledge, skills, and strategies." (Graham & Hebert, 2010, 25)

Reading supports writing through the acquisition/preparation/activation of

- Vocabulary knowledge:
  - in pre-writing activities, reading is done to pool relevant vocabulary for the topic of writing (e.g. read and underline words; read and fill in a text with your choice of words from among those provided in a list). Students can read texts with highlighted words and infer the meaning of relevant vocabulary elements from the text.
  - during writing, students can be referred to e.g. word lists or dictionaries to clarify meaning.
  - in post-writing, re-reading one's own text or reading someone else's text helps students revise and make choices about vocabulary to improve clarity.
- Contextual knowledge and knowledge of text structures:
  - In pre-writing: students do careful reading of the task for sound understanding of what the written product should be; they read exemplars (very good quality written products in response to the same task); students read rubrics used in assessment so as to understand the expected level of performance; for mastery of text structure, ample exposure to (reading of) texts with the same structure and analysis of the elements that convey the text structure helps.
  - During writing: students can use templates, other elements of scaffolding (e.g. a text that is partly written and the students only need to fill in some parts based on reading and extracting information; list of connectors and sequencing words).
  - After writing, re-reading own writing or other students' writing is done for self- and/or peer-assessment. E.g. students can read each other's work as if they were the audience intended for the writing and check whether the text is well structured and it is a relevant response to the task. Stu-

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

dents can be provided exemplars and / or rubrics to (re)read and judge their written product during revision or self/peer-assessment.

- General knowledge of topics:
  - in pre-writing activities: reading is done in order to clarify ideas and/ or gain broader and deeper understanding of the topic to write about. Reading of linear and non-linear text, of list, skimming and scanning texts, careful reading of graphic representations, charts etc. all help collect ideas and clarify concepts to be used in the writing.
  - During writing: students read graphic organizers to refer to ensure clarity of major ideas and concepts.
  - In post-writing, students read their own work or the work of peers for self/ peer-assessment.

Writing supports reading through acquisition/preparation/activation from

- Vocabulary and contextual knowledge
  - Writing as a pre-reading activity: collecting and writing down ideas (before reading), writing associations/opinions/expectations on the topic; brainstorming; compiling keywords; etc.
  - Writing during reading: for example, taking notes, writing short excerpts while reading; answering questions to a text in written form; reacting spontaneously to a reading assignment (for example, in the form of a letter to a classmate); writing (short) reflections relating to the text; writing a critique or supplement; etc.
  - Use of general and subject-specific vocabulary
  - Writing as a post-reading activity: for example, fill in the blanks texts; text reshaping; definitions (what is...?) in both broad and narrower terms; word families; word associations; well-formulated texts
- Text pattern knowledge
  - Through post-reading activity: for example, advantage/disadvantage table; pro/con argument table; timeline with keywords (commentary); worksheets: theses → compile arguments; formulate a sentence for each paragraph, create coherence, summaries; analyse/describe/interpret the text; the structure of the text paragraphs (topic sentence including continuation, explanations, substantiations, etc. as a worksheet)
- Text type knowledge
  - Writing as a post-reading activity: for example, description of reformulations → instruction; report → commentary; subjects-specific text → expertise (general-language); etc.

Intense discussion / analysis of the text

- Focused writing (for example, eliminate redundant elements while reading the text; conversely, use reading of texts while writing (vocabulary, text patterns, extracting information from the text); etc.
- Adjustment with the social communicative problem or reading/writing assignment.

The order of reading and writing activities in a scenario, in which they relate to each other, is essentially open. One could use reading tasks as pre-writing activities or vice versa writing tasks as pre-reading activities. Moreover, one could use reading during writing as a source of linguistic and topic knowledge. Again writing can be used as a post-reading activity, e.g. by writing summaries or comments regarding the reading (see Fig. 1).

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

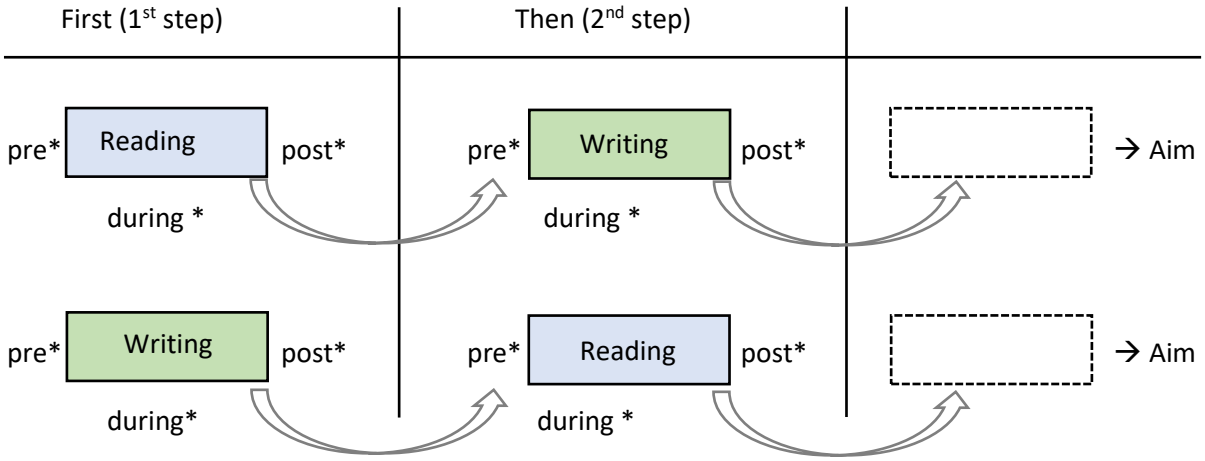


Fig. 1: Open order of reading and writing activities

In this manner, interactions between reading and writing serve the integrative promotion of literacy skills, which in vocational education have not yet been considered or researched. This project focusses on general education and professional classes with the goal of promoting general and professional reading and writing skills of VET students. The implementation of the concept takes into account the context and the differences in the vocational education systems across European countries (Germany, Estonia, Poland and Romania).

Co-funded by the Erasmus+ Programme of the European Union
ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

Writing

The following chapter gives an insight to the main approaches of writing promotion in VET schools. It embeds writing as a process for problem solving within reading-writing-scenarios. It shows how reading and writing are interacting in way that both competences support the development of one another. Beyond that, it gives examples of short exercises that scaffold writing by building the necessary linguistic skills.

Concerning the research of writing competences and writing support in VET, there are some studies that explore students' writing abilities (Wyss Kolb, 1995; Müller, 2003; Fleuchhaus, 2004; Efing, 2008; Neumann & Giera, 2018), and these studies infer concepts of writing support. Moreover, there are studies, which develop and implement concepts of writing support and then evaluate the effects of these same concepts (Hoefele & Konstantinidou, 2016, 136-163). For the part of writing in the Erasmus project, we mainly refer to the research in scenario-based, process-oriented writing in VET schools (Hoefele & Konstantinidou, 2016). Writing ability is defined in this project – process- and product-oriented – as the ability to organise writing as well as to write and to revise a text's content, structure and language in such a way that it fulfils its social-communicative function. (ibid, 148-149). This functional, pragmatic dimension of writing is particularly noticeable in learning scenarios, in which writing takes place in real-life situations and address specific persons (scenario-based-approach).

Different text types create different demands for writing (Hoefele & Konstantinidou, in preparation). Therefore, it is important to determine the relevant text types within the framework of the Erasmus project according to VET students' needs and according to the standards of the writing curricula in VET schools in the participating countries. Fundamental text types, which have been determined, are the following: descriptive texts (e.g. a description of machine, circumstantial facts or process), informative/instructive texts (e.g. a user manual) and persuasive, argumentative texts (e.g. an offer and/or quote, a letter of complaint, etc.).

The concept of integrated reading and writing support in vocational education is based – especially for the writing part – on the following three fundamental principles:

1. Scenario-based (reading and) writing
2. Process-oriented writing
3. Language support (Scaffolding)

1. A ***scenario*** is a description of a real or working life situation that is likely to occur (see also Guidelines). The tasks resulting from a scenario are authentic and relevant for VET students' every day and working life. From the scenario a problem arises that has to be solved by the students. Thus, scenarios generate thinking, problem-solving processes (Piepho, 2003, 42) and demand VET students' engagement in accomplishing, among others, reading and writing tasks. Within a scenario, reading and writing tasks are related to each other and can be seen as problem solving, social communicative acts.

This concept refers to the approach adopted by the CEFR Common European Framework of Reference for Languages: Learning, Teaching, Assessment (council of Europe 2001, 9); it views writers – and in general users of language – as 'social agents', i.e. "members of society who have tasks (not exclusively language-related) to accomplish in a given set of circumstances, in a specific environment and within a particular field of action." (ibid.) "While acts of speech occur within language activities, these activities form part of a wider social context, which alone is able to give them their full meaning." The CEFR approach considers "the cognitive, emotional and volitional resources and the full range of abilities specific to and applied by the individual as a social agent." In this way the starting point are situations or scenarios relevant to real or working life (see Anderson & Reder, 1964, Lave & Wenger, 1991), through which writing is experienced as a problem solving, social communicative act (Becker-Mrotzek & Böttcher 2015, 9-20). It is meant for an addressee whose perspective is taken into account (Becker-

Co-funded by the Erasmus+ Programme of the European Union
ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

Mrotzek et al., 2014, 23) so that the text achieves the intended effect. Writing can thus be seen as a construction of meaning and significance in which linguistic, social, and cultural norms are taken into account.

2. We understand writing as a process. The ***process-oriented writing*** is quite relevant; it is characterised by "breaking down" the writing into smaller

- pre-writing,
- writing and
- post-writing units

so that by preparing content knowledge, linguistic and communication tasks may be solved successively in different writing stages (Becker-Mrotzek & Böttcher, 2012, 19). This helps students master the multitude of tasks inherent in writing and offers teachers the opportunity to better diagnose deficits and focus on the missing knowledge and skills concerning content, text types and language. At the same time, reading a text before writing (reading to write) allows students to activate prior knowledge, "scaffold" (Gibbons, 2002) the writing process, raise awareness about vocabulary, text knowledge and language skills for writing.

The process approach goes back to cognitive models of writing, initiated by Hayes & Flower (1980), Flower & Hayes (1980; 1981), Bereiter & Scardamalia (1987), and others, that view writing as a series of cognitive activities such as idea generation, structuring ideas, planning, proposing ideas, and translating ideas into word strings. This approach placed a strong emphasis on problem-solving activities and writing strategies. Several new elements have been absorbed into the process approach, the most important being peer feedback, collaborative writing and reflective techniques (Pritchard/Honeycutt, 2006; Ruhmann/Kruse, 2014).

Accordingly, the promotion of writing takes place through semi-real, authentic scenarios, in which (reading and) writing is understood as a means to solving a problem. Thereby the process is reflected step-by-step by the students so that writing is experienced as the process of pre-writing, writing and post-writing phases with (peer) feedback. It is important that VET students consider their first written product merely as a draft. A draft needs revision, and this requires re-reading by the author, peer feedback or feedback from an expert/teacher. Feedback (peer feedback as well) is an essential element of process-oriented writing (Rijlaarsdam & Braaksma, 2008; Harris & Graham, 1996). Studies have shown that peer feedback can be very effective and beneficial not only for the author, but also for the person providing the feedback (Rijlaarsdam et al., 2008; Harris & Graham, 1996). It is recommended to instruct peer feedback for VET students especially for those with less practice (Hoefele & Konstantinidou 2016, 138) and focus on specific aspects than to general text feedback. Feedback can refer to content, to text structure or to language features ibid.).

The main recurring elements in the process-oriented writing approach are:

- Presenting the scenario
- Generating and structuring ideas
- Providing materials to solve the problems, e.g., preparatory reading texts
- Initiating reflection on vocabulary, text structures, linguistic means
- Integration of 'focus on language' exercises into the writing process, which raise awareness of language skills and their importance for the subsequent writing or prewriting phase
- Draft writing
- Peer and/or teacher feedback with subsequent revision
- Writing the final version

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

3. The shift to process-oriented writing has resulted in an increased reluctance towards ***teaching of language*** in the writing class. In cognitive process models (in the tradition of Hayes/Flower, 1980), linguistic activity is viewed as a means of translating thought into text but not as a part of thinking, idea generation and meaning making. As a result, language support has almost disappeared from the teaching of writing. Recently, it has become clear that language instruction has to find its way back into the teaching of writing (Steinhoff, 2007; Pohl, 2007; Locke, 2010; Myhill, 2010; 2012; Feilke, 2012; 2014; Anson, 2014). In the case of VET schools, this seems to be quite relevant as students with heterogeneous linguistic backgrounds may lack the essential linguistic resources for writing tasks. Materials like *reading assignments* to prepare writing tasks are very useful to instruct VET students on the writing processes/routines, which also include vocabulary, linguistic forms and rhetorical elements.

Additionally, linguistic resources are activated and constructed through short focus-on-language exercises, which are necessary to complete the writing task. These short exercises (using chunks for text procedures, providing examples to prove understanding, synonym exercises, etc.) are integrated in the reading/writing scenarios so that their meaning is understood and utilized in their communicative pragmatic function (137–147; Hoefele et al. in preparation). This focus-on-language approach in writing is especially suitable for VET schools, where native speakers with serious difficulties in reading and writing can also be found (Efing, 2008; Schiesser & Nodari, 2005; Müller, 2003). These same students would benefit from this approach (Hoefele & Konstantinidou, 2016, 136).

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

The Framework model

This graphical model represents important factors and processes which the teacher should consider when it comes to reading and writing support.

The present framework provides teachers with support in promoting the reading and writing processes of students in vocational education and training. It is equally aimed at both language and non-language teachers. The framework model is divided into processes and factors. The processes include the planning and teaching steps. The factors are assigned to them and shown in the graphic in boxes.

The process begins with clarifying the professional and linguistic objectives. To this end, country-specific educational requirements such as educational plans and examination requirements and group-specific criteria such as the competence and language level of the students are analysed. Based on this, an appropriate, professionally anchored scenario is designed and developed for the lessons. This also takes into account the texts to be edited or the texts to be compiled, by clarifying which text frame, such as description, guidance, argumentation is focussed on and how these must be taken into account. The chosen frame depends mainly on educational requirements and the respective professional field of usual work processes. In addition, it is necessary to clarify which linguistic focus is set in the scenario, i.e. whether vocabulary/technical jargon, sentence formation, text comprehension, text types are at the forefront of linguistic learning. The linguistic focus can only be made meaningful if information about the competence and language level of the respective learning group is available and thus necessary linguistic needs can be determined.

In the scenario, reading and writing are always integrated into a job or task related action and are therefore not an end in themselves; rather, reading and writing support the (professional) learning processes. In the great majority of cases, students are reading to write, but writing to read is also done occasionally. However, this distinction does not play a decisive role in the practical preparation and implementation of teaching skills.

A scenario always includes reading and writing tasks, but they can be weighted very differently. Particularly in the case of writing tasks, great differences are possible depending on the type of education and the occupation. While simple manual trades can be a challenge to complete an activity protocol at the outset, there are professions in which very complex reports and letters are written, especially in the economic and administrative sector. It is the pedagogic responsibility of the teacher to decide which difficulty level the writing task is at and which writing task seems realistic for the respective profession.

The use of scenarios can be attributed to the large field of action-oriented teaching. This approach is heterogeneous disseminated in European education systems, the use of scenarios should ensure that students are not overwhelmed. This is true especially if both scenarios, as well as reading and writing support for students, are largely unknown. In this case, it is advisable to introduce the three elements individually until the students have a certain degree of security (Vygotsky, Zone of proximal development). When students have reached this stage in the three elements, complete scenarios can be used for the purposes of this framework in the classroom.

It is also recommended to start with small, easily implementable strategies for the reading and writing strategies. With regard to these strategies, there are those who promote both reading and writing simultaneously. Such strategies are shown in the graphic in the middle box between reading and writing strategies. These strategies include, for example, completing sentences or sections, defining subheadings, defining terms, etc.

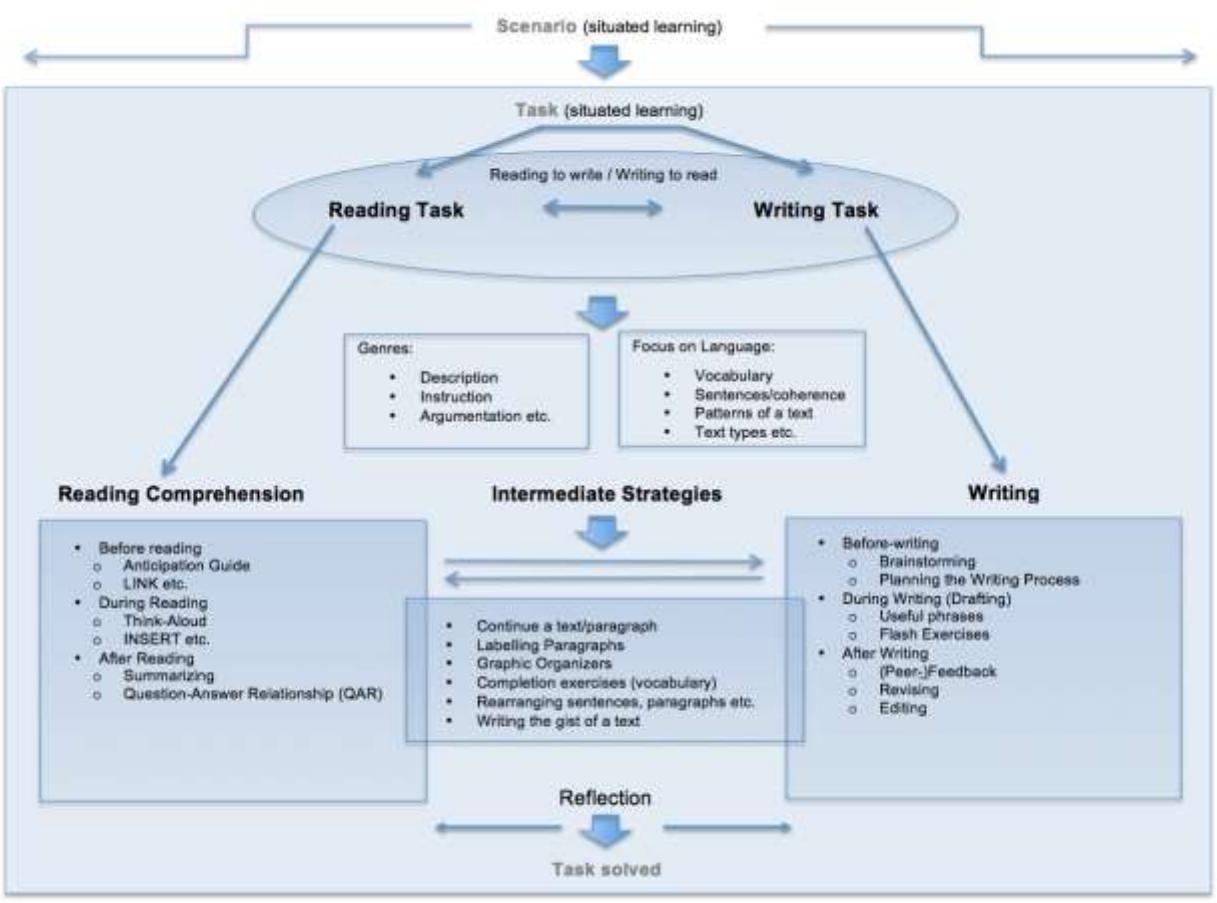
Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

In the box “Reading Comprehension” on the left is a list of suitable reading strategies, in the box “Writing” on the right a list of very useful writing strategies. The box in the middle “Intermediate Strategies” represents strategies which are focussing on reading and writing. All three boxes serve as a quarry for possible strategies which can be used in scenarios. The strategies mentioned there can be extended as desired.

An essential point of the framework model is reflection, which completes the learning cycle. Reflection refers to both the learning process, and the quality of the written product(s) which represent the solution to the problem/ task posed at the start of the scenario-based learning. Reflection may be supported by feedback on the product or the process received from either the teacher or peers. For feedback to be effective, it is best provided using clear and agreed criteria.

The following figure represents and summarizes the entire chapter on integrated reading and writing support. It also gives an overview of the most important factors and processes, which should be considered when it comes to reading and writing support in classroom.



Model of Integrated Reading and Writing Support

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

References

Anderson, J. R., Reder, L. M. & H. A. Simon (1996*).* Situated Learning and Education. *Educational Researcher*, 25(4), 5–11.

Anson, Ch. M. (2014). Writing, language, and literacy. In: Tate, G., Rupiper Taggart, A., Schick, K. & H. B. Hessler (Eds.) *A guide to composition pedagogies.* New York: Oxford University Press, 3–26.

Austin, John L. (1962). *How to do things with words*. Oxford: Clarend Press.

Bacic Curriculum for Teachers´In-Service Training in Content Area Literacy in Secondary Schools. Workbook for Teachers. Köln 2012.

Baurmann, J. & T. Pohl (2011). Schreiben – Texte verfassen. In: Bremerich-Vos, A., Granzer, D., Behrens, U. & O. Köller (Eds.) *Bildungsstandards für die Grundschule. Deutsch konkret*. (3rd ed.). Berlin: Cornelsen.

Beck, I. L., McKeown, M. G. & L. Kucan (2002). *Bringing words to life*: *Robust vocabulary instruction*. New York: Guilford Press.

Becker, A. (2006). A Review of Writing Model Research Based on Cognitive Processes. In A. Horning & A. Becker (Hrsg.), *Revision Theory, History and Practice* (25-49). West Lafayette, Indiana: Parlorpress.

Becker-Mrotzek, M., Kusch, E. & B. Wehnert (2006). Leseförderung in der Berufsbildung. *Kölner Beiträge zur Sprachdidaktik, Heft 2*. Duisburg: Gilles & Franke.

Becker-Mrotzek, M. & K. Schindler (2007). Schreibkompetenz modellieren. In: Becker-Mrotzek, M. & K. Schindler (Eds.) *Texte schreiben*. Duisburg: Gilles & Franke, 7–26.

Becker-Mrotzek, M. & I. Böttcher (2012). *Schreibkompetenz entwickeln und beurteilen.* 4. Auflage. Berlin: Cornelsen Verlag.

Becker-Mrotzek, M. (2014). Schreibkompetenz. In: J. Garbowski (Ed.) *Sinn und Unsinn von Kompetenzen. Fähigkeitskonzepte im Bereich von Sprache, Medien und Kultur.* Leverkusen: Barbara Budrich, 51-71.

Becker-Mrotzek, M., Grabowski, J., Jost, J., Knopp, M. & M. Linnemann (2014). Adressatenorientierung und Kohärenzherstellung im Text. Zum Zusammenhang kognitiver und sprachlich realisierter Teilkomponenten von Schreibkompetenz. *Didaktik Deutsch,* 37/2014, 21–43.

Becker-Mrotzek, M. (2014). Bildungsstandards und Schreibaufgaben. In: Feilke, H. & T. Pohl (Eds.) *Schriftlicher Sprachgebrauch – Texte verfassen.* Hohengehren: Schneider, 501–513.

Becker-Mrotzek, M. & I. Böttcher (2015). *Schreibkompetenz entwickeln und beurteilen.* Berlin: Cornelsen Scriptor.

Bereiter, C. (1980). Development in Writing. In: Gregg, L. W. & R. E. Steinberg (Eds.) *Cognitive Processes in Writing.* Hillsdale, NJ: Erlbaum, 73–93.

Bereiter, C. & M. Scardamalia (1987). *The Psychology of Written Composition.* Hillsdale, NJ: Erlbaum.

Block, C. C. &G. G. Duffy (2008). Research on Teaching Comprehension. Where We've Been and Where We're Going, in Block, C. C. & S. R. Parris (Eds.) *Comprehension Instruction: Research-Based Best Practices, Second Edition,* Guildford Publications.

Buehl, D. (2001). Classroom strategies for interactive learning, (2nd ed.), International Reading Association, Newark.

Council of Europe (2001). *Common European Framework of Reference for Languages: Learning, teaching, assessment*. Cambridge et al: Cambridge University Press.

Dymock, S. (2005). Teaching expository text structure awareness. *The Reading Teacher*, 59(2), 177-182.

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

Efing, C. (2008). „Aber was halt schon schwer war, war, wo wir es selber schreiben sollten." Defizite und Förderbedarf in der Schreibkompetenz hessischer Berufsschüler. In: Jakobs, E.-M. & K. Lehnen (Eds.) *Berufliches Schreiben. Ausbildung, Training, Coaching*. Frankfurt/M.: Peter Lang, 17–34.

Efing, C. (2006): „Viele sind nicht in der Lage, diese schwarzen Symbole da lebendig zu machen." - Befunde empirischer Erhebungen zu Sprachkompetenz hessischer Berufsschüler. In: Efing, C. & N. Janich (Eds.) *Förderung der berufsbezogenen Sprachkompetenz. Befunde und Perspektiven.* Paderborn: Eusl-Verlagsgesellschaft, 34–68.

Efing, C. (2013). Editorial: Sprache und Kommunikation in der beruflichen Bildung. Anforderungen an die Kompetenzen, die Diagnose und die Förderung. In: Efing, C. (Ed.) bwp@ Spezial 6 – Hochschultage Berufliche Bildung 2013, Fachtagung 18, 1-6. [Online] http://www.bwpat.de/ht2013/ft18/editorial_ft18-ht2013.pdf (accessed 19/10/2016).

Emig, J. (1971). *The Composing Process of Twelfth Graders.* Urbana (IL): NCTE.

Europäische Union (2018). COUNCIL RECOMMENDATION of 22 May 2018 on key competences for lifelong learning. [Online] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018H0604(01)&rid=7 (accessed 20/08/2018)

Feilke, H. (2014). Begriff und Bedingungen literaler Kompetenz. In: Feilke, H. & T. Pohl (Ebs.) *Schriftlicher Sprachgebrauch – Texte verfassen*. Hohengehren: Schneider, 33–53.

Feilke, H. (2014). Argumente für eine Didaktik der Textprozeduren. In: Bachmann, T. & H. Feilke (Eds.) *Werkzeuge des Schreibens. Beiträge zu einer Didaktik der Textprozeduren.* Stuttgart: Fillibach bei Klett, 11–34.

Feilke, H. (2012): Was sind Textroutinen? Zur Theorie und Methodik des Forschungsfeldes. In: Feilke, H. & K. Lehnen (Eds.) *Schreib- und Textroutinen. Theorie, Erwerb und didaktisch-mediale Modellierung.* Frankfurt/M. et al.: Peter Lang, 1–31.

Fitzgerald, J. & T. Shanahan (2000). Reading and Writing Relations and Their Development. *Educational Psychologist*, 35, 39–50.

Fleuchaus, I. (2004). *Kommunikative Kompetenzen von Auszubildenden in der beruflichen Ausbildung. Ausprägungen, Förderung und Relevanz im Urteil von Ausbildern, Lehrern und Auszubildenden.* Dissertation. Hamburg: Dr. Kovač.

Flower, L. & J. R. Hayes (1980). The dynamics of composing: Making plans and juggling constraints. In: Gregg, L. W. & E. R. Steinberg (Eds.) *Cognitive processes in writing.* Erlbaum: Hillsdale NJ, 31–50.

Flower, L. & J. R. Hayes (1981): A cognitive process theory of writing. *College Composition and Communication* 32, 365–387.

Frayer, D. A., & H. G. Klausmeier (1969). A schema for testing the level of concept mastery, *Technical Report #16*. The University of Wisconsin.

Gibbons, P. (2015). *Scaffolding Language, scaffolding Learning. Teaching Second Language Learners in the Mainstream Classroom*. Portsmouth: Heinemann.

Glaser, C., Keßler, C. & J. C. Brunstein (2009). Förderung selbstregulierten Schreibens bei Viertklässlern. Effekte auf strategiebezogene, holistische und subjektive Masse der Schreibkompetenz. *Zeitschrift für Pädagogische Psychologie*, 23(1), 5-18.

Glaser, C. (2004). Förderung der Schreibkompetenz bei Grundschülern: Effekte einer integrierten Vermittlung kognitiver Schreibstrategien und selbstregulatorischer Fertigkeiten. Unveröffentlichte Dissertation zur Erlangung

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

des Grades Dr. Phil., Humanwissenschaftliche Fakultät der Universität Potsdam, Potsdam. [Online] https://publishup.uni-potsdam.de/files/205/GLASER.PDF (accessed 19/10/2016).

Grabowski, J., Becker-Mrotzek, M., Knopp, M., Jost, J. & C. Weinzierl. (2014). Comparing and Combining Different Approaches to the Assessment of Text Quality. In: Knorr, D., Heine, C. & J. Engberg (Eds.) *Methods in Writing Process Research*. Frankfurt/M.: Peter Lang, 147–165.

Graham, S., McKeown, D., Kiuhara, S. & K. R. Harris (2012). A Meta-Analysis of Writing Instruction for Students in the Elementary Grades. *Journal of Educational Psychology*, No Pagination Specified.

Graham, S. & M. Hebert (2010). *Writing to Read. Evidence for How Writing Can Improve Reading.* New York: Carnegie Corporation.

Graham, S. & D. Perin (2007). *Writing next: Effective strategies to improve writing of adolescents in middle and high schools.* New York: Carnegie Corporation.

Graham, S., Harris, K. R. & L. Mason (2005). Improving the writing performance, knowledge, and self- efficacy of struggling young writers: The effects of self-regulated strategy development. *Contemporary Educational Psychology*, 30, 207–241.

Gunning, T. G. (2003). Building Literacy in the Content Areas, Pearson Education

Harris, K. R. / Graham, S. (1996). *Making the writing process work. Strategies for composition and selfregulation.* 2. Aufl. Cambridge Mass.: Brookline Books Inc.

Hatti, J. (2009). *Visible Learning: A Systhesis of over 800 Meta-Analyses Relating to Achivement.* London: Routledge.

Hayes, J. R. & L. Flower (1980). Writing as problem solving. *Visible Language*, 14, 288–299.

Heinemann, W. & D. Viehweger (1991). *Textlinguistik. Eine Einführung* (=Reihe Germanistische Linguistik 115). Tübingen: Niemeyer.

Herber, H. (1978). *Teaching reading in the content areas*. (2nd ed.). Englewood Cliffs, NJ: Prentice Hall.

Hidi, S. & P. Boscolo (2006). Motivation and Writing. In: Charle A., MacArthur, Graham, S. & J. Fitzgerald (Eds.) *Handbook of Writing Research.* New York: Guilford, 144-157.

Hirsch, E. D. (2003). Reading comprehension requires knowledge – of words and the world: Scientific insights into the fourth-grade slump and the nation's stagnant comprehension scores. *American Educator*, 10 (13), 16-29.

Hoefele, J., Konstantinidou, L. & C. Weber (2017): Zweitsprachendidaktische Konzepte in der Förderung der allgemeinen Schreibkompetenz an Berufsfachschulen. In: Efing, C. & K.-H. Kiefer (Eds.) *Sprachbezogene Curricula und Aufgaben in der beruflichen Bildung.* Frankfurt/M.: Peter Lang.

Hoefele, J. & L. Konstantinidou (2016). Förderung der allgemeinen Schreibkompetenz an Berufsfachschulen: Prozessorientierte Schreibdidaktik zwischen Deutsch als Mutter- (DaM) und Zweitsprache (DaZ). In: Kreyer, R., Güldenring, B. & S. Schaub (Eds.) *Angewandte Linguistik in Schule und Hochschule. Neue Wege für Sprachunterricht und Ausbildung*. Frankfurt/M.: Peter Lang.

Hoefele, J. & L. Konstantinidou (in preparation). Förderung der allgemeinen Schreibkompetenz im Bereich der beruflichen Bildung. In: Efing, C. & K.-H. Kiefer (Eds.) *Sprache und Kommunikation in der beruflichen Aus- und Weiterbildung. Ein interdisziplinäres Handbuch.* Tübingen: Narr.

Hoffman, J. (1992). Critical Reading/Thinking Across the Curriculum: Using I-Charts to Support Learning. *Language Arts*, 69(2), 121-127.

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

International Literacy Association (2017). Literacy Leadership Brief., Second-Language Learners' Vocabulary and Oral Language Development, [Online] https://www.literacyworldwide.org/docs/default-source/where-we-stand/ila-second-language-learners-vocabulary-oral-language.pdf?sfvrsn=67f9a58e_6 (accessed 18/02/2018).

Kaiser, A., Kaiser, R., Lambert, A. & K. Hohenstein (Eds.) (2015): *Lernerfolg steigern, Metakognitiv fundiertes Lernen in der Grundbildung*. Bielefeld: W. Bertelsmann.

Kim, J., Hemphill, L., Troyer, M., Jones, S., LaRusso, M., Kim, H., Donovan, S., & C. Snow (2016). *The experimental effects of the Strategic Adolescent Reading Intervention (STARI) on a scenarios-based reading comprehension assessment.* Society for Research on Educational Effectiveness (SREE).

Konstantinidou, L., Hoefele, J. & O. Kruse (2016). Assessing writing in vocational education and training schools: Results from an intervention study. In: Göpferich, S. & I. Neumann (Eds.) *Developing and Assessing Academic and Professional Writing Skills.* Frankfurt/M.: Lang, 73–101.

Lee, C.D., & A. Spratley (2010). *Reading in the disciplines: The challenges of adolescent literacy.* New York, NY: Carnegie Corporation of New York.

Locke, T. (2010). *Beyond the grammar wars. A resource for teachers and students on developing language knowledge in the English Literacy classroom*. New York: Routledge.

Medina, C. (Ed.) (2008). *Successful Strategies for Reading in the Content Areas* (2nd ed.) Secondary. Huntington Beach: Shell Education.

Müller, A. (2003). *Deutsch als Zweitsprache in der Berufsausbildung. Sprachsoziologische Überlegungen, pädagogische Positionen und drei Bausteine zur Sprachförderung.* Berlin: Artà.

Myhill, D.(2010). Ways of Knowing. Grammar as a Tool for Developing Writing. In: Locke, T. (Ed.) *Beyond the grammar wars. A resource for teachers and students on developing language knowledge in the English Literacy classroom.* New York: Routledge, 129–148.

Myhill, D. (2012). The ordeal of deliberate choice. Metalinguistic development in secondary writers. In: Berninger, V. W. (Ed.) *Past, Present, and future contributions of cogni-tive writing research to cognitive psychology.* Psychology Press: New York, 247–273.

Neumann, A. & W.-K. Giera (in preparation). Diagnose von Schreibkompetenz im Bereich der beruflichen Bildung. In: Efing, C. & K.-H. Kiefer (Ed.) *Sprache und Kommunikation in der beruflichen Aus- und Weiterbildung. Ein interdisziplinäres Handbuch.* Tübingen: Narr.

Nodari, C. (2002). Was heisst eigentlich Sprachkompetenz? In: Schweizerisches Institut für Berufspädagogik (Ed.) *Barriere Sprachkompetenz. Dokumentation zur Impulstagung vom 2. November 2001 im Volkshaus Zürich.* SIBP: Zollikofen, 9–14.

Nurkholis & Petrick, S. (2014). "Yes, I can!" – The potential of action-oriented teaching for enhanced learner-centered education in Indonesian vocational schools. *TVET@Asia 3,* 1-18. [Online] http://www.tvet-online.asia/issue3/nurkholis_petrick_tvet3.pdf (accessed 30/06/2014)

OECD (2016). PISA 2018 Reading Literacy Framework. [Online] https://www.oecd.org/pisa/pisaproducts/PISA-2018-draft-frameworks.pdf *(accessed 18/12/2016)*

Ogle, D. M. (1986). K-W-L: A teaching model that develops active reading of expository text. *The Reading Teacher*, 39, 564-570.

Olson, D. (1996). Language and Literacy: What writing does to language and mind. *Annual Review of Applied Linguistics*, *16*, 3-13.

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

Philipp, M. (2012). *Besser lesen und schreiben. Wie Schüler effektiver mit Sachtexten umgehen lernen.* Stuttgart: Kohlhammer.

Philipp, M. (2013). *Lese- und Schreibunterricht*. Tübingen & Basel: A. Francke.

Philipp, M. (2015). *Grundlagen der effektiven Schreibdidaktik und des systematischen schulischen Schreibförderung* (3rd ed.). Baltmannsweiler: Schneider Verlag Hohengehren.

Piepho, H.-E. (2003). *Lerneraktivierung im Fremdsprachenunterricht: „Szenarien" in Theorie und Praxis.* Braunschweig: Schroedel.

Pohl, T. (2007). *Studien zur Ontogenese wissenschaftlichen Schreibens.* Niemeyer: Tübingen.

Pressley, M. & I. W. Gaskins (2006). Metacognitively competent reading comprehension is constructively responsive reading: how can such reading be developed in students? *Metacognition Learning*, 1 (1), 99–113.

Pritchard, Ruie J. & R. L. Honeycutt (2006). The process approach to writing instruction. In: MacArthur, C., Graham, S. & J. Fitzgerald (Eds.) *Handbook of Writing Research*. New York et al.: The Guilford Press, 275-291.

Rijlaarsdam, G., Braaksma, M., Couzijn, M., Janssen, T., Raedts, M., Van Steendam, E., … H. van den Bergh (2008). Observation of peers in learning to write. Practise and research. *Journal of Writing Research*, 1(1), 53–83.

Rijlaarsdam, G. & M. Braaksma (2008). Die Sache mit den ‚Schlemmy'-Riegeln. Beobachtendes Lernen: Ein Beispiel aus der Unterrichtspraxis. *Fremdsprache Deutsch. Zeitschrift für die Praxis des Deutschunterrichts* Textkompetenz, 39, 23–27.

Rosebrock, C. & Nix, D. (2008). *Grundlagen der Lesedidaktik und der systematischen schulischen Leseförderung.* 3., überarbeitete Auflage. Baltmannsweiler: Schneider Hohengehren.

Ruhmann, G. & O. Kruse (2014). Prozessorientierte Schreibdidaktik: Grundlagen, Arbeitsformen, Perspektiven. In: Dreyfürst, S. & N. Sennewald (Eds.) *Schreiben. Grundlagentexte zur Theorie, Didaktik, und Beratung.* Opladen: Barbara Budrich, 15-34.

Schneider, H. Becker-Mrotzek, M., Sturm, A., Jambor-Fahlen, S., Neugebauer, U., Efing, C. & N. Kernen (2013). Expertise. *Wirksamkeit von Sprachförderung.* Zürich: Bildungsdirektion.

Schoenbach, R., Greenleaf, C., Cziko, C., & L. Hurwitz (1999). *Reading for understanding: A guide to improving reading in middle and high school classrooms.* San Francisco, CA: Jossey-Bass.

Schwartz R. M. & T. E. Raphael (1985) Concept of Definition: A Key to Improving Students' Vocabulary. *The Reading Teacher*, 39, 198-205.

Sedita, J. (2005). Effective vocabulary instruction. *Insights on Learning Disabilities*, 2(1), 33-45.

Stahl, S. A. (2003). *How words are learned incrementally over multiple exposures*. American Educator, Spring 2003.

Steinhoff, T. (2007). *Wissenschaftliche Textkompetenz*. Niemeyer: Tübingen.

Sturm, A.; Schneider, H. & M. Philipp (2013): *Schreibförderung an QUIMSSchulen.* Grundlagen und Empfehlungen zur Weiterentwicklung des Programms. Aarau: Pädagogische Hochschule FHNW, Zentrum Lesen.

Vaughn, J.L. & T. H. Estes (1986). *Reading and Reasoning Beyond the Primary Grades.* Boston: Allyn & Bacon.

Wild K-P. & E. Klein-Allermann (1995): Nicht alle lernen auf die gleiche Weise... individuelle Lernstrategien und Hochschulunterricht. In: Behrendt, B. (Ed): *Handbuch Hochschullehre*. Bonn: Raabe Verlag.

Wood, K. D. (1988). Guiding students through information text*. The Reading Teacher*, 41, 912-920.

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

Wyss Kolb, M. (2002). Zu den Schreibkompetenzen von Berufsschülerinnen und Berufsschülern. In: Josting, Petra & A. Peyer (Ed.) *Deutschdidaktik und berufliche Bildung.* Baltmannsweiler: Schneider, 79–91.

Wyss Kolb, M. (1995). *Was und wie Lehrlinge schreiben. Eine Analyse von Schreibgewohnheiten und von ausgewählten formalen Merkmalen in Aufsätzen.* Aarau: Sauerländer.

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

Appendix

Classification of texts PISA 2018

Description is the type of text where the information refers to properties of objects in space. The typical questions that descriptive texts provide an answer to are what questions. Descriptions can take several forms. Impressionistic descriptions present information from the point of view of subjective impressions of relations, qualities and directions in space. Technical descriptions present information from the point of view of objective observation in space. Frequently, technical descriptions use non-continuous text formats such as diagrams and illustrations. Examples of text objects in the text type category description are a depiction of a particular place in a travelogue or diary, a catalogue, a geographical map, an online flight schedule or a description of a feature, function or process in a technical manual.

Narration is the type of text where the information refers to properties of objects in time. Narration typically answers questions relating to when, or in what sequence. Why characters in stories behave as they do is another important question that narration typically answers. Narration can take different forms. Narratives present change from the point of view of subjective selection and emphasis, recording actions and events from the point of view of subjective impressions in time. Reports present change from the point of view of an objective situational frame, recording actions and events which can be verified by others. News stories intend to enable the readers to form their own independent opinion of facts and events without being influenced by the reporter's references to his own views. Examples of text objects in the text type category narration are a novel, a short story, a play, a biography, a comic strip and a newspaper report of an event.

Exposition is the type of text in which the information is presented as composite concepts or mental constructs, or those elements into which concepts or mental constructs can be analysed. The text provides an explanation of how the different elements interrelate in a meaningful whole and often answers questions about how. Expositions can take various forms. Expository essays provide a simple explanation of concepts, mental constructs or conceptions from a subjective point of view. Definitions explain how terms or names are interrelated with mental concepts. In showing these interrelations, the definition explains the meaning of words. Explications are a form of analytic exposition used to explain how a mental concept can be linked with words or terms. The concept is treated as a composite whole that can be understood by breaking it down into its constituent elements and then naming the interrelations of those elements. Summaries are a form of synthetic exposition used to explain and communicate texts in a shorter form than the original text requires. Minutes are a record of the results of meetings or presentations. Text interpretations are a form of both analytic and synthetic exposition used to explain the abstract concepts that are realised in a particular (fictional or non-fictional) text or group of texts. Examples of text objects in the text type category exposition are a scholarly essay, a diagram showing a model of memory, a graph of population trends, a concept map and an entry in an online encyclopaedia.

Argumentation is the type of text that presents the relationship among concepts or propositions. Argumentative texts often answer why questions. An important subclassification of argumentative texts is persuasive and opinionative texts, referring to opinions and points of view. Comment relates the concepts of events, objects and ideas to a private system of thoughts, values and beliefs. Scientific argumentation relates concepts of events, objects and ideas to systems of thought and knowledge so that the resulting propositions can be verified as valid or non-valid. Examples of text objects in the text type category argumentation are a letter to the editor, a poster advertisement, the posts in an online forum and a web-based review of a book or film.

Instruction (sometimes called injunction) is the type of text that provides directions on what to do. Instructions present directions for certain behaviours in order to complete a task. Rules, regulations and statutes specify re-

Co-funded by the Erasmus+ Programme of the European Union
ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.

quirements for certain behaviours based on impersonal authority, such as practical validity or public authority. Examples of text objects in the text type category instruction are a recipe, a series of diagrams showing a procedure for giving first aid and guidelines for operating digital software.

Transaction represents the kind of text that aims to achieve a specific purpose outlined in the text, such as requesting that something is done, organising a meeting or making a social engagement with a friend. Before the spread of electronic communication, this kind of text was a significant component of some kinds of letters and, as an oral exchange, the principal purpose of many phone calls. This text type was not included in Werlich's (1976) categorisation, used until now for the PISA framework.

The term transactional is used in PISA not to describe the general process of extracting meaning from texts (as in reader-response theory), but the type of text written for the kinds of purposes described here. Transactional texts are often personal in nature, rather than public, and this may help to explain why they do not appear to be represented in some of the corpora used to develop many text typologies. For example, this kind of text is not commonly found on websites, which are frequently the subject of corpus linguistics studies (for example, Santini, 2006). With the extreme ease of personal communication using e-mail, text messages, blogs and social networking websites, this kind of text has become much more significant as a reading text type in recent years. Transactional texts often build on common and possibly private understandings between communicators – though clearly, this feature is difficult to explore in a large-scale assessment. Examples of text objects in the text type transaction are everyday e-mail and text message exchanges between colleagues or friends that request and confirm arrangements.

Narration occupies a prominent position in many national and international assessments. Some texts are presented as being accounts of the world as it is (or was) and therefore claim to be factual or non-fictional. Fictional accounts bear a more metaphorical relation to the world as it is, appearing either as accounts of how it might be or of how it seems to be. In other large-scale reading studies, particularly those for school students: the National Assessment of Educational Progress (NAEP); the IEA Reading Literacy Study (IEARLS); and the IEA Programme in International Reading Literacy Study (PIRLS), the major classification of texts is between fictional or literary texts and non-fictional texts (reading for literary experience and reading for information or to perform a task in NAEP; literary experience and acquire and use information in PIRLS). This distinction is increasingly blurred as authors use formats and structures typical of factual texts in creating their fictions. The PISA reading literacy assessment includes both factual and fictional texts, and texts that may not be clearly one or the other. PISA, however, does not attempt to measure differences in reading proficiency between one type and the other.

PISA 2018. DRAFT ANALYTICAL FRAMEWORKS. MAY 2016 Page 30.

https://www.oecd.org/pisa/pisaproducts/PISA-2018-draft-frameworks.pdf

Co-funded by the Erasmus+ Programme of the European Union

ReWrVET project was funded with support from the European Commission under Erasmus+. This document reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
Project period: 01 09 2015-31 08 2018. Agreement VG-SPS-RP-15-36-013584.