HOW TO SUPPORT STRUGGLING WRITERS: WHAT THE RESEARCH STIPULATES

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The purpose of this paper is to give an overview of the current research involving composition writing with respect to students experiencing difficulties. It responds to the fact that composition writing is a largely neglected area in education and research. This paper will review the following: (a) the reasons why writing competence is so vitally important in many life situations, (b) outline the ordinary development of proficient writing skills, and (c) address the causes and characteristics of what constitutes severe writing problems. The main piece of this paper centers on describing best practice approaches *by assisting students to become proficient writers. It concludes with an outlook on pressing research questions that need to be tackled in the near future to provide even better support for students who struggle with the concepts of written expression.*

Composition Writing: An Under-Researched Area in Education

Composition writing is the act of transferring ideas or information into written text while following conventional patterns in order to achieve a communicative goal with a specific audience. Even though the great significance of this skill for all different areas of life appears to be self-evident, it is a stunningly neglected aspect of education. Teachers usually focus on instructing children on how to read, spell, and perform math during their elementary school education. In contrast, only little time is spent to assist students to put their thoughts into words in order to write short stories, essays, treatises, or any other kind of meaningful texts. Even after they entered secondary education, composition writing is usually not explicitly targeted. This situation might not only result from a deliberate disregard by educators for this academic skill. Teachers are often overburdened by the task of having to instruct students in this area. As Troia and Graham (2003) alluded, *Teachers … frequently comment that they lack the knowledge, skills, and strategies they believe would be helpful to them in facilitating children's emerging competence as writers* (p. 75).

Research also focuses mainly on other aspects of classroom instruction and largely parcels out the skill to formulate words and sentences following conventional patterns to create a significant writing product. In 1984, Sonntag and McLaughlin pointed out, *While much research has been done on areas of reading and mathematics, little by comparison has been done in writing, especially in teaching students how to write compositions.* (p. 49).

The situation has changed since the mid-1980s and many research groups have emerged that have been very active in their endeavors to shed some light on the questions of what makes a proficient writer and how the corresponding skills can best be taught. Fortunately, there are now even a number of excellent textbooks dedicated to this topic (e. g. Graham & Harris, 2005; Graham, MacArthur, & Fitzgerald, 2013; Harris, Graham, Mason, & Friedlander, 2007;

MacArthur, Graham, & Fitzgerald, 2008). However, the gap between papers on composition writing and other areas of school education remains remarkably wide, especially when considering not only English-speaking publications. When taking a look at the data base PSYNDEX – the German equivalent of PsycINFO (the largest data file in the field of psychology and education, produced by the American Psychological Association), the difference becomes particularly evident. As of August 2014, PSYNDEX lists 1,380 journal articles or book chapters that contain the terms *math*, *mathematics*, or *calculating* in their titles, whereas only 37 publication titles mention either *text composition*, *composition writing*, *expressive writing*, *writing skills*, *composition skills*, *essay writing*, or *story writing*.

The major cause for these gaps between papers on composition writing and other areas of education might be similar to the aforementioned reasons why teachers may pay little attention to this academic skill: Writing is a very complex neurodevelopmental process. It requires brain-based components such as intact attention and concentration, spatial and sequential production, memory, higher-order cognition, language involving vocabulary and spelling, as well as executive functioning (Feifer & Defina, 2002). A person has to coordinate multiple cognitive, linguistic, and physical operations along with needing to consider genre-specific conventions while keeping the intended audience in mind when writing (Troia & Graham, 2003). This makes it extremely intricate to validly assess the product of one's writing endeavors. Generally, standardized diagnostic instruments and curriculum-based measures (CBMs) cannot adequately grasp the essence of what constitutes a *good* written text. Most of these instruments focus on productivity. For example, large parts of the *Test of Written Language* (TOWL-4) (Hammill & Larsen, 2009) assesses spelling and punctuation, as well as the student's ability to integrate the meaning of several short sentences into one major one. The three most widely used approaches of applying CBMs in measuring writing include: (1) counting total words written, (2) counting total words spelled correctly, (3) and counting the number of adjacent, correctly spelled words (Correct Word Sequences, CWS) (Watkinson & Lee, 1992). These methods possess a high level of objectivity. Most of all, they are easy to use. However, they often miss the point. Koutsoftas (2014) rightly argues that many passages that are rated very positively by most people can sometimes score rather low when standardized diagnostic instruments or CBMs are applied. Thus, writing and its assessment poses challenges for researchers that other school-related research topics do not. There is not much to objectively, reliably, and validly measure reading fluency or spelling. With writing, it is a whole different story.

The Importance of Being Able to Put Ideas Into Words

It is hard or even impossible to differentiate the significance of different school-related skills and to determine, which one is more important than another. However, there seems to be a broad consensus that reading comprehension is certainly one of the most important competencies a child can acquire in his or her first three to four years of schooling. Without adequate expertise in this area, students are not sufficiently enough able to understand, analyze, or apply the information in text and are thus bound to fail in most every school subject (Grünke, Wilbert, & Kim Calder Stegemann, 2013). Proficiency in deriving meaning from text is equally important in math (especially when having to solve word problems), language, science, religion, or social studies. In contrast, not being able to play a musical instrument or to run fast does not have the same disadvantageous effects on the academic career of a child. Ample skills in composition writing seem to be equally vital as ample skills in reading comprehension. In fact, both areas are very closely connected. Being able to relate events and represent their links in a mental model is crucial for both understanding and producing text (Arfé & Bosolo, 2006). However, the underlying competencies necessary for performing reading comprehension and composition writing tasks are not identical. In order to produce and record an appealing story, one needs to be adept in making meaning from text. But this is not true vice versa. People are oftentimes able to comprehend a passage, even though they lack the skill of composing an attractive narrative themselves (Carretti, Re, & Afré, 2013; Katusic, Colligan, Weaver, & Barbaresi, 2009).

By independently producing a text, children and youth can express their content knowledge, their intellectual flexibility, and their maturity. Oftentimes, the appraisal of student's performance in different school subjects does not only depend on their expert knowledge or reasoning abilities, but also heavily on their skill to put their ideas into a written form. To prepare for an exam, it is frequently essential to take notes, or excerpt the main points of a text.

What applies to basic school education is equally valid for higher learning: Without adequate skills in *thinking on paper*, students are bound to perform poorly in a whole array of subject matters. Additionally, this ability is one of

the essential competencies in many occupational fields. Finally, an incapacity of putting thoughts into written words excludes one from many leisure and social activities like sending an email, communicating through blogs, sharing an experience on Facebook, or posting a simple text message on a smartphone (Boyd, 2008; National Commission on Writing, 2004). Thus, it is of crucial significance to make sure that no student falls behind as the rest of the class progresses in their composition writing abilities.

The Development of Proficient Writing Skills

The so called *simple view of reading* by Gough and Tunmer (1986) is a popular mathematical formula that states that decoding (D) x language comprehension (LC) = reading comprehension (RC). This model explains the act of reading, processing, and understanding a text in a very concise and succinct way. However, no equivalent theory exists for writing. No *simple view* can adequately capture the complexity of the ability to compose a written text. Especially the development of higher-level skills in this area does not seem to follow as much certain fixed stages as it is the case with other academic competencies. The path by which children eventually attain adequate expressive writing abilities encompasses some small as well as some very major steps, a lot of plateaus, and even a number of temporary setbacks (Berninger & Winn, 2006).

The ability to compose text develops alongside the other three linguistic systems: speaking, listening, and reading. There is considerable overlap between all these related skills. Special competencies in one area usually enhance the development in another (Shanahan, 2006). Proficiency in text composition is acquired gradually with age and practice (Midgette, Haria, & MacArthur, 2008). However, unlike with the other three skills, there does not seem to be an end to perfecting writing abilities. Professional authors oftentimes publish their best work later in life. The same kind of progress can usually not be noticed when focusing on a person's speaking, listening, or reading competencies.

Even before they reach age three, children demonstrate an understanding of and an appreciation for writing (Santangelo, 2014). They are aware of the fact that letters represent meaning. Frequently, they try to imitate their parents by scribbling letter-like characters on paper and pretending to convey a message through this playful act. After they entered school, they acquire the alphabetic principle (i. e. they understand that there are systematic and predictable relationships between written letters and spoken sounds) and start writing simple words. They progress in their transcription skills (handwriting and spelling), and become more and more familiar with sentence generation strategies to transform their ideas into language.

During childhood up to puberty, student's so called working memory continues to increase in capacity. The term refers to *…a system for temporary storage and manipulation of information during the performance of a wide range of cognitive tasks* (Kemps, de Rammelaere, & Desmet, 2000, p. 89). Working memory capacity and its efficient use are seen as the main predictors of the composition writing ability in children and youth (e. g. Berninger & Swanson, 1994; Swanson & Berninger, 1996). This feature is so important, because it determines to what extent a student is able to control the engagement of the writing process (planning, generating content, and revising), while maintaining a representation of the intended audience (Alamargot, Caporossi, Chesnet, & Ros, 2011). Simultaneously, a person needs to access his or her long-term memory to retrieve content knowledge as well as knowledge about different genres, task schemas, linguistic conventions, etc. On top of it, students need to be able to flexibly select the most suitable strategy for a respective sub-task from their available repertoire, to monitor its usefulness while applying it, and to keep themselves motivated during the process (Limpo & Alves, 2013). Without an efficient use of working memory resources, a person is bound to fail in trying to perform all these tasks simultaneously.

Characteristics of students who struggle with written expression

Because composition writing is so demanding, but at the same time such a neglected area in school education and research, it takes no wonder that the prevalence of children and youth with severe problems in this respect is alarmingly high. In 2011, the *National Center of Educational Statistics* (NCES) commissioned the *National Assessment of Educational Progress* (NAEP) to gather data on the largest representative and continuing assessment of written expression in the United States. Within the scope of this survey, the written language abilities of 52,000 8th and 12th graders were assessed. The findings suggest that written language skills remain the single most challenging academic task to both teach and remediate successfully. A vast majority of secondary level students have not demonstrated written language competency for grade-level material with writing pitfalls especially

paramount among male students. At least one-third of High school students planning to attend college do not meet the basic readiness requirement for college composition courses.

The globally used *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) (American Psychological Association, 2013) describes a syndrome called *Written Language Disability* (WLD). Characterizations of this diagnosis vary in the literature. However, delays in the capability to compose a written text (usually of around two years), along with an average intelligence quotient (IQ) and fair academic skills in non-writing related areas are certainly the most common features in all definitions (Yoshimasu et al., 2011). According to Katusic et al. (2009), the incidence rate of boys and girls with a WLD varies between 6.9 and 14.7%, depending on how the diagnostic criteria are applied. The share of children and youth with reading, spelling, and math disorders in the population of students is usually a lot lower (Mayes & Calhoun, 2006). Regardless of what epidemiological study is used as a reference, boys always outnumber girls concerning the prevalence of this disorder by a large margin. A ratio of 2:1 to 3:1 seems to be the adequate magnitude. About a quarter of all students with a WLD do not meet the diagnostic criteria of a reading disability. Both problem areas are closely related. However, a considerable number of boys and girls with severe writing challenges are perfectly able to decode a text fluently and comprehend its content (Katusic et al., 2009).

If we additionally take the group of students into account that do not qualify for a WLD diagnosis, but nonetheless experience severe difficulties in composition writing, the number of children and youth in need of help becomes even larger. In fact, problems in composing meaningful text is characteristic for a large spectrum of special educational needs. They have been described in students with different kinds of emotional and behavioral problems (Bak & Asaro-Saddler, 2013), learning disabilities (Saddler, Asaro, & Behforooz, 2008), childhood autism disorders and Asperger syndrome (Asaro & Saddler, 2009; Asaro-Saddler & Bak, 2014), attention-deficit/hyperactivity disorders (Re & Cornoldi, 2010), or such rare phenomena like the Noonan syndrome (Asaro-Saddler, Saddler, & Ellis-Robinson, 2014).

Even though these young people have to cope with a whole variety of different challenges, their writing difficulties express themselves in very similar ways. The same is true for interventions to help these children and youth acquire composition skills (which we will describe in a later part of our paper): These students all seem to benefit from the same kinds of approaches (Saddler & Asaro-Saddler, 2014). Thus, the following remarks apply to a very large scope of young people with special needs.

In all cultural educational venues, it is mandatory to first excel in lower-level skills before it becomes possible to master higher-level abilities. For example, if children have not developed ample math fact fluency, they will not be able to solve complex word problems (Grünke & Calder Stegemann, 2014). Students with WLD and other forms of poor written expression usually experience severe difficulty with the mechanics of the writing process. This becomes especially apparent in their relatively slow and uneven handwriting (Graham & Weintraub, 1996). All initial writers struggle with fluency and legibility in one way or another, but children with problems in composition writing have never overcome this hurdle. Thus, they have to continue to devote a large share of their cognitive resources to forming legible letters instead of attending to planning, organizing, or other composing processes. In many instances, students cannot even read their own notes. This makes studying for a test, at best, very difficult and, at worst, nearly impossible (Graham, 2010).

Students with poor expressive writing also demonstrate very poor spelling, capitalization, punctuation, and usage skills. In addition, their texts contain an exceptionally large amount of grammatical errors (Mac Arthur & Graham, 1987). These boys and girls are constantly so engaged in trying to meet the demands of lower-level text production tasks that they cannot think about the content of what they want to communicate and are unable to consider their potential audience (Fulk & Stoemont-Spurgin, 1995). For them, composing becomes a knowledge-telling process in which they instantly write down anything that comes to mind – without considering the respective genre, the audience, or the purpose. Each thought just prompts the next one (Graham, 2010). Factoring out the mechanics of writing, not investing a sufficient amount of time into planning is the number one stumbling block that keeps learners from producing appealing texts (Rodríguez, González-Castro, Grünke, Cerezo, & Álvarez, 2015).

It is thus not surprising that these children and youth produce generally very short, incomplete, and poorly organized texts (Englert & Raphael, 1988). Their brief writing products mainly contain irrelevant information that is not arranged in any structured manner (MacArthur & Graham, 1987). They obviously are not sufficiently able to actively engage in a task and/or show the persistence necessary to succeed in such a challenging and sophisticated

assignment such as producing a meaningful and compelling text (Torgesen, 1982). Thus, quite a number of children who experience severe problems in expressive writing also suffer from some form of Attention-Deficit/Hyperactivity Disorder (ADHD) (Rodriguez, González-Castro, Grünke, Cerezo, & Álvarez, 2015). But even if students with severe problems in writing composition were able to apply the necessary concentration and endurance to finish an ambitious writing task, they would in all likelihood not be adequately proficient in executing and monitoring the cognitive processes that are essential for succeeding in their endeavors (Baumann, 1984). All these difficulties become ever more evident as the complexity of the task increases. Writing a story is usually less demanding than writing a persuasive essay (De La Paz, 2001).

Best Practices in Helping Students Become Proficient Writers: Teaching Basic Prerequisite Skills

In order to successfully be able to tackle higher-level writing abilities, it is indispensable to demonstrate sufficient expertise in lower-level skills (see above). The handwriting has to be adequately fluent and legible. In addition, one must possess ample spelling, capitalization, and punctuation skills, as well as a well-founded knowledge base about the grammar of the respective language he or she intends to write in. A person has to be able to execute all these prerequisite competencies without the need for conscious attention in order to compose text (Graham & Santangelo, 2014).

But even though these skills are so vital, they have been pushed *to dusty corners of the classroom* in recent years, as Schlagal (2013, p. 257) described it. Electronic keyboard- and keypad-driven communications with its spell-check functions seem to have given rise to the attitude that teaching children legible handwriting, as well as correct spelling, capitalization, and punctuation, is no longer important (ebd.). However, neglecting to instruct boys and girls in these areas has very harmful effects on their writing development.

Fortunately, there are a number of evidence-based practices that can remediate those basic skills (Howe, Roston, Sheu, Hinojosa, 2013; Nies & Belfiore, 2006; Simonsen & Gunter, 2001). Handwriting can best be taught by teachers visually and verbally modelling correct letter formation and by short daily practices with immediate, corrective feedback (Hoy, Egan & Feder, 2011, Schlagal, 2013). The same applies to interventions focused on improving spelling, capitalization, and punctuation (Sayeski, 2011). Two approaches that are exemplary in this respect are copy-cover-compare (CCC) and constant time delay (CTD). During spelling instruction using CCC, boys and girls are required to look at a target word, cover it, write it down, uncover the previously covered word, compare the spelling with the written response, and correct any errors if applicable. The steps of CTD include the presentation of a word, the provision of a constant time interval for a student to write it down (e. g. 5 seconds), and a reinforcement in case the word was spelled correctly (or a corrective feedback if an error occurred) (Cates, Dunne, Erkfritzm Kivisto, Lee, & Wierzbicki, 2007).

Teaching Sophisticated Writing Strategies

There seems to be a broad consensus among scholars that the Self-Regulated Strategy Development (SRSD) model (Harris & Graham, 1996) is the best concept to guide instruction when familiarizing students with the three fundamental processes of successful composition writing: planning, producing text, and revising (Santangelo, 2014). As Limpo and Alves (2013) point out, *In particular, the SRSD seems to be the most effective strategy instruction model, as its average effect size doubles that of the other ones* (p. 329). It is in large parts based on the learning strategies approach developed by Alley and Deshler (1979) (Graham & Harris, 2009) and was initially referred to as self-control strategy training (Harris & Graham, 1985). One of the reason for its potency is the fact that it was designed to address exactly the four key areas that the development of writing skills mainly depends upon: (1) self-regulatory or strategic behaviors, (2) writing knowledge, (3) writing skills, and (4) motivation (Sreckovic, Common, Knowles, & Lane, 2014). The two key instructional principles of Self-Regulated Strategy Development (SRSD) are explicit teaching and simplifying complex processes into small comprehensible steps (Regan & Mastropieri, 2009). Isolating and then automating certain actions that a learner must perform in order to reach a certain goal effectively reduces working memory overload. Regardless of what kind of specific sub-goals a teacher wants to aim for at a time, the following six stages of SRSD always guide his or her actions.

Stage 1 (convey and activate background knowledge). The teacher makes sure that the students possess the knowledge and the skills to use a strategy. This is done through informal observation or direct assessment. The teacher helps the students to remember the parts of the procedure that they are already familiar with or provides remediation as necessary.

Stage 2 (discuss it). The teacher presents a particular strategy as a useful tool to accomplish a certain task. Subsequently, he or she outlines and explains the different steps of the procedure.

Stage 3 (model it). The teacher demonstrates how to apply a strategy using simple problems while verbalizing his or her thoughts. This enables learners to get familiar with the metacognitive processes someone must use to master a task.

Stage 4 (enable memorization). The teacher provides ample practice opportunities to help students to memorize the steps of a strategy. To facilitate successful learning, he or she uses cue cards or other visual aids that present these steps. Oftentimes, mnemonics are also included as a help to make memorization easier.

Stage 5 (support it). The teacher scaffolds the application of a strategy and offers prompts to the students with gradual fading. As time progresses, learners should be able to apply the procedure more and more without help.

Stage 6 (enable independent performance). The teacher monitors student's progress while they are trying to tackle different subtasks of the writing process all by themselves and reinstructs them if necessary (Graham, Harris, & Saddler, 2009; Jacobson & Reid, 2007; Reid, Hagaman, & Graham, 2014).

These stages can be used as a framework to design instruction for teaching any kind of skill necessary to improve writing abilities in struggling children and youth. Below, readers find some examples of strategies designed to support the acquisition of planning, text producing, and editing skills that can easily be taught by going through the six stages of SRSD. The procedures mentioned are not a comprehensive collection of effective writing strategies, but just a small arbitrary selection out of a very large pool of helpful options. As numerous literature reviews and meta-analyses indicate, techniques like the ones described below have proven to be highly effective with struggling writers (e. g. Bangert-Drowns, Hurley, & Wilkinson, 2004; Datchuk & Kubina, 2012; Graham & Perin, 2007a; Rogers & Graham, 2008; Sreckovic et al., 2014). Additional and equally beneficial interventions to foster text composition are described in Graham and Harris (2005), Graham, MacArthur, and Fitzgerald (2013), or Harris and Graham (1996). Even if strategies do not explicitly focus on enhancing motivation, this essential ingredient in any favorable writing endeavor usually gets boosted by the mere fact that students are systematically led from one partial success to the next, while constantly getting reinforced by the teacher for their efforts. This side effect is an intended feature of SRSD.

Planning

Different text genres follow different particular text structures. For example, narratives involve a setting, an episode, and a conclusion. Frequently, a story is structured around a main character, a problem, an action required by the main character to solve the problem, an outcome of this action, and some kind of bottom line (Reid & Lienemann, 2006). With other genres, it is more difficult to pinpoint a basic outline. However, regardless of the type of text someone wants to produce, they need to sit down first and think about what ideas they intent to write about.

In order to compose a text of good quality, one must be mindful of the relevant structure and come up with a rough blueprint. There are different ways on how to help struggling writers master this part of the task. One of them is the use of *story maps*. These are graphic organizing techniques that are based on schema theory (Anderson, 1977). They depict all major elements of a narrative (settings, characters, problems, events, solutions, and conclusions) in the form of a diagram (see figure 1). A story map template is supposed to facilitate the brainstorming process of students by serving as a reminder of the different components of a tale and by providing the opportunity to systematically take some notes. It helps them to incorporate the different elements by providing them with a *bird's eye view* of the basic structure and the connection between the various parts of a respective narrative (Davis & McPherson, 1989; Li, 2007). Story maps have mainly been used to improve children's reading comprehension (e. g. Grünke, Boon, & Burke, in press; Grünke, Wilbert, & Calder Stegemann, 2013), but have also been successfully applied in building planning skills in poor writers (e. g. Hennes, Büyüknarci, Rietz, & Grünke, 2015; Li, 2007; Unzueta & Barbetta, 2012; Zipprich, 1995).

The question-asking strategy that Graham and Harris used in some of their early studies on teaching story composition to struggling learners (e. g. Graham and Harris, 1989a) is very similar to the story mapping approach

(Baker, Gersten, & Scanlon, 2002). As mentioned above, these graphic organizing techniques are meant for designing narratives. However, they could also be of benefit within the context of other text genres.

An additional (and advanced) way to help struggling learners to plan their writing product is *STOP & LIST*. This strategy involves four steps that students need to follow: (1) Sit down quietly, (2) think about the purpose, (3) list your ideas, and (4) sequence your ideas. Such a procedure can be used with all different kinds of genres. It helps children and youth to not instantly start writing as soon as they are assigned a topic, but to stop and list first (Troia & Graham, 2002).

Producing Text

The ability to construct sentences is undoubtedly one of the most vital competencies as a person tries to express his or her thoughts in writing. Children and youth with insufficient knowledge about the grammar of their language are certainly disadvantaged when trying to create such a composition in miniature (Saddler, 2013). Texts that contain many sentences that are short and choppy, frequently start with similar words, exhibit roughly the same length, or are characterized by fragments, run-ons, and ramblings, usually get rated rather unfavorably (Saddler, Asaro, & Behforooz, 2008). Unless students make ample improvements in this respect and acquire the skills necessary to produce meaningful und well-phrased groups of words which express a complete thought, they are bound to fail in their endeavors to create texts of sufficient quality. A simple and well-known strategy to help struggling writers is called *sentence-combining*. It provides structured practice in manipulating and rewriting short sentences of low quality into more mature and more varied ones. When using this approach, teachers or peer tutors create a number of exercises that consist of many kernel sentences. He or she then models how to combine two very similar ones, like *The dog is big. The dog barked*. These two entities can be incorporated into one, such as *The big dog barked* or *The dog that is big, barked*. As soon as students have become proficient in combining kernel sets, they can be taught how to combine sets of kernels into whole paragraphs, while promoting sentence variety (Saddler & Asaro-Saddler, 2010).

A much more complex strategy to help students improve their writing is called *POWER*. It is comprehensive in the sense that it not only focuses on the actual process of generating words and phrases, but also involves the other two elaborated procedures described in this article: planning and editing. During the planning phase, learners are encouraged to consider the intended audience of their text, make themselves aware of the purpose of their paper, and to activate their background knowledge regarding the respective topic. They take notes of their thoughts on a so called pattern guide and come up with a first structure for their text. The core of POWER is a phase, in which students go back to their pattern guide to formulate a first draft of their text. They then reread and appraise their writing product by marking sections they approve of and those that they believe need modification. In a subsequent step, they make the necessary alterations and think of two questions they could ask their teacher or a peer tutor in order to get some ideas on how to further improve their text. They then read the current version of their paper to this other person and let him or her critique on it. Both, student and teacher or peer tutor, then brainstorm about ways on how to advance the text to a higher quality level. Finally, the learner works the suggestions into his or her paper. During this last phase, the teacher or peer tutor assists the student in his or her endeavors to revise the text by scaffolding how to restate certain passages, rearrange the structure, insert new information, etc. (Englert & Raphael, 1988; Reid & Lienemann, 2006).

Editing

SCAN is a strategy designed to help students revise a persuasive essay. It serves the purpose of adding information to a paper if necessary, improving its clarity and cohesiveness, as well as correcting any spelling, capitalization, punctuation, or grammatical errors. When using SCAN, learners go through the following five steps: (1) Read your paper and refamiliarize yourself with it, (2) identify a topic sentence that reflects the desired intend of your paper, (3) add two or three additional reasons for your position, (4) go through each sentence and check whether it is comprehensible to the reader, useful for your argument, complete, as well as free of mechanical errors, and (5) make any final changes (Graham & MacArthur, 1988). If used with other kinds of text genres, the steps of SCAN have to be reformulated accordingly.

A specific technique focused at the last step in the SCAN strategy is called *COPS*. When applying this procedure, students have to appraise their paper and check (1) whether first words and proper names are capitalized, (2) whether the overall appearance is acceptable, (3) whether the commas and end punctuations are set correctly, and (4) whether every word is spelled the right way (Schumaker, Deshler, Nolan, Clark, Alley, & Warner, 1981). In case a student needs help, he or she is encouraged to ask a teacher, refer to a dictionary, or consult the internet (Reid & Lienemann, 2006).

Future Research Perspectives on Optimizing Current Treatment Options for Struggling Writers

The capacity to eloquently and coherently compose a text without committing too many errors in grammar, spelling, or punctuation is an extremely powerful predictor of academic and vocational success. It is also a vital prerequisite for participation in civic life. Despite the significance of this ability, we have not yet managed to comprehensively provide elementary and high school students with effective instruction in writing (Santangelo & Olinghouse, 2009). The number of children and youth with serious difficulties in this area is still alarmingly high (Feifer, 2013; Katusic et al., 2009). One reason for this is certainly the long time neglect of research in this field. The amount of studies on how to best teach reading or spelling still outnumbers the amount of studies on how to best teach writing by a great margin. However, mainly triggered by the pioneering work of Graham and Harris (e. g. 1988; 1989a; 1989b), a large body of findings regarding the usefulness of different approaches to teach text composition to struggling learners has emerged over the last two and a half decades.

In this paper, we presented an overview of techniques that really work. Their effectiveness has been documented in a number of literature reviews and meta-analyses that focused on students with WLD (Rogers & Graham, 2008), learning disabilities (e. g. Baker, Chard, Ketterlin-Geller, Apichatabutra, & Doabler, 2009; Cook & Bennett, 2014; Graham & Harris, 2003; Graham & Perin, 2007a; 2007b; Mason & Graham, 2008), attention-deficit/hyperactivity disorders (Cook & Bennett, 2014), intellectual disabilities (Joseph & Konrad, 2009), autism (Pennington & Delano, 2012), and other kinds of disabilities (Taft & Mason, 2011). Cook and Bennett (2014) point out that ... *SRSD programs were consistently found to be effective and evidence-based in both group design and single-case design research* (p. 345).

We thus now have a strong empirical base to inform high quality practice. However, the gap between research and implementation remains extraordinarily wide. Johnson and Semmelroth (2013) point out that, ... *while arguably no other content area in education has produced more instructional practice research than special education, the profession itself has made little progress in getting these instructional strategies into practice* (p. 71). What is true for special education in general is especially applicable to writing instruction. This defect has many reasons. One striking one was indicated earlier: Teachers are oftentimes very intimidated to tackle this task. They are rather skeptical as to their ability to make a difference as they strive to help students to become proficient writers (Troia & Graham, 2003).

Future efforts in accumulating empirical knowledge in this area should particularly focus on bridging the apparent research-practice gap. We know enough to break through the declining spiral of frustration, anxiety, and more failure that far too many low achieving writers experience every day. To achieve this, we believe that the following three research points have to be increasingly considered in the future:

(1) *Ways to change teachers' attitudes towards writing instruction*. Santangelo and Olinghouse (2009) make a strong case for this proposition. They rightly point out that ... *highly effective writing teachers not surprisingly are truly passionate about writing, and their classrooms are imbued with that belief ... They emphasize the value of writing and underscore that it can be difficult but also exciting and fun* (p. 2). The challenge now consists of identifying and testing options that can facilitate enthusiasm about teaching writing in educators. Text composition is a creative endeavor. How well a student performs in this area depends to a high degree on his or her self-efficacy (Sanders-Reio, Alexander, Reio Jr., & Newman, 2014). Even soothing background music has an advantageous effect on how well a boy or a girl is able to produce competent prose (Legutko & Trissler, 2012). Children and youth need a fear-free, relaxed, and encouraging atmosphere in order to be at their best when trying to creatively put their ideas into words. An instructor who radiates excitement and believes in his or her students is an indispensable factor in this structure of conditions. However, very view studies have so far been conducted to shed some light on the question of how such a positive attitude can be built up in teachers.

(2) *Ways to maximize the fidelity of expertly teaching writing skills*. Whether the aforementioned strategies to promote writing skills in students find their way into everyday practice depends heavily on teachers as implementers. As Fixen, Naoom, Blasé, Friedman, and Wallace (2005) rightly point out, ensuring that educators are provided with the support necessary to serve learners in a way that meets their needs is highly challenging. It is not sufficient to just instruct teachers once on how to apply different approaches. Mitchell (2014) calls attention to the fact that „… successful implementation of … evidence-based strategies needs to be carefully planned and well-resourced, and requires changes at the practitioner, supervisory, and administrative support levels, as well as the system level (p. 2). All too often, teachers do not apply strategies with enough fidelity to the intervention model. They might be convinced that a certain approach really works and might be highly motivated to teach writing, but they frequently still do not put it to good use in their classrooms. Many need periodic reassurance on whether they are doing it *right*. They have to be provided with continuous supervision and opportunities for professional development to always furnish the best support under varying circumstances. However, we certainly need more implementation research that helps us to better understand what kind and what amount of support teachers need in order to actually apply effective strategies in everyday classroom life (Reinke, Herman, Stormont, Newcomer, & David, 2013).

(3) *Ways to involve students as teachers*. The application of some of the aforementioned interventions seems so simple that even fellow students should be able implement them with struggling classmates like it is done in the class-wide peer tutoring model (e. g. Maheady & Gard, 2010). Other forms of cooperative learning (like reciprocal peer tutoring) might also be useful in conveying effective writing skills. But we do not know much about whether these assumptions really hold water. In any case, research needs to focus on how instruction can be organized and delivered in a way that this demanding task becomes manageable for teachers. The fashion in which different approaches are described in empirical studies or even in textbooks is often not feasible for instructors who need to juggle a great amount of obligations and need to attend to a large number of students at once. More research is warranted that evaluates the use of different writing strategies under the conditions of everyday school life.

By pursuing these three research points, we will certainly be able to make a difference in providing a knowledge base for deciding how to reduce the greater number of students who fail in reaching their potential in life because of insufficient writing abilities. Overall, the approaches suggested in this paper may provide students the confidence, knowledge, and skills they need to succeed with writing across the life span.

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