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**Efficacy Check of Writing Processes of Adult Writers and Using
Collaborative Writing as Writing Enhancement Tool**

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Abstract:

This research examined how and what struggling adult writers know about writing and themselves as authors when it comes to overcoming a writing difficulty. We used a three-pronged approach to learn more about the adult authors' writing processes: participant observation, text analysis, and structured one-on-one interviews with both retrospective and prospective parts. Adult writers who are struggling can benefit from this rigorous approach since it provides them with important tools for examining their writing processes and expertise. We may observe an example of data triangulation in action by examining a real-world case study. The results of this case study show that struggling adult authors and younger writers have certain things in common and some things in common. When it comes to the writing process, both groups have a limited role for planning and rewriting. For the most part, struggling adult authors have an advantage over their younger counterparts because they have a better grasp of their own talents as writers, in addition to a better grasp of their own identity as writers.

Keywords: Writing process, writing knowledge, collaborative writing, struggling adult writers

1. Introduction

More than half of the population lacks basic reading skills according to the most recent statistics from the Survey of Adult Abilities (PIAAC) (OECD, 2013). Writing skills in adults were not assessed as part of the study as a result of the PIAAC's lack of focus on these areas.

Most of the research on the subject of writing abilities in adults has been conducted among university students. Adults with advanced writing skills are of particular interest because of this (Bourdin & Fayol, 2002; Chenoweth & Hayes, 2003; Quinlan, Loncke, Leijten, & Waes, 2012; Torrance, Thomas, & Robinson, 1994). A lot of mystery surrounds adult authors who are having trouble getting their work published. There are just a few studies that look at the struggles of adult writers, and these studies tend to focus on the basics, such as spelling and syntax (Grotlüschen & Riekmann, 2012; Wengelin, 2007). Adult struggling writers' higher-order talents, such as their ability to recognise and appreciate the writing process or to recognise and appreciate themselves as authors, are unknown. According to previous study, many adult struggling writers feel writing is simply about mechanics and not about the creative process. This is a misconception.

Writing therapies for struggling adult authors are the subject of some recent study, which is now under publication (Berry & Mason, 2010; MacArthur & Lembo, 2009). It's comparable to reading research that these treatments are based on studies with younger age groups. Even though it seems natural, extending study findings from children and adolescents to adults "is largely speculative, especially in areas where there is little existing AE [=adult education] research" (Kruidenier, MacArthur, and Wrigley, 2010, p. 14). Kruidenier et al. (2010) point out that there are considerable differences in reading comprehension and fluency between young and adult learners. Adult and adolescent struggling authors have different traits, and it is not possible to assume that the characteristics that identify them are the same for both groups of writers (Amato & Watkins, 2011; Troia, 2006) One's way of life, age, and formal schooling setting all have an influence on learning in general as well as learning how to write in particular, and these factors must be taken into account when evaluating learning outcomes. Among the many reasons that make adult learners distinct from other students is that their literary experiences are likely to be different from those of children, and secondly and most

importantly, that their adult responsibilities prevent them from regularly attending literacy classes or devoting time to learning.

Three questions must be addressed in order to comprehend the difficulties faced by struggling adult writers as a group. ' One consideration would be how to design literacy classes for adults in a way that accommodates their busy schedules and diverse personal preferences and needs. It is required to address two other sets of issues prior to discussing pedagogy in this context. For the sake of this paper, let's consider the following issues:

- “What strategies do struggling adult writers use to complete a writing assignment? And what level of writing expertise do they possess?”
- “Secondly, what are the most acceptable ways for evaluating the writing processes and writing knowledge of struggling adult writers?”

The following is how the article will be structured: When it comes to observing struggling adult writers, I argue that a novel combination of methods, including the observation of collaborative writing tasks, follow-up structured individual interviews with writers, and analysis of their written texts, is most effective in observing their writing processes (section 2). In addition, I believe that this three-step technique can help adult authors who are struggling to have their work published. It's at this point, in Section 3, that I explain how this study was connected to a wider investigation on struggling adult authors in German-speaking Switzerland. Section 4 provides a detailed explanation of the three-part technique and an example of how it was put into practise in a sub-study of dyads of struggling adult authors. In the next part (section 5), I will use one of these writing couples as a case study to explain how their writing process and knowledge are illuminated. Researching troubled adult authors can benefit from collaborative writing, and I urge more study into how collaborative writing can assist these writers improve their writing.

Considerations for the Research Process:

Research on Adult Writers Who Struggle Using Collaborative Writing There are three traditional ways to study the writing process: prospectively through surveys or interviews, simultaneously under thinking aloud settings, or retrospectively through interviews. Each technique has advantages and downsides.

Experimental bias can emerge as a result of the inclusion of additional questions in prospective interviews, including hypothetical ones like those done by Zimmerman and Martinez Pons (1986). (Veenman, 2005, p. 79). When conducting interviews in the future, it is difficult to use hypothetical occurrences due to the fact that it demands the capacity of respondents to relate and apply such scenarios to their own personal experiences, which is not always achievable. When conducting interviews, researchers and interviewees alike may look to hypothetical events for common points of reference, as opposed to a questionnaire, which does not provide this information.

Think aloud does not reveal many highly automated processes, but it does show higher-order processes in other circumstances (Veenman, 2005). Consider whether or not this method has an effect on higher order writing processes while you're thinking aloud. There is a strong correlation between the prolonging of the pause and the amplitude of the temporal effect, as proven by Janssen, Van Waes, and Van den Bergh (1996). As a result, several layers of planning are necessary. The degree of difficulty of the writing project has an effect on these variances. A study on think-aloud exercises led the authors to this conclusion: protocols for writing activities that demand problem solving are more informative than protocols for simple tasks that are protocols of knowledge telling and are thus less beneficial; (Janssen et al., 1996, p. 249).

However, as Winne (2010) points out, the existence of thinking aloud data is only roughly contemporaneous with the incidence of cognitive activity. Instead, when authors express their opinions, they are interpreting a specific event. To put it another way, the ability to think and write concurrently as well as explain and analyse one's own cognitive processes is demonstrated through the practise of "thinking aloud." Even for authors who are already struggling, this requires an advanced vocabulary, which can be a substantial burden.

Unless it is impractical, most retrospective interviews are performed as quickly as possible following the viewing of a scenario. It is important to keep in mind that interviewees often have a hard time remembering what they were asked to write about them when it comes to cognitive activities. Given that recalling and verbalising from memory involves interpreting and verbalising your own cognitive functions, it may be deduced that this technique requires relatively strong vocal talents, akin to thinking out loud. This is a similar strategy. Levy,

Marek and Lea (1996) found that test-takers were frequently unable to remember or reconstruct what they had said during the thinking aloud session, despite their best attempts.

Janssen et al. (1996) and Levy et al. (1996) suggest that while all procedures have their shortcomings, neither thinking aloud nor retrospective interviews should be discarded because they both have merits. " The same is true for those who are interested in being interviewed. It's possible that combining these methods (Spörer and Brunstein, 2005) will be the key to your success. There are a number of different ways to observe writing processes; this review shows that each approach makes distinct demands on test subjects; as a result, a combination of these methods creates even more and hence higher expectations on test subjects.

As important as it is to document the writing processes of aspiring adult authors, a detailed assessment of the approach and expectations set on test subjects is required. Researchers have a particular set of methodological problems in the study of this population, including the following:

They do not want to be seen or recorded when they are writing because they are self-conscious about their appearance (Sturm, 2010).

In pretests, it is discovered that people have trouble thinking aloud while writing, as per Sturm (2010). One probable explanation is that they need their mental power to write, and another is that they are ashamed to contemplate aloud in front of others.

They will focus on procedures with a low hierarchical degree of complexity since struggling adult writers are unlikely to have fully automated fundamental talents like handwriting or orthography (Wengelin, 2007). So it is not apparent if the data gathered from thinking aloud will be enough for the study.

Avoiding writing settings as much as possible is a common occurrence for adults with weak writing abilities (Sturm, 2010).

Adults with low reading skills may also struggle verbally in specific contexts, as demonstrated by research done with teens (Dockrell, Lindsay, and Connelly, 2009). 6.

In light of points 1)–3), thinking aloud is not a suitable method for researching the writing processes of struggling adult authors. For the same reason that struggling adult authors often

have limited personal experience from which to draw (point 4), prospective interviews that refer to a hypothetical situation will only give the most restricted insight into these people. When interviewers are unable to communicate effectively, their credibility is questioned as a whole. This may be addressed by combining data from video observations of authors working on collaborative writing assignments with structured individual interviews done immediately after the task completion and an evaluation of the written texts generated.

As an alternate method of examining adult authors who are having difficulties, collaborative settings might be employed. Only briefly considered in the context of a learning arrangement, collaborative writing has significant positive impacts on text quality (Graham and Perin, 2007, report an effect size of $d=.75$, which is above average), and from a socio-constructivist perspective, collaborative writing also has "motivational relevance for students" (Boscolo&Hidi, 2007, p. 9).

Working together on a project creates not just texts but also meanings in collaborative writing (Kostouli, 2009). A discussion over what should and shouldn't be included in the text, as well as how a topic should be articulated is inevitable while working on a collaborative writing project (Lowry, Curtis and Lowry, 2004; McAllister, 2005). For researchers, the negotiating process is made more transparent when it is done in front of the group. This kind of open conversation about, for example task demands or arranging concepts or formulations should help increase the visibility of processes, particularly those at the top of a hierarchical hierarchy. In addition, both authors are equally responsible for the work they do as co-authors. Participation in a research like this might be especially motivating for adult authors who are having difficulty getting published.

It's been questioned if monitoring collaborative writing gives any insight into the participants' individual writing. Collaboration does have an effect on how an individual approaches writing, but it's safe to believe that the experience doesn't completely restructure that person's writing abilities. A test subject's orthographic difficulties will also be evident in collaborative writing, albeit to a lesser degree. Respondents may be reluctant to participate in planning activities if they are not used to doing so. The same holds true for time-consuming writing tasks. No one can prevent them from taking part in the planning process that their spouse has already begun.

One such question is how the data acquired through the monitoring of the collaborative writing process might be analysed in more depth. Individual writing habits can be gleaned from the distribution of writing activities amongst partnered authors, for example, but this information can only be drawn through the observation of collaborative writing tasks. Although these writers are primarily concerned with individual writing processes, I will illustrate in Section 4.5 how the protocols of a collaborative writing job may be examined primarily on the basis of Breetvelt, van den Bergh, and Rijlaarsdam (1994). Hopefully, this knowledge will be of assistance to you.

Individual writing processes and expertise in writing can be better understood by combining data from collaborative writing activities with data from structured one-on-one interviews. Retrospective and future sections are recommended for these interviews. Researchers can utilise a variety of data to assess whether or not participants use the same strategy while writing alone as they do when working with a partner, or whether or not they take a different method entirely. Using a collaborative writing exercise as the starting point for an investigation may help participants gain tangible experience and a pattern of writing behaviour that they may use as a reference point when considering hypothetical situations.

A historical context for the current study on collaborative writing is provided in the next section (section 3) by referencing the larger study that it is part of. After that, the cooperative writing project will be fully presented, followed by individual interviews (section 4).

3. Overall Study: Evaluating Literacy Courses

In Switzerland, the DachverbandLesen und Schreiben is the primary provider of literacy education for adults with low literacy abilities (Swiss umbrella organisation for reading and writing). Adult education institutions also provide these classes as part of their usual curriculum. Spelling and grammar are two of the most important aspects of communication that these service providers place a high value on. Writing instruction is primarily focused on the creation of finished products, which is in line with more conventional educational philosophies.

Literacy classes given by diverse providers were evaluated in this primary study's goal. Participants were asked, among other things, how well they could read and write. What drives them to do what they do? Moreover, how do these aspects change during the course of

the courses themselves? Teachers were also surveyed at the same time in order to gather further information regarding course layout.

Reading and writing self-concepts, their motives for taking a literacy course, their reading and writing behaviours at work and during leisure time, as well as the usage of a computer were analysed using a questionnaire.

In order to ascertain whether or not the students' reading and writing skills had improved considerably, the following measures were used:

As many stumbling blocks or terms that did not suit the text as possible were ordered to be crossed out by test takers (Metze, 2003). The exam has a time limit of three minutes. The number of correctly read phrases is counted in order to get an idea of how fast you read.

b) Based on the work of Malecki and Jewell (2003) and Benson and Campbell (2006), a test to measure fluency in German writing was created (2009). The test takers were given three minutes to describe their work in as much detail as feasible. In addition to the number of syllables and the proportion of right syllables, the test also looks at the number of words and the accuracy of the word sequences.

Comparative data from vocational students was also gathered by administering both evaluations to these students. Considering that the reading test's comparison data came mostly from elementary school students, and the writing exam was just being produced, this was critical information to have (Sturm, 2014). Students who are enrolled in traditional postsecondary education programmes, such as trade schools, offer an interesting point of comparison because one of the key aims of literacy classes is to prepare adult learners to participate in those programmes.

Adult literacy classes began with a reading and writing assessment (t1), and the assessments were repeated at the conclusion (t2). A period of three months elapses between the dates of t1 and t2. The size of the sub-sample research was based on the findings of the two tests performed at time point t1. Figure 1 depicts the data-gathering method for the main and sub-studies.

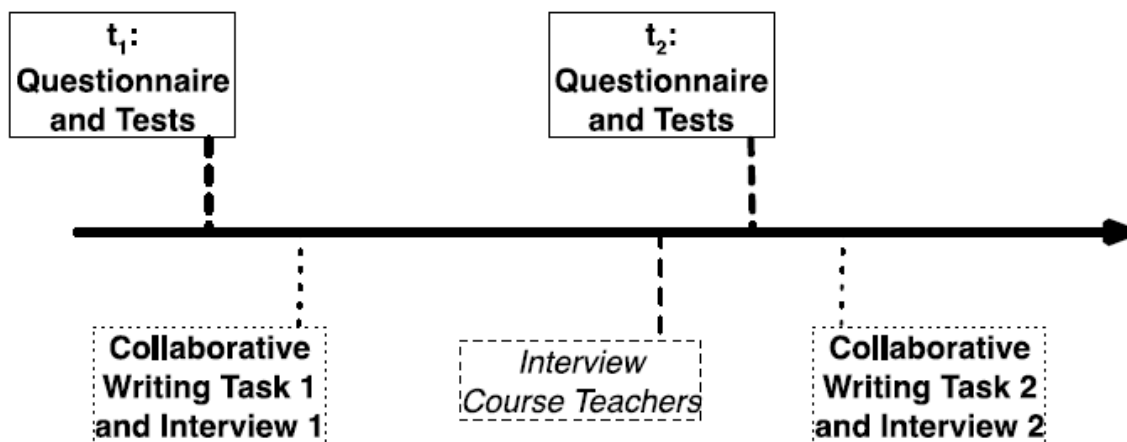


Figure 1: Data Collection in the Main and the Sub-Study.

3.1 Participants

The primary trial had 235 participants. Each of the five German-speaking areas of Switzerland provides a separate set of courses. As an umbrella organisation, RWA is made up of adult education institutions, public libraries, and the Swiss Army. More over half of the participants were fluent in German. Since 69 of the participants were Swiss Army troops, the male-to-female ratio is 75%. The participants ranged in age from 18 to 65, with the youngest at 18. The average age of students in the Swiss Army courses was 21.6 years, whereas the average age of students in the other courses was 44.4 years. Only 60 percent of the participants were able to be interviewed and analysed at t1 and t2 because of sickness, relocation, or discontinuation of the course.

3.2 Selected Results

Table 1 shows that the reading performance of adult learners who were struggling was significantly poorer than that of vocational students, and that adult learners were also significantly worse writers than vocational students.

A second finding was the functional illiteracy of slightly over two-thirds of the population. Functional illiteracy is defined by Egloff, Grosche, Hubertus, and Rüsseler (2011) as reading and writing skills below the level of an average fourth-grade student (i.e., a student aged 9 or 10 years in their 6th year of school). Each minute, an average fourth-grade kid can read 8.1 sentences that are correct. We discovered that 69% of participants in our adult literacy course

did not achieve this level of functional literacy after the course. Furthermore, we found that 29% of those who took the course and took our evaluation scored much lower than the second-grade level, which is 4.1 accurate sentences.

Table 1: Means (Standard Deviations) and Effect Sizes for Adults Participating in Literacy Courses (=LAB) and for Comparison Group

	LAB (t ₁) (n=228 resp. n=161)	Vocational Students (n=361)	Effect Size (Cohen's d)
Reading Test:			
Number of Correct Sentences / Min.	7 (3)	12.3 (3.3)	1.67
Writing Test:			
Number of Syllables in 3 Min.	67 (25)	87 (24)	.82
% Correct Syllables	92 (8)	98 (3)	1.32
% Correct Word Sequences	47 (23)	77 (15)	1.72

They also found that adult learners didn't increase in their reading or writing skills from time one to time two (d=.16 in both tests) (same for t1 and t2, but somewhat better for t3) (Sturm and Philipp, 2013b).

4. A Multi-Method Approach to Study Struggling Adult Writing

Researchers conducted a sub-study of their larger study to examine how struggling adult writers finish writing tasks and what writing expertise they have. Two collaborative writing exercises (4.2.), structured interviews (4.3.), and analysis of participants' written texts were used in this sub-study to design a unique methodological combination.

4.1 Participants

A sub-selective study sampling was conducted using the reading and writing test results stated in Section 3. Participants were selected based on their reading and writing abilities, which may be poor, high, or a mix of the two. Students with varying writing and reading abilities were selected for the purpose of forming pairs with comparable features. Also included was the act of reading, as authors rely on it to evaluate and modify their own work.

As per the advice of participants' teachers, appropriate pairs were matched together. Participation in a literacy course and teachers' belief that collaboration amongst participants is possible are prerequisites for participation in this study. For the purpose of avoiding the harmful effects of other factors, such as the dominance of a member, on the collaborative writing process, this technique was employed. Strictly speaking, no dyads could be picked for the research since professors would sometimes suggest an alternative pairing or because students would refuse to take part.

14 dyads were formed from 28 individuals from the main study, which were then matched together. Reading speed in the sub-study was 6.4 sentences per minute at t1 (n=19), which was 68% higher than the national average (n=1). Primary research found that this is lower than the functional literacy rate for fourth-grade kids, which was defined in the study as 80%. When it comes to writing, this sub-participants study's produced an average of 65.6 syllables in 3 minutes, with 90.2% of syllables and 54.5 percent of word sequences written properly. With 12 men and 19 native German speakers, the participants' average age was 38.7 years old. For the sake of avoiding test fatigue, the two collaborative writing sessions were set three months apart. According to the primary research, the reading and writing tests were given at this time (Figure 1). The same two writers were involved in both joint endeavours. Fewer than half of the 14 dyads took part in both measurements. There were no second writing assignments for dyads in which one member did not finish the course, moved away, or was unwell for an extended length of time.

4.2 Creating Two Different Writing Assignments

There were a number of criteria that had to be met before the writing assignments employed to monitor these two struggling adult authors could be judged genuine. When it came to the content, they had to be simple enough for people to absorb it. In order to encourage creative problem-solving and a wide range of writing styles, students must also face difficult but manageable problems. Because struggling adult writers prefer to avoid writing, the activities must be both fascinating and inspirational. Thus, the following criteria were created for writing assignments:

In order to have the most influence on the participants' professional and personal life, the event needed to fit neatly within a certain genre.

The work needed a defined writing objective in order to succeed. Avoiding the appearance that talking with the customer would help fix the problem was very important.

The assignment had to be constructed in such a manner that just a minimal amount of current knowledge was necessary, in order to prevent the limitations of such information from impairing the writing process.

Students were given two separate genre-specific writing assignments, one for each of the two circumstances. This allowed us to examine the extent to which participants demonstrated genre-specific writing processes and expertise, as well as the extent to which they were able to adapt their work to the environment. Writing a handbook for a daily environment was task one. It set out to accomplish two things:

Pretend you're a volunteer at a children's club for this first task. The teens who were using the coffee machine were to blame for its malfunction. You bought a new, very small one, and then gave it to the club.

Assist yourself by writing a manual.

providing the capacity to brew coffee and tea to teens

- Use the coffee maker with caution.

The coffee machine was available for use by the attendees (which included ground coffee powder, water, milk, and sugar).

Students had to prepare an argumentation letter for a professional audience for the second assignment. Participants were presented the following situation and taught to visualise it: For the time being, they work for a tiny company and have been given the task of handling mail. There has been a (false) complaint left on the answering machine by Mr. Fässler. He believes that the freshly placed parquet has three scratches that need to be corrected, and he is only prepared to pay the invoice if the scratches are eradicated. According to the audio, the client is displeased to say the least. The audio recording of the customer's complaint was played for the participants to hear and rehearse their responses. 3 For the writing task, I was given the following:

Second, you must notify the customer in writing that the repair is now impossible after discussing with your supervisor. If he insists on having the floor fixed at the same time, you'll need to talk him into accepting a 5 percent discount instead.

Both textual and auditory information was needed to solve the problems. Writing assignments for the participants were given to them in the form of pre-written questions. The written descriptions of the exercises were also read aloud to the participants throughout the session. Emails sent to participants in Task 2 were another example of supplementary written input. Participants were also given the option of receiving audio input (such as a message left on an answering machine) in the form of a recording. Through the use of this feature, participants were able to read and listen to the activities and materials as many times as they wanted. In addition, the approach itself is described in further detail in Section 4.4.

4.3 Structured Individual Interviews

After the two authors had completed their writing obligations, roughly ten minutes after they had done, organised individual interviews were conducted with each of them. Part A and Part B were the two halves of these interviews. See Table 2 for further information.

Table 2: Structured Individual Interviews with Two Parts

	Part A	Part B
Interview 1 following Task 1	Retrospective on the basis of the observed collaborative writing process	– biography as a writer – concept of writing
Interview 2 following Task 2		– concept of writing – prospective: a hypothetical situation

Tasks 1 and 2 were written in a different manner from Tasks 3 and 4. A group writing exercise and one-on-one interviews were too tiring for participants to complete in a timely manner. It was discovered that the complete Interview 1 (part A plus B minus the hypothetical circumstance) lasted an average of 59 minutes. 4

As a follow-up to Task 2, an imaginary scenario based on Zimmerman and Martinez Pons (1986) was incorporated into the interview to help bolster participants' writing knowledge. Interviewees were made aware of a situation that had been observed during data collection: During the first few minutes of a lecture, a course teacher encourages students to discuss their

thoughts and experiences from the previous week. According to one participant, the teacher's writing assignment did not appeal to her in the least. She had no idea what to write about. As part of the course requirements, students were expected to craft a story around their favourite dish. After that, the teacher encourages her to try again. When asked whether they had ever been in a situation when they weren't sure what to write about or how they would tackle such a situation in the future, participants admitted that they had. When asked what they do when they don't know what to write about, have an idea but can't get it down on paper, aren't happy with their material, or have lost inspiration in the middle of the writing process, they said that they do nothing.

In addition, they were asked what they would tell other students in the similar situation.

4.4 Procedure

The participants penned their thoughts on paper with a pen. When it came to writing, there were no limits. Using two distinct cameras, two different types of photographs were obtained in order to precisely analyse when and what the subjects wrote. It was necessary for the analyst to be able to exactly reconstruct the authoring process by using a camera that was focused directly at the writer's hand. For this experiment, scotch tape was utilised as a marker for the writing area, as the camera's position was established. The second camera recorded the entirety of the scene (medium close-up). Camera position was documented on tape during a brief introduction that participants were shown as part of. They were able to have a better grasp on the camera angles thanks to this. All the professors had claimed that they had never utilised collaborative writing in their classes previously, therefore this was done to show an example of it. Members of the study team portrayed the two adult authors who were arguing whether or not to include a notion in their writing in a video clip recorded from the perspective of the second camera. Some other footage shows a grownup drawing a chart of where they're going. This should be taken as an implied indication that particular text components, such as illustrations and other visual elements, can be used.

The reactive writing approach is presented in the video clip for collaborative writing: Writers that use the reactive writing technique do so without any forward planning or coordination, instead working on a text in real time, responding and changing to the contributions of their peers. p. 78 of Lowry and colleagues, 2004 While other collaborative writing techniques,

such as parallel writing, are less effective at communicating and collaborating, reactive writing encourages writers to negotiate and come to a more firm consensus. On the other hand, Lowry et al. (2004) note that coordination can be more difficult in the case of reactive writing (2004, p. 79).

The written assignment was provided to the participants after the video clip was shown to them. To use the coffee maker or to listen to a customer complaint on the tablet numerous times, they proceeded to do so after being informed that they were allowed. Participants worked on a writing project while being monitored from afar following the introduction. Using a second camera, the researchers were able to see and film the writing process despite being in a separate room. Before the meeting began, it was made clear to everyone that this would be the case. Rereading one's work after a brief pause from the writing process was encouraged since struggling writers tend to stop or finish a writing process prematurely as soon as a text is completed (Troia, 2006). They were explicitly told that they could change the language, but that they may also opt to keep it as is. Color-coded pens were used to make it simpler to discern between edits and additions to the original document.

As they prepared to interview each writer individually, two researchers met for 10 minutes to discuss their results and suggestions for improvement. They sought to limit the questions they would ask participants to those pertaining to the tasks of planning, translating, and evaluating/revising because these activities could be observed. As a result, the two researchers developed questions about parts of the writing process that were particularly remarkable for being unexpected. The following are some examples of the latter-day inquiries: What was the point of mentioning an image but never implementing it? Why did the two participants alternate writing?

Exploration and Analysis of Data 4.5

A detailed written record was created from all of the material. Transcriptions of all of the participants' speech were scrupulously done. Coffee maker activities, as well as reading and listening to the writing work (which included several replays of the client complaint audio recording), as well as all acts of transcribing, were to be documented. The entire dataset was coded and analysed using a version of MAXqda (Kuckartz, 2005). Breetvelt, van den Bergh and Rijlaarsdam (1994) identified eleven distinct cognitive activities, and these were used to

determine how to code and assess the writing process data. Although the categories were updated and some new categories were established to meet with the unique requirements of the tasks as well as the distinctive aspects of collaborative writing that separate it from solo writing, the categories remained the same.

a) Additional background information was supplied. This required fluency in English as well as knowledge of the relevant subject area. However, there was considerable disagreement concerning language issues in relation to Task 1's requirement to define important coffee machine information.

However, it was determined that there were two distinct stages in the process of generating ideas and articulating them: It happened because participants agreed on what to write but differed on how to write it. It was decided that in cases where the distinction between generating ideas and formulating was not clear-cut that the following coding rule was used: if the relevant idea had not been discussed before, the extract would be coded as generating ideas; if the relevant idea had been discussed before, the extract would be coded as formulating.

c) Categories relevant to the collaboration between the two authors were defined (partly based on Lowry et al., 2004). (partly based on Lowry et al., 2004). Responsibility, coordination, and other forms of assistance are all included in this category. For example, the writer may ask their partner to wait until the writer has done transcribing (wording is repeated or dictated, not for oneself but for the partner).

There were no pauses categorised in this study, unlike Breetvelt and colleagues (1994), because the pauses often overlapped with the participants' conversations. As a result, self-instructional remarks such as "First, I have to do this" weren't categorised because they were an integral component of their collaborative interplay with the two participants.

In addition to a detailed discussion of each category, the code manual provided instructive examples. A considerable difference between two groups that could not be differentiated necessitated the introduction of coding rules as indicated above in b). Table 3 offers a brief explanation of each category and a brief description of each category from the transcripts and statements from participants. It's important to note that participants are identified by their P and a number.

It is not feasible to create independent units that cannot be categorised using MAXqda. Thus, the categorising and naming of categories was a part of the coding process.

Table 3: Categories, their Descriptions, and Examples from Transcripts

Category Name	Description	Examples from Transcripts
Writing Task	(Re)reading or (re)listening to the writing task	Explicit text in the transcript: [Both read the writing task, P11 quietly speaks along]
Writing Plan	Discussion about what to do, how to proceed	P13: First, we have to think about what we want to write.
Writing Goal	Formulating product or process goals (adopted from the task or self-devised)	P10: This will become some sort of keyword thing, right? I assume firstly, secondly, thirdly, right? No point in writing a long novel? P11: Yes, but it has to be a bit more elaborate, no?
Background Knowledge	Clarifying subject or linguistic background knowledge (incl. knowledge about genres)	P13: So, how does this work? P14: Um, [reaches for the bottom part of the coffee maker], so, it works like this, or, do you see this tap here?

Transcriptions of the following protocols were made: Each line began with the participant's name and the number of the microphone they were using. Square brackets and the term "writes." were used to indicate writing actions. Parentheses and brackets were used to denote other behaviours, such as peering inside the coffee maker. The "/" suggested a sudden pause in speaking, whereas the ellipsis indicated an incomplete sentence.

Commenting	Reflecting on or evaluating their writing process, incl. statements on their skills; reflecting on or evaluating the writing task	P17: Well, you can write much better [pokes P18], for sure, it's really unbelievable.
Generating Ideas	Generating ideas or propositions	P11: Now we can say that there's no more coffee for the moment because it's broken.
Structuring	Selecting, ordering or outlining ideas	P17: [...] Operation. Point one. [...]
Formulating	A previously discussed idea is now conceptually	P15: straine/coffee grounds in here. P16: coffee s/ coffee strainer
	formulated in writing; search for expressions that fit	P15: coffee strainer
Transcribing	Write quietly, speaking along or parsing the sounds	Explicit statement in the transcript: [P8: writes and speaks along very quietly: instruction]
Reading Through	Reading the text written so far, fragments or sentences	Explicit statement in the transcript: P9: [reads] Since our boss is currently [...]
Evaluating	Evaluating ideas, content, formal aspects etc.	P8: Written as one word, correct? P7: Yes, I would.
Revising	Revising ideas, content, formal aspects etc.; that is something was rewritten, added, deleted or moved	Explicit statement in the transcript: P19: [inserts "e" before "f"]
Coordinating	Explicit instruction to the partner to wait, to explain something, to pass something (paper and the like)	[Both read through their text] P10: What do you possibly want to change here?

Supporting	Mutual support by repeating an idea or the wording, pointing to something the partner does not see etc.	P28: Yes, or put such a line here [takes the second pen and shows where]
Clarifying Responsibility	Clarifying who will transcribe or dictate or demonstrate something etc.	[Text lies between P13 and P14] P13: Do you want to read?

The first phase in coding was recognised as cohesive activities. Participants were not consulted before allocating codes for new cognitive activity. Because the participants were discussing how the coffee machine worked, the full phrase was categorised as background knowledge in Table 4.

Table 4: Identifying Cohesive Activities, Excerpt of a Coded Transcript (Dyad 8)

Cognitive Activity	Transcript (Excerpt)
Background Knowledge	P15: Is the water going to be filled in here? [Both examine the coffee maker] P16: Yes. P15: [incomprehensible] P16: On the bottom goes the wat/ - No, sh... [lifts the lid of the coffee maker] P15: No, on the top goes/ Yes/ [...]

Cohesive cognitive activities were discovered, and two further categories were added to identify individual activities:

Each participant's speech and writing acts were coded after coding the cognitive activity (speaker A vs. B and writer A vs. B).

7 Aside from transcribing and rewriting, writing tasks are not further categorised for each participant. In the writing process, this allowed us to calculate how the two participants divided up the work.

An example of a process being spread out over several participants is shown in Table 5.

Table 5: Excerpt of a Coded Transcript (Dyad 8): One Activity over Several Turns

Change of Speaker	Cognitive Activity	Transcript (Excerpt)
Speaker A	Background Knowledge	P15: Is the water going to be filled in here? [Both examine the coffee maker]
Speaker B		P16: Yes.
Speaker A		P15: [incomprehensible]
Speaker B		P16: On the bottom goes the wat/ - No, sh... [lifts the lid of the coffee maker]
Speaker A		P15: No, on the top goes/ Yes/ [...]

It is possible, as shown in Table 6, that a speaker initiated many activities. In these cases, coded activity was confined to one utterance by a speaker. Thus, by employing this coding strategy, it is possible to separate the collaborative writing process from the level of involvement of the two writers (for more detail, see 5.2.).

Table 6: Excerpt of a Coded Transcript (Dyad 8): Different Activities

Change of Speaker	Cognitive Activity	Transcript (Excerpt)
Speaker A	Reading Through	P16: [reads] Upper part = screw on
Speaker B		P15: = [reads along] screw on.
	Generating Ideas	And then on the hot stove [points at the hot stove].
Speaker A	Formulating Transcribing	P16: And then [transcribes: and then]

In this example, the data was coded by the author and a university student using an elaborate coding manual he prepared. However, the second rater had just graduated from college and had no prior training in quantitative coding procedures or qualitative research methods. A transcript was coded in cooperation between him and the writer. Afterwards, he worked alone to code a second transcript. Group discussion and corrections were done on this. The next step was for each rater to independently code three transcripts. In all other situations, the transcripts were coded either by the author or a second rater. The author evaluated the transcripts that had been coded independently by the second rater.

The intercoder reliability for all three dyads is between 68% and 83%. As a result of this method, MAXqda can detect if the coded segments of both documents rated by rater A are equal in size and whether the same code is assigned to both documents. The content of two codes must be at least 70% identical in order to meet the requirements of this sub-study. Without the codes given above, the intercoder reliability for Dyad 8 (the topic of this paper) is 83 percent; with these codes, it is 91 percent. This article focuses on Dyad 8.

Each interview was given its own evaluation, without reference to the others (Sturm & Philipp, 2013a, 2013b). A hypothetical situation in interview 2's part B was analysed using the cognitive activities as well as knowledge of metacognitive processes (about oneself as a writer; about characteristics of a writing task and their effects on the solving of the writing task; about writing strategies, including conditional and procedural knowledge; self-regulation; and knowledge about supporting strategies, like seeking help from the course teacher).

The writings created by the participants were not coded; rather, they were evaluated holistically on a large scale. Certain aspects such as the piece's literary genre fit were also taken into consideration throughout the review process.

Each participant's recorded and written replies as well as the skills and writing expertise revealed in follow-up individual interviews were included in the analysis. Figure 2 depicts the method that was used:

The collaborative writing process was used as a starting point for the data study. 2. The code was used to create a summary of the coded writing process, as described in the preceding section. The coding procedure was supplemented by the recording of questions or remarks in memo form. Comments and concerns were made about the lack of proof of writing skills in the broadest sense. In this stage of the writing process, for example, why is it that the writers alternate writing? Talking about drawing but not really creating one is a waste of time.

As a follow-up to the first stage, data and texts from Part A of the interviews were used to reconstruct the previously coded writing processes. During this procedure, it was required to locate the relevant passages in both the interview and the text. As a result, elements of the interviews that directly address difficulties related to observations made throughout the writing process were uncovered and documented, too.

Comparable to theirs is the approach devised by the Kaplan, Lichtinger and Margulis group (2011). For Kelle (2007, p. 57), this form of triangulation doesn't validate anything; rather, it's an aid to understanding, clarifying, and explaining the extent of a problem or topic.

MAXqda is able to connect data from several sources. No further coding was done for paragraphs that were connected to an interview segment (see Figure 2), as was the case here. These connections are become clearer and more accessible via this approach. MAXqda does not allow the estimate of intercoder reliability in the case of these linkages.

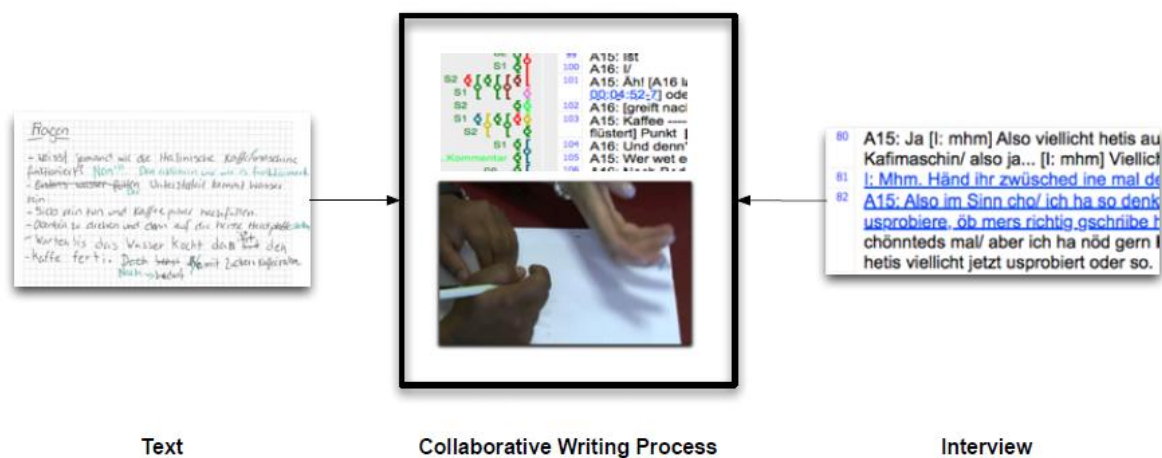


Figure 2: Complementary Triangulation of the Different Datasets.

5. A Case Study: Helen and Lucy (Dyad 8)

A detailed description of Dyad 8 will be provided to show how the observation of collaborative writing, combined with a structured individual interview and the text written by the participants, can be used to gain valuable insights into the writing process and knowledge of struggling adult writers, as well as to provide insights into the participants' writing knowledge.

The bulk of dyads may be compared to Dyad 8. For both writing assignments, save in a few situations, the writing process was primarily focused on the transfer of knowledge. On top of all of that, the duo talked to one another. Finally, both authors completed their work using the reactive writing approach. Dyad 6 and 12 were the only pairs where the writing process was knowledge changing; and in just one instance (Task 1), was the writing process parallel (i.e.

participant A wrote a manual, participant B made a drawing to go with it) rather than reactive (i.e. participant A wrote the manual, participant B created a drawing to go with it).

At the time of the study, Dyad 8 was made up of two women (see Appendix A for their writing fluency materials).

A frequent attendee of the literacy course for the past four years, Helen is 35 years old. Born and raised in Switzerland, she became fluent in Swiss German as a youngster. It was obligatory schooling that she completed, which was her greatest degree of education. For a total of nine years, all children in Switzerland are required to attend school. At the time, she was employed as a restaurant assistant.

As a second-grader, she could only produce 3.67 accurate sentences per minute in her reading comprehension; in addition, her writing skills were severely hampered (48 syllables in 3 min., 79 percent correct syllables, and 25 percent correct word sequences).

Lucy, a 23-year-old participant in the literacy programme, had been attending for two years. While her native language was Romanian, her father taught her Swiss German, which she was able to speak fluently. Her apprenticeship in viticulture had paid off, and she was now working in the sector.

As a fourth-grader, she could read at the rate of 8 sentences per minute, but her writing skills were superior to those of Helen (78 syllables in 3 min., 100 percent correct syllables, and 68 percent correct word sequences).

For Writing Task 1, Helen and Lucy produced a high-level assessment of the text they submitted, as well as a high-level summary of the writing process they utilised. Task 2's writing requirements are summarised in Appendix C for your convenience.) There are detailed discussions of both writing operations' codings in Section 5.2 of this document. 5.3 and 5.4 give a comprehensive examination of two components related to Task 1 writing, in conjunction with the text and interview, respectively.

As a first impression, here are some key points to keep in mind:

Task 1 was completed by Helen and Lucy in around 9 minutes (7 min. for phase one plus, after a short break, 02:40 for phase two). They had a handbook with 43 words at the end of the first phase; the second phase produced a manual with 51 words. It took Dyad 8 the least

amount of time (81 minutes was completed by Dyad 15) to accomplish Task 1, but their text was not the shortest (Dyad 16 did it in the shortest amount of time with the shortest text of 22 words); Dyad 7 finished it with the largest text of 163 words. Every pair of partners worked together to create an instruction manual that met the guidelines set out by the writing assignment. Only one Dyad, 15, wrote a tale instead of an instruction manual. Task 2 took Helen and Lucy a bit longer, roughly 17 minutes. In its ultimate form, their letter included 68 words. Again, they were the ones that used up the least time. When Lucy was writing, Dyad 8 was able to stand out from the rest of the dyads because they were able to write more fluently. In contrast to the dialogues of other paired characters in the novel, Helen and Lucy rarely discussed word choice or spelling (for further detail, see section 5.2).

The next section goes into additional detail about Task 1. Table 7 summarises the writing process and relates to the portion of the text that was being drafted at the time of the summary's development (Appendix B contains the original text, including a translation).

Table 7: Summary of the Writing Process Matched with Section of Written Text: Task 1, Dyad 8

Min.	Summary of the writing process	Section of written text
<i>Phase 1</i>		
0-1	L. asks H. if she has any objections to L. writing. H. does not object. L. asks how they should proceed. H. answers with a first suggestion, an idea that L. writes down.	Questions – does anyone know how the italian coffe maker works?
1-2	H. formulates the first core element of the manual, L. writes it, crosses it out and rewrites it, supplemented by an additional piece of information.	– Firstly fill water The lowest part gets water in.
2-3	H. generates another idea that L. picks up on; however, L. would like to word it somewhat differently. They are suddenly unsure how the coffee maker works, where the water needs to be poured in. They discuss it.	– Put strainer in and refill coffee powder.

3-4	They clarify their uncertainty, do not change their mind that water needs to be poured into the lower part. H. suggests new ideas that L. picks up on. L. suggests that H. writes as well. H. agrees.	- Screw on upper part and thn it on the hot stove.
4-5	L. explains that the water is now boiling, which causes H. to start writing. L. generates a further idea that H. does not discuss but writes down differently.	- Wait until the water is Boiling then si-sis is the - Coffe finishe
5-6	H. suggests an idea that L. does not react to. L. formulates a different idea. H. starts to write it down. L. watches H. write and asks her the meaning of "reiqu". H. responds that she cannot write any longer, whereupon L. takes the pen out of her hand and rewrites "reiqu".	At reiqu Required din

Table 7 illustrates the process of passing on information through writing. Writing was the participants' first step, and they proceeded from there. Because they didn't address their notions in connection to the purpose of their work, which was implicitly stated in the first comma, their scope was even more restricted. Notable is the fact that, following the first part of phase 1, they changed writing responsibilities twice in a short amount of time.

In respect to the handbook, the following features stand out: Participant familiarity with the genre's function may be gauged based on their response to the first survey question. In spite of the fact that it provides all of the fundamentals of the procedure, the book does not give any specifics (for example, how much coffee powder or water should be used) or other information that readers could find interesting (e.g. the time it takes until the coffee is ready).

6-7	L. finishes writing down the idea. After that, they discuss whether or not they should inform the test supervisor that they have finished. L. gives the sign agreed upon, while H. starts reading through the text.	with sugar + coffe creamer.
<i>Phase 2 after a short break</i>		
0-1	Both start reading through the text. H. notices that something is missing, i.e. that the question they asked requires answering. She thus generates an idea. L. writes down only part of it.	Questions -do anyone know how the italian coffeé maker works? <i>No!!!</i>
1-2	H. insists on her idea, L. writes it down. Both continue reading some parts out loud. L. finds that one word is missing after "stove" (fourth bullet point) and fills it in. L. edits a few small things.	Than we explen how it works. [...] then <i>put</i> it on the hot stove.
2-3	L. edits one more small thing. They briefly discuss whether or not they have finished. L. gives the sign agreed upon.	

5.2 The Codings and First Questions

It is shown in Table 8 in comparison to other pairs, as well as the complete group of pairs during the time of the study (T1). When it comes to writing style, informational content, and total length, Dyad 5 and Dyad 8 were surprisingly comparable in terms of their knowledge-telling procedures. In contrast, Dyad 12's writing process is a famous example of writing that transforms knowledge. It was a collaborative effort, with each member of the dyad taking part in the brainstorming process and discussing the usual qualities of the manual genre. There were several useful hints in their handbook, which was very comprehensive. In addition to the written information, an image was supplied. The amount of codings in Dyad 8 was smaller than in Dyads 5 and 12 because the writing process was shorter in Dyad 8. More than half of Dyad 8's time was spent on transcription, revision, revising, and reading through. When Dyad 8 was compared to all other dyads at t1, it produced ideas at a rate that was around two times higher. Despite the fact that Dyad 8 completed nearly five times fewer conceptualising tasks than Dyad 7, it performed around one-third less transcribing operations. Because Dyad 8 wrote so quickly, this may be one probable explanation. Lucy and Helen were able to convert their notions into English with little reprocessing in Dyad 8, indicating a

distinct type of functional automaticity in this case. In the formulation, which uses a low level of coding characteristic of knowledge transfer, this is clearly demonstrated (McCutchen, 1988, S. 312). In contrast, Dyad 12 focused on the development of ideas, how to more accurately explain the components of the coffee machine, and how to approach the reader in the essay, respectively. When putting up activities for Dyad 5, the most challenging element was coming up with the vocabulary needed.

Table 8: Overview of Codings and Total Words for Writing Task 1, Dyad 5, 8 and 12, Compared with all Dyads

<i>Cognitive Activities</i>	D 5		D 12		All Dyads	D 8	
	Number of Codes	%	Number of Codes	%	%	Number of Codes	%
Transcribing	108	37,8	87	27,4	28,7	27	18,6
Evaluating	49	17,1	53	16,7	16,8	27	18,6
Formulating	32	11,2	28	8,8	10,3	4	2,8
Reading through	26	9,1	27	8,5	10,5	20	13,8
Background Knowledge	23	8,0	19	6,0	7,2	3	2,1
Commenting	17	5,9	23	7,3	6,5	18	12,4
Revising	7	2,4	26	8,2	5,5	20	13,8
Generating Ideas	13	4,5	20	6,3	6,7	18	12,4
Structuring	4	1,4	14	4,4	3,1	4	2,8
Writing Plan	2	0,7	11	3,5	3,0	3	2,1
Writing Task	3	1,0	4	1,3	1,2	1	0,7
Writing Goal	2	0,7	5	1,6	0,5	0	0
Total	286	100	317	100	100	145	100

Because Dyad 8 was previously familiar with the coffee machine, they didn't need as much clarification as Dyad 5, 12, or All Dyads. In addition, editing efforts in Dyad 8 were noticeably higher, maybe as a result of Lucy pointing out spelling errors to Helen (this is discussed in section 5.3, Excerpt 5). Finally, out of all the pairs, Dyad 8 received the greatest feedback on its strategy. In section 5.6, we'll take a closer look at how this is done.)

As shown in Table 8, the importance of collaborative writing assistance for all dyads is clear, but it is especially critical for those who struggle to write. Participant P9 dictated often in Dyad 5 so that P10 could concentrate on transcribing, for example. Dyad 12 also debated who should write more frequently, as seen in Table 8 during Task 1, and their task assignments changed multiple times. In the majority of pairs, participants took turns writing, either during one of the two writing tasks or throughout both. For example, participant A wrote during Task 1 and participant B wrote during Task 2, and so on and so forth. Participants A and B were the only two people in Dyad 7 who completed both writing assignments without interruption. The fact that Dyad 7 participant B's basic writing abilities were so lacking is one probable explanation (10 percent correct word sequences).

Unlike Table 8, Table 9 focuses on the specific activities that each member of a dyad participated in (see section 4.5). The total number of activities done by both participants may be more than the number of codes in a "collaborative" coherent cognitive activity since people may engage in an activity, such as producing ideas, many times (for example background knowledge or generating ideas). In a "collaborative" coherent cognitive activity, one participant's efforts may surpass the total number of codes (background knowledge and evaluating).

In both writing projects, Helen and Lucy had a similar impact on the outcome. In contrast, Lucy was more active in transcribing and revision implementation, whereas Helen was more involved in concept generation and evaluation. Although Helen had a far more difficult time with writing fundamentals than Lucy, she looked to be more active in higher-level processes throughout Task 1. The higher-level procedures were less of an issue for Helen in Task 2, maybe as a result of her familiarity with manuals rather than letters (see also section 5.4).

As shown in Table 9, in Task 2, Helen and Lucy spent more time discussing and analysing their written work than on lower-level tasks like brainstorming. Due to Task 2's greater difficulty, the quantity of higher-order actions reflects the task requirements rather than a gain in writing abilities throughout the three months between tasks 1 and 2.

It is not clear from Table 9 who initiated which action. Dig through the writing process data to find out who started what. Many times, it was Helen who came up with the ideas and Lucy

who documented them. This was immediately evident from the beginning of writing Task 1: the following excerpt comes from the transcription of the video recording:

Excerpt 1: Generating Ideas (D8, Task 1, line 17–18)

Table 9: Overview of Codings for Writing Task 1 / Task 2, Dyad 8

<i>Cognitive Activities</i>	<i>Number of Codes</i>	Helen		Lucy	
		Speaking	Writing	Speaking	Writing
Transcribing	27 / 35		9 / 12		18 / 22
Evaluating	27 / 22	31 / 20		22 / 17	
Revising	20 / 33	8 / 16	4 / 6	18 / 19	18 / 28
Reading through	20 / 17	14 / 11		13 / 13	
Generating Ideas	18 / 11	17 / 14		11 / 8	
Commenting	18 / 20	9 / 12		14 / 20	
Structuring	4 / 0	2 / 0		2 / 0	
Formulating	4 / 9	4 / 9		2 / 9	
Background Knowledge	3 / 3	10 / 2		8 / 1	
Writing Plan	3 / 7	3 / 6		1 / 7	
Writing Task	1 / 7	1 / 6		0 / 7	
Writing Goal	0 / 0	0 / 0		0 / 0	
Total	145 / 164	108 / 96	13 / 18	109 / 101	36 / 50
Total Words Text Task 1 / 2	51 / 68				

Helen: Well, first and foremost, did/did anyone see the coffee maker? (00:00:22-8). [both eyes are on the coffee utensils] Yes, yes, yes, yes, yes, yes, yes, yes, yes, yes, yes, yes, yes, yes, yes, yes, yes, yes [They're both staring at the coffee machine] — Oh, and we may also question, did someone also write, does anyone know how to make coff/ how to make coffee with this [points to the coffee maker]? - Do you have a coffee maker?

Lucy: [small counterclockwise spin of the notebook] Well. He, he, he, he, he, he, he, he, he, [simultaneously writes: Questions]

Helen's interpretation of the writing activity as a query in need of a response is first indicative of a common feature of kids with learning or writing challenges (Graham, 1990) (See section 5.4 for further information on this in relation to the interview data.) If Lucy had an idea, it was usually sparked by a passage she had jotted down:

D8, Task 1, lines 40–42) Excerpt 2: Generating Ideas Lucy: [slowly writes and speaks: strainer; 00:02:26-0] - As well as restocking coffee powder. -Lucy: [reading through] put strainer in [writes and speaks slowly: and refill coffee powder]. Helen: Th/ yeah -Lucy: [reading through] put strainer in [writes and speaks slowly: and refill coffee powder].

In general, distributions like these show that diverse responsibilities are played by participants in collaborative writing. Regardless of who is transcribing, the main chronology is more or less: producing ideas – transcribing – generating ideas in both situations.

This role assignment could be attributed to the collaborative writing context and the fact that Dyad 8 test subjects use the reactive writing method.

9 This implies that they must agree on who will transcribe. However, as Excerpt 2 demonstrates (see also Dyad 12 in Table 8), this does not imply that when B is transcribing, A always develops ideas or commands. Helen and Lucy's role distribution can also be traced back to their disparities in writing abilities. Starting with the questions, Why wasn't Helen transcribing (section 5.3), a more thorough data analysis is required. Why, in section 5.4, does she view the writing task as a question? The next two sections focus on Helen, how she solves a writing task, and what writing expertise she possesses in order to answer these questions. This focus on Helen promises to be especially useful in terms of adding to our knowledge of struggling adult writers, as she struggles more with writing than Lucy.

Why Was Helen Not Transcribing? 5.3 Zoom 1: Why Was Helen Not Transcribing?

Helen responded to the interviewer's question on why Lucy started writing by saying that Lucy is a better writer than she is. Excerpt 3 demonstrates how she specifies:

3rd Excerpt: Writing and Thinking (Interview 1, D8, P15, line 26)

I'm assuming she can think and write. And it's a bit tough for me to clarify something before writing.

As a result, Helen refers to herself as the thinker and Lucy as the writer multiple times throughout the discussion. Furthermore, she says that during the course, she and Lucy have frequently completed grammar assignments together – but never wrote collaboratively – and have always proceeded in the same manner.

Helen brought up the subject of thinking and writing several times in various contexts. How she refers to the videographed collaborative writing process and other writing experiences is crucial from a methodological standpoint. Excerpt 4 depicts Helen's description of the start of their writing process and her assessment of the writing process as a whole, only to add an experience that extends beyond the writing process. The word "always" alludes to the latter:

Interview 1, D8, P15, line 10ff., author's emphasis) Excerpt 4: Thinking and Writing (Interview 1, D8, P15, line 10ff., author's emphasis)

So, first and foremost, we inquired as to who knows how the coffee maker operates. Then – yep, we initially discovered it, yes/well, I thought it was very simple. Except for the one about writing. Thoughts constantly come faster than I can write them down. [...] The speed with which we think is faster than the speed with which we move our hands. I've already forgotten about it by the time I write this.

Helen did not choose to transcribe throughout the collaborative writing process (Task 1), but Lucy pushed her to do so. Helen couldn't remember which idea to jot down when she finally took over the pen, despite the fact that she had just suggested one herself moments before. Of course, external factors such as task coordination or her contact with Lucy can be blamed for her difficulties.

Helen's struggle with the interplay between thinking and writing was evident during the collaborative writing process (Task 1). Helen was a slow writer who frequently had to rectify her mistakes (Excerpt 5). Helen made more spelling and grammatical errors the more she wrote (this is also borne out by the results of the writing fluency test t1, cf. Appendix A). Lucy took over transcribing when she began to write incomprehensibly, such as "Arreiqu" instead of "As necessary."

Helen is writing and revising (D8, Task 1, lines 97–101) Excerpt 5: Helen is writing and revising (D8, Task 1, lines 97–101)

=Then [writes: n (over the's' in 'das' [the]); Helen: 00:04:39-4] den/den/den/den/den/den/den/den/den [is - a - a - a - a [00:04:41-2] [writes: sat den] - (sixth bullet point) [writes:

Then I/ sist [points to the word'sit'] Helen: Isn't it?

Lucy: I/Helen: Way to go! [Lucy and Helen both laugh] - The first. [Is] [crosses out sit and replaces it with isit; 00:04:49-8] No, I'm misspelling it once more. - It's [crosses out isit and replaces it with ist; 00:04:52-7] or it is. [is] [...]

The same may be said for Task 2: Lucy began writing, and Helen followed suit early in the fourth minute, but this time on her own initiative (maybe this can be attributed to the fact that she had already developed some familiarity with this activity during Task 1). Helen became fatigued, which revealed itself in spelling problems, and Lucy took over writing once more. Helen approached the subject of the terms thinking and writing in the retrospective phase of the interview concerning this writing exercise in the same way she did for Task 1.

Helen was asked what she would do if she understood what she wanted to write about but didn't know how to put it into words during the part of the interview where the participants were encouraged to envision writing a storey or recounting an experience that they linked to a recipe (section 4.3). She desired a role allocation comparable to that observed in the collaborative writing process, as shown in Excerpt 6:

Writing Knowledge - Thinking and Writing (Excerpt 6) (Interview 2, D8, P15, line 174)
Then I'll ask: Could you just assist me for a few minutes? I'll tell you what to write, and you'll do it for me. Helen stated that she hadn't used this method in a long time when the interviewer delved a little deeper. From the interview, it was unclear to what extent this is a method she employs frequently. She did, however, discuss how her sisters and mother assist her in writing: they first ask her what she wants to write about and why she wants to write it (Excerpt 7). Excerpt 7 also represents the role assignment within the collaborative writing process in several ways:

7th Excerpt: Writing and Thinking (Interview 2, D8, P15, line 192)

[...] First, think, and then tell us what you want us to write [...]. To summarise, it is reasonable to suppose that Helen's cognitive load is not significantly increased by reactive writing in the experimental circumstance when compared to when she writes alone or with the assistance of persons other than Lucy. Helen's writing fluency text at t1 revealed comparable challenges with accuracy, as previously stated. She also claimed that she had gone through a similar surgery on several other occasions.

The topic of whether Helen's writing process was hampered by other basic cognitive skills in Tasks 1 and 2 cannot be answered in this study. Helen did mention a vague remembrance of a test she had taken in school during Interview 1. (Interview 1, D8, P15, line 252). She saw her failure on the test as a reason why she wouldn't be able to pursue vocational training.

Zoom 2: "Then We Explain How It Works": Helen's Interpretation of the Writing Assignment

Helen was the one who came up with the idea of starting the manual with the question: "Does anyone know how the Italian coffee maker operates?". After a short break, as she was reviewing the text, she realised that she, too, wanted to know the answer to this question. Then Helen requested that Lucy include the words "Then we explain how it works" after she began by simply writing "No!" Not only did Helen interpret the writing work as a question, but she also phrased the opening of the text itself as a question, as shown in Excerpt 8: "Not only did Helen interpret the writing task as a question, but she even phrases the start of the book itself as a question."

Excerpt 8: Understanding the Genre (Interview 1, D8, P15, line 32 ff.)

[...] Helen: [inaudible] So, one explains / explains - and the question was, how to explain this - and then we had/have stopped and moved on to the next step in the process. Nevertheless, we should have responded yes and then asked what you thought... correct? In fact, the entire paragraph can be read as a question because f was truly a question in the first place. [I say: mhm] Text of the question And then we / I realised that something wasn't quite right here. I believe there is some sort of void (00:05:00-4) where something is lacking. As previously noted, the coffee maker was made available to all dyads during their writing work, allowing them to rely less on prior knowledge of the subject matter. Helen and Lucy, on the other hand, did not utilise it to explain their topic knowledge, and they even avoided utilising it

when they were confused of where the water needed to be poured in. Excerpt 9 makes Helen's reasoning for her actions crystal clear:

Excerpt 9: Understanding the Genre (Interview 1, D8, P15, line 82)

The minute it got down to min/ I thought, either they [= the researchers] do it now, which I confirmed with Lucy, or they make coffee because they are trying to see whether we put it down correctly, which is what I assumed. Yes.

However, even though Helen perceived the writing task and the introduction of the book as a question, she nevertheless adhered to the writing aim of the text, which was to write a standard manual in some ways. The easiest way to determine the effectiveness of a guidebook is to follow it step by step. Despite the fact that they are written in an atypical manner, Excerpts 8 and 9 might be taken as a demonstration of genre expertise. When asked if she had ever written a handbook before, Helen reacted by alluding to an oral circumstance that she had encountered previously (Excerpt 10). In the same way, her explanation of that oral circumstance fulfilled the primary job of a guide. She also noted that topic expertise is required in order to be able to produce a handbook, whether it is in oral or written form, which she did not elaborate on.

Excerpt 10: Genre and Topic Knowledge (Interview 1, D8, P15, line 90 ff) (Interview 1, D8, P15, line 90 ff.)

In any case, my father is having some technical troubles with his cell phone, and he comes to me and asks me how it works, after which I demonstrate it. So, to sum it up, you always have to/I can do the same thing as well. Because I am familiar with how a mobile phone operates.

Her response to a question on what she would recommend to someone who was faced with a similar writing duty included an indirect reference to the "testing" of their material (Excerpt 11). This means that she did not place too much emphasis on form or mechanics at the expense of higher order aspects, as might be expected of a young, inexperienced author (Graham, Schwartz, & MacArthur, 1993). Although she demonstrated some knowledge of the genre, she did so in a limited way because she was unfamiliar with the characteristics of a written handbook.

Excerpt 11: The Process of Evaluating (Interview 1, D8, P15, line 102 ff.)

As far as I'm concerned, sure, please describe how you would go about doing it, and if it still doesn't work, we can attempt it together. - Alternatively, if I/If I read this through and think, "Well, no one understands that, start by reading it for yourself," I would say the following: "Yes, first and foremost, read it for yourself, because I would not comprehend this."

Following up with Helen on Task 2, she stated that the "testing" of texts was no longer a topic of discussion. Affirming that the letter she and Lucy had written had been "excellent," Helen responded affirmatively: "mmh, good" (Interview 2, D8, P15, line 90). However, when the interviewer inquired as to whether or not the letter would persuade the buyer, she exhibited substantial scepticism. She was particularly concerned about whether the consumer would accept a 5 percent reduction as a sufficient discount (Interview 2, D8, P15, line 92). She was also dissatisfied with the letter during the collaborative writing process, but she was unable to express her dissatisfaction verbally ("Something I do not like," D8, Task 2, line 119).

In keeping with their failure to test whether their text was good or not, Helen and Lucy failed to set a writing goal for their letter in Work 2, despite the fact that they completed a more thorough analysis of the task (Excerpt 12). It is interesting to note that both Task 2 and Task 1 were viewed as a manner of explanation.

Writing Task 2 (D8, Task 2, lines 20–22) Excerpt 12: Analyzing Writing Task 2

Helen: We've received an email from our supervisor, and we must respond in writing. Because of this [points to the email]...

Lucy: Oh, we have [also points to the email] to explain that now, don't we, Lucy? Helen: That's correct.

It was difficult for Helen to complete Task 2 because she did not have a model to replicate (Interview 2, D8, P15, lines 64–68). During the interview, she did not demonstrate any extra expertise of the type of an argumentative letter (Excerpt 13).

Excerpt 13: Understanding the Genre (Interview 2, D8, P15, line 100) Interviewer: What, in your opinion, makes a good letter?

Helen: Well, just make sure the date is correct and that everything is in order. And, yeah, with as few faults as possible.

Helen recalled that she had completed a work identical to this one when attending "school," a phrase she frequently used to refer to the literacy course. In discussing that "school" assignment, she restricted herself, as she does in Excerpt 13, to the surface features of letters, such as the date, where to write the addressee and sender, and then the text itself, as she does in Excerpt 14. (Interview 2, D8, P15, line 76).

Therefore, the beginning point for the analysis was an occurrence that was initially seen during the collaborative writing process, and the knowledge of which was reinforced by the interview data, as previously stated (in sections 5.3 and 5.4). However, in the sections that follow (sections 5.5 and 5.6), data is gathered from follow-up interviews about features of the collaborative writing process that cannot be clearly linked to the collaborative writing process.

Differences in writing behaviour and gaps in interviewee answers - Methodological questions remain unanswered at 5.5.

Despite the fact that Dyad 8 writes with only a few aspects of planning, the foregoing study reveals that knowledge telling is the main technique while writing. The investigation of the writing process as a whole, when seen from this perspective, does not reveal anything surprising. However, when taken along with the interviews that followed Tasks 1 and 2, it becomes clear that Helen, in particular, possesses more writing knowledge (at least in terms of the genre of manuals as opposed to argumentative letters) than might be expected of a struggling writer. It would be possible to describe and comprehend some of the events in the writing process much more fully and effectively if they were linked to the interviews and the manuscripts. These are concerned with gaps in the participants' abilities to respond to some of the interviewers' questions, as well as the subject of whether these writers follow a different writing process if they write on their own rather than in groups of two.

Observations made during the current study indicated that participants can sometimes forget specific events that occurred during the collaborative writing process, which was a source of concern in the previous study. This is consistent with similar findings made by Janssen et al. (1996) in the case of individual writing. This is especially true for Helen, who, for example,

could not recall why she had failed to take note of Lucy's proposal during the second work, when Lucy had advised that they read the writing assignment a second time (Excerpt 14). Furthermore, Helen was only able to provide a cursory overview of the writing process for both Task 1 and Task 2. (see Excerpt 4 for Writing Task 1).

Excerpt 14: A chasm (Interview 2, D8, P15, line 51 ff.)

Interviewer: You'd already made significant strides forward with your letter. Lucy then had the impression that she wanted to hear the assignments again, particularly the one involving Mr Fässler on the phone. You were a little unsure about it, to be honest. What was the reason for this?

Helen: I believe so, but I'm not sure why. [laughing]

The same was true for Lucy, who could not recall, for example, why there had been a change in the role allocation throughout the second writing phase, as illustrated in Excerpt 15:

Excerpt 15: A chasm (Interview 2, D8, P16, line 42f.)

[...] The interviewer: Remember the rationale for the second shift in who is writing? Do you have a good memory? Lucy: It does happen. I'm not sure why this is happening. I / I am so äh / I do not know how to express I do not know, it just occurs. I / I am so äh / So, with a bit of writing, wham, bam, here it is.

Although Helen was sometimes extremely capable of providing information on the collaborative writing process and of using that information as a springboard to discuss other similar writing experiences, she had significant difficulty with questions that went beyond the writing task they had previously completed (Excerpt 16). She thought both texts were quite good, but she didn't give any explanations for why she thought that. She was also perplexed as to why she and her writing partner Lucy did not include a drawing to accompany the manual, despite the fact that she had previously stated that drawings were an important component of manuals in other places (Excerpt 17).

abridged version of excerpt 16: The Meaning and Importance of Writing (Interview 2, D8, P15, lines 143–146) Interviewer: What does the act of writing imply for you?

Helen: — I'm not sure what to say. — In a word, yes. Interviewer: What level of importance do you place on writing? Helen: It's not that significant.

The following is an excerpt from Excerpt 17: Self-Evaluation and Genre Knowledge (Interview 1, D8, P15, lines 91–98). Interviewer: What are your thoughts, and how did you fare on the task?

Helen: That's great.

Interviewer: And what makes you think you're good?

Helen: That's correct. — As a result of / - Yes, I just thought that was a good piece of writing. I'm not sure why this is happening. [laughing] Interviewer: A decent manual should include the following elements in your opinion.

Helen: And an excellent example of this would be a user manual that also includes a picture next to it so that one can see how it works.

Helen demonstrated just rudimentary strategic knowledge in response to the hypothetical situation in Part B of the second interview (Excerpt 18). She was unable to provide an actual technique that she would employ when faced with challenges in coming up with ideas when questioned about how she typically dealt with such difficulties. Instead, she responded by saying she would contact for assistance. She also provided methods for other processes, such as proposing and evaluating, that were comparable to hers. The fact that seeking assistance with writing was a very common writing style during this section of the interview is noteworthy. Helen eventually came to the conclusion that a good writer is also someone who can assist others in their writing ("And then I can approach her and ask her for aid," Interview 2, D8, P15, line 112).

Excerpt 18: Strategy Knowledge (Interview 2, D8, P15, lines 171–174; Interview 2, D8, P15, line 171–174)

Interviewer: If you are stuck for ideas on what to write about, what should you do? So, what do you do in that case?

Helen: Yes, if there is someone present, I can approach them and ask them. If I were to write about the course instructor, for example, what could I possible write? [...]

Interviewer: Let's suppose you already know what you want to write about. It is possible that you have a concept, but you are having difficulty putting it on writing. So, what do you do in that case?

Helen: Then I'm going to ask: Hey, could you please lend a hand for a moment? I may provide you with prompts, and you can write on my behalf.

In order to better understand the distinctions between solo and collaborative writing, participants were questioned during the interviews if they would have approached the writing task in the same way if they had been working alone. Helen said that if she had been writing alone, she would have proceeded in a different manner since she would have lacked patience (Excerpt 19). In particular, she stated that if she became aware that something was missing or inaccurate, she would cross out the entire sentence and start over from the beginning. This type of conduct could not be noticed during the collaborative writing process since Lucy took over the writing when Helen began to experience difficulty in the process.

The following is an excerpt from Excerpt 19: Another Solving Process (Interview 1, D8, P15, lines 43–52).

Interviewer: If you were forced to complete this assignment on your own, would you proceed in the same manner or would you do something different?

Helen: Then I'd more - I'd notice myself immediately noticing that something was missing. Although I have some difficulties writing, I have to stop and think about how I could write this and then - yes, it is not correct - and then I cross it out because I don't have much patience [laughs]. Yes.

Interviewer: What does it mean to you to be unable to wait for anything?

Helen: Yes, I'm willing to give up quickly. Ignoring the fact that I don't know the word results in the word being omitted, and later on, the text becomes/ f/ is no longer entirely correct. [...]

Interviewer: And then you decide whether to leave it as is or... Helen: Either that, or I'll cross everything out and start over.

Interviewer: Do you want me to use the entire text or just a single word? Helen: I'm talking about the entire text.

Lucy, like many others, admitted that she would have written differently if she had been working on her own project. She stated specifically that she would have written at her own pace if she had the opportunity (Interview 1, D8, P16, line 38). In fact, she stated a number of times that she was simply too fast for Helen to keep up with.

Both cases demonstrate that the collaborative environment has an impact on the writing behaviour of participants. In Helen's case, this was especially true to a significant extent. It appeared that the writing process was influenced primarily by the writers' relative abilities, which appeared to be the case. It is reasonable to assume that writers with lower abilities impose a greater burden on the writing process than those with higher abilities. Despite this, the setting as a whole provides valuable insights into the individual writing processes, which is a clear strength of the approach that is being presented in this chapter.

5.6 Impact of the Experimental Situation

It is important to remember that the approach provided here is an experimental circumstance, so proceed with caution. As previously stated in Section 2, adult struggling writers do not prefer to be viewed directly or recorded while they are writing because they feel embarrassed about their work (Sturm, 2010). As a result, it should be assumed that the inclusion of these aspects will have an impact on the writing process.

Both members of Dyad 8 were clearly aware of the experimental circumstance in which they were placed. In Task 1, as Lucy snatched the pen out of Helen's hand, Helen murmured, "They see everything that we write" (D8, Task 1, line 115). " Instead of maintaining a disguised awareness throughout the writing process, Lucy communicated directly with the camera, for example, by raising her beverage and toasting towards the camera. During Task 2, Lucy, in particular, made fun of the (false) customer's name (Mr. Frässler from fressen, which means to eat, rather than Mr. Fässler), which she repeated on multiple occasions. Such occurrences were likewise tagged as "comments" in the database.

A further in-depth examination of all comments reveals that, as shown in Table 3, the vast majority of dyad members remarked on their own writing in most circumstances. To put it another way, they examined and assessed their writing process, as well as making judgments on their writing abilities. The majority of the time, comments are expressed in a neutral manner. However, it appears that especially dyad members with very poor writing skills reacted in the same way Helen did, namely, by feeling embarrassed about their poor spelling skills or their rough handwriting (see Figure 1). (e.g. Dyad 4 or Dyad 5).

Following their interviews, both members of Dyad 8 appeared to be fatigued. In the end of the interview following the second writing exercise (Excerpt 20), Lucy openly stated that she was fine with it, but Helen simply responded that she had no problem with it.

Excerpt 20: The Experiment as a Repetitive Situation (Interview 2, D8, P16, lines 402–405).

Lastly, how was your interview experience? Interviewer: what do you think? Lucy: It's been exhausting. No [laughs out loud].

Interviewer: Can you tell me what was exhausting?

Lucy: No, one has to think about it. I mean, I'm slowly but steadily becoming exhausted. It had been a long day.

6. Discussion

The purpose of this study was to determine how struggling adult writers complete a writing task and what writing knowledge they had. Also investigated was the methodological question, specifically whether the multi-method approach used here (a combination of video recordings with interviews and textual analyses) was capable of capturing the answers to these two questions and whether it was feasible to conduct such an investigation.

In reality, the findings demonstrate that the proposed combination of approaches, when applied to the analysis of collaborative writing, generates a plethora of useful information. Working with struggling adult writers through collaborative writing can be a fruitful instrument and an excellent beginning point for a conversation about their writing technique, themselves as authors, and their conception of what constitutes good writing. It provides struggling adult writers with a real writing experience that they can call on frequently in interviews and that they can connect with other personal writing experiences, which is

extremely valuable. At the same time, retrospective interviews can help researchers gain a better understanding of collaborative writing processes, even if participants are limited in their ability to reconstruct cognitive processes or describe the chronology in detail, as was the case with Levy et al. (1996).

This multi-method approach has also been proved to be effective for acquiring insights into the individual writing talents of struggling adult authors, as has been demonstrated. By contributing to existing research on fundamental writing skills such as spelling, the approach taken here advances our understanding of how individuals in this specific group of struggling writers deal with higher order writing skills such as genre knowledge, planning, and evaluating the effectiveness of texts. The two zoom-ins on Helen, as well as the other results about her in Section 5, provided compelling evidence of this. The fine-grained picture that emerged from the data also indicated that adult struggling authors share several characteristics with their younger counterparts who are also suffering (Dockrell, 2009; Graham, Schwartz, & MacArthur, 1993; Troia, 2006). When Helen is depicted as a struggling adult writer, she exhibits common characteristics such as inadequately developed fundamental writing skills, which have a significant impact on the writing process. Furthermore, as an illustration, her orientation in the writing process is local, which means that she does not tackle writing problems in relation to a writing aim or the work as a whole. This corresponds to the observation that she possesses just rudimentary strategic understanding.

Further details are provided on the features that distinguish struggling adult writers from their younger counterparts as a result of the research (Harris, Graham, Brindle, & Sandmel, 2009). Using Helen as an example, we can see an adult who understands herself well as a writer, in that she can pinpoint a fundamental obstacle in writing, such as the inability to think and write at the same time, with pinpoint accuracy. Furthermore, she views writing to be a communicative act, which is supported by the fact that she believes it is reasonable to test a written manual in relation to the reactions of readers. Most importantly, when it comes to manuals, she demonstrates an understanding of the genre, despite the fact that she relies largely on oral experience garnered from previous experiences. In the integration of three

data sources, namely the protocol of video observation, a written piece, and an interview, the features of young struggling writers that are atypical become obvious.

Despite these advantages, the current study nevertheless has certain disadvantages, which are as follows: In the first place, the sub-study is based on a limited sample of participants, and the results given are primarily drawn from a case study. Secondly, from the standpoint of methodological considerations, it should be remembered that the collaborative environment has an impact on the writing process. This is demonstrated by the fact that Helen does not cross out the entire manual, as she claims she would do if she were having spelling difficulties when writing on her own. This is not an option for her because her spouse is in charge of the transcription. While it is present, the collaborative context has a limited impact on participants' writing talents; it does not fully restructure them while they are present. Even when paired with a partner who possesses superior writing abilities, such as Lucy, Helen fails to write fluently and precisely, nor does she take the initiative to initiate activities such as setting a writing objective.

It is possible that data from different sources (watching of the collaborative writing process, follow-up interviews, and written texts) will not always fit together in a straightforward manner when using a multi-method approach, as demonstrated in this study. Some of the events that occurred throughout the collaborative writing process can be traced back to the original incident in follow-up interviews as well as in the written texts. However, extreme caution should be exercised when interpreting such texts. In order to avoid jumping to conclusions too quickly, these traces should always be studied in conjunction with events that occurred during the writing process or statements made during interviews that provide alternative explanations. This is required because participants' approaches to collaborative writing can differ from their approaches to writing in a setting where they are writing alone.

Future studies could also look into how struggling adult writers cope when they are forced to complete a writing activity on their own rather than with a group of others. More research is needed, in particular, to determine which wasteful or ineffective tactics they adopt to achieve their goals. It is also necessary to establish methods for systematising the analyses of all three data sources – the protocol of the video observation, the written texts, and the follow-up interviews – in order to make conclusions more easily transferable between cases.

It is necessary to point out the following points from the standpoint of instruction. Because the literacy courses did not result in a statistically significant improvement in writing skills within three months (Sturm & Philipp, 2013b), teachers should learn more about the writing processes and writing knowledge of their participants, as well as about effective writing instruction that does result in a statistically significant improvement in writing skills. It is possible that educators will require further training to better appreciate the characteristics and benefits of collaborative writing. Consider Helen as an example, and applying the generalisation to all participants: teachers must address specific weaknesses, particularly in genre knowledge and writing skills, in order to ensure success. The teachers must go beyond the typical product-focused writing teaching to achieve this goal. Instead, evidence-based writing practises, such as clearly teaching the writing process and modelling writing methods, must be used in order for writing skills to grow (MacArthur & Lembo, 2009). More research is needed to further strengthen this evidence base, as well as the writing instruction that is based on it, by taking into account specific characteristics of struggling adult writers, such as their knowledge of themselves as writers and their oral literacy experiences, among other factors.

During interviews with 12 instructors in adult literacy courses (one of whom was Helen's teacher), it was discovered that they did not use collaborative writing in their instruction (Sturm & Lindauer, 2014). It is important for teachers to understand how different cooperation tactics effect on the development of writing abilities. For example, Helen's teacher indicated that she aids adult learners by taking on the role of thinker while the learners take on the role of transcriber, or vice versa. As for Helen, it is unclear to what extent her teacher's approach indirectly influenced the way she solved Tasks 1 and 2 in the sub-study and to what degree Helen had already cultivated this form of role allocation with her mother and sisters, as shown by the interviews. When it comes to this, case studies can be really beneficial. They can demonstrate to teachers how, rather than helping adult struggling writers improve their writing ability, certain instructional techniques encourage them to engage in unfavourable writing behaviour or use an inefficient strategy when writing.

Because the participants in this study expressed a preference for working together to complete the writing task, future research could evaluate whether or not collaborative writing

can help struggling adult writers improve their writing abilities. Additionally, teachers could employ collaborative writing in literacy courses to acquire insight into the approaches taken by (struggling) adult learners to gain insight into their own teaching methods.

Notes 1. There was no difference between dropouts and those who completed the course in terms of their reading and writing abilities, or in terms of their motivational features (Sturm & Philipp, 2013b).

2. The majority of dialects are spoken in the German-speaking region of Switzerland. Swiss High German is used in formal contexts, and in particular while drafting documents. The High German spoken in Switzerland is remarkably similar to the High German spoken in Germany.

3. Several participants commented during the course of the observed writing process that it would be far better not to return the phone call of a dissatisfied client.

4. In other instances, the written work and individual interview took nearly three hours to complete (Dyad 6 spent roughly 75 min. on the Task 1; after a 10-minute break, one interview lasted an additional 75 min.).

5. All dyads had re-read their texts previous to receiving this challenge, but they had done so largely locally, rather than in terms of a global representation of the text. Only Dyad 6 elected not to re-read their material for Job 1 because they had already spent a significant amount of time – around 75 minutes – on completing the writing task in its entirety. In the first phase, Dyad 16 came to an abrupt halt because they had only written five keywords, which they expanded with one more in the second phase.

6. Lowry et al. (2004) use supporting activities as a generic phrase for researching, socialising, talking, negotiating, coordinating, monitoring, rewarding, punishing and recording. Their assumption is that every supporting activity is included in a cooperative writing process, and the occurrence of supporting activities is dependent on the writing assignment.

7. The coding of speaker A or B and writer A or B is in some sense mechanical since the transcripts previously recorded which participant was speaking or writing.

8. The use of fictitious names.

9. Another collaborative writing method was identified in only one of the dyads studied. Dyad 16 decided on parallel writing, with one member drafting the manual and the other creating a picture of the coffee maker. The participants in Dyad 16 did very little negotiating.

To begin, did anyone see the coffee maker? Helen (00:00:22-8). Coffee utensils are all that is on my mind right now. "Yes" is the correct answer. "Yes" is the correct answer. "Yes" is the correct answer. Neither of them is looking away from the coffee machine. — Do you know how to make coffee with this [shows the coffee maker]? Oh, and one more thing: did anybody else write that? - Is there a coffee machine in the house?

Lucy: the notepad is rotated counter-clockwise Well. "He," "He," "He," "He," "He," "He," "He," While concurrently writing "Questions," he continues to type.

Children with learning or writing difficulties often see tasks as questions that need answers, and Helen's interpretation is an example of this. In Graham's (1990) words: For more detail on this, see Section 5.4, which deals with the interview data. The most common source of inspiration for Lucy's thoughts was a sentence she had scribbled down:

D8, Task 1, lines 40–42) Extract 2: Creating New Concepts Lucy: [slowly writes and speaks: strainer; 00:02:26-0] Restocking coffee powder is also on the list of tasks. -Lucy: [reading through] Put the filter in [writing and speaking slowly: and replace the coffee powder]. - Helen: That's right. Put the strainer in and replace the coffee powder, Lucy says, as she reads.

Distributions like this illustrate that participants in collaborative writing have a wide range of roles to perform. Whoever is transcribing will follow a similar pattern: creating ideas, transcribing, and then generating additional ideas.

The collaborative writing environment and the adoption of the reactive writing style by Dyad 8 test participants may be to blame for this role assignment.

9 To be clear, they must decide on a transcriber before they can begin the process. While it is true that when B is transcribed, A is more likely to come up with new ideas or orders, this does not mean that this is the case all the time. Because of their differing writing talents, Helen and Lucy's roles can also be explained. It is necessary to do a more extensive study of the data to answer the question, "Why wasn't Helen transcribing?" (section 5.3). To what end

does she refer to the writing exercise as a question in section 5.4? Following that, we'll take a closer look at Helen, her approach to problem-solving and the specific writing skills she possesses. As Helen is more of a struggler than Lucy, this study promises to be a valuable addition to our understanding of struggling adult authors.

What Happened to Helen's Transcribing Skills? What's the reason Helen wasn't transcribing?

This is what Helen said to the interviewer when she was asked to explain why Lucy began to write. She illustrates this in the third excerpt:

Writing and Thinking, Third Excerpt (Interview 1, D8, P15, line 26)

My assumption is that she can think and write. In addition, it's difficult for me to make a point explicit before putting pen to paper.

Thus, Helen refers to herself as the thinker and Lucy as the writer many times during the conversation. In addition, she claims that she and Lucy have regularly worked on grammar tasks together during the course, but they have never written jointly and have always followed the same procedure.

Several times, Helen brought up the topic of thinking and writing. In terms of methodology, how she describes the videotaped collaborative writing and other writing events is critical. excerpt 4 shows how Helen began their writing process and how she views the writing process in general, only to add an event that goes beyond the writing process. As a nod to this, the term "always" is used.

(Author's emphasis): Interview 1, D8, P15, line 10ff. Interview 1, D8, P15, lines 10ff., emphasis added by the author)

First and foremost, we questioned about the coffee maker's operating procedure. And when we first found it, well, it was straightforward to me, too. However, there is one exception: writing. Despite my best efforts, I am unable to keep up with all of the ideas that come to my mind. [...] Faster than we can move our hands, we can move our thoughts. By the time I get down to write this, I've already completely forgotten about it.

Lucy persuaded Helen to transcribe throughout the collaborative writing process (Task 1). Although she had just given a new concept, Helen couldn't remember which one to write

down when she eventually took up the pen. Of course, her troubles might be attributed to external circumstances like poor work coordination or her close relationship with Lucy.

During the collaborative writing process, Helen's struggle with the interaction between thinking and writing was clear (Task 1). For some reason, Helen was always having to go back over her work and fix her faults (Excerpt 5). The more Helen wrote, the more mistakes she made in spelling and grammar (this is also borne out by the results of the writing fluency test t1, cf. Appendix A). When Lucy began writing incomprehensibly, such as "Arreiqu" instead of "As necessary." she took over transcription.

(D8, Task 1, lines 97–101) Helen is drafting and rewriting
Extracted from D8, Task 1, lines 97–101, Helen is now drafting and rewriting.

And so on]; and so forth; and so forth; and so on. In Helen's case, [00:04:39-4], If you're looking for the plural form of any of the above words, then you've come to the right place. [00:04:41-2] [sat den] To put it another way (sixth bullet point) [writes:

That is why [he points to the word] I / sit Helen: Isn't that the case?

A big congrats to both of you, Lucy and Helen. They both burst out laughing. Ahead of time: - The first. Sit has been replaced with [crossed out sit and replaced by an isit] I'm sorry, but I think I've spelled it incorrectly again. - "It" (00:04:52-7) has been crossed out and replaced by "ist." Alternatively, it might be. [is] [...]

Lucy started writing in the fourth minute of Task 2, and Helen followed suit, but this time on her own (maybe this can be attributed to the fact that she had already developed some familiarity with this activity during Task 1). Lucy was forced to take over writing duties when Helen's exhaustion led to spelling errors. When it came to the phrases "thinking" and "writing," Helen used the same method she had for Task 1 when discussing this writing exercise in the interview's retrospective phase.

During the stage of the interview when participants were invited to envisage writing a story or describing an event tied to a recipe, Helen was asked what she would do if she knew what she wanted to write about but didn't know how to put it into words (section 4.3). As demonstrated in Excerpt 6, she sought a role distribution similar to that seen in the collaborative writing process:

Writing Skills - The Art and Science of Writing (Excerpt 6) (Line 174 of Interview 2, D8, P15) Let me know if you can help me out for a few minutes. You'll write for me, and I'll tell you what to write. When the interviewer dug a bit deeper, Helen admitted that she hadn't utilised this strategy in a long time. It wasn't obvious from the interview how often she uses this technique. She did, however, talk about how her sisters and mother aid her in writing: they first ask her what she wants to write about and why she wants to write it (Excerpt 7). Additionally, Excerpt 7 depicts the collaborative writing process's role assignment in numerous ways:

The 7th Excerpt: Writing and Thought (Interview 2, D8, P15, line 192)

[...] Think about what you want us to write, and then tell us. To summarise, it is acceptable to assume that Helen's cognitive load is not considerably raised by reactive writing in the experimental setting as compared to when she writes alone or with the aid of individuals other than Lucy.. As previously mentioned, Helen's t1 writing fluency text exhibited similar difficulties with accuracy. According to her, this was not the first time she had undergone a similar procedure.

It is not possible to determine if Helen's ability to complete Tasks 1 and 2 was limited by a lack of some fundamental cognitive abilities. During the first interview, Helen mentioned that she had taken a test in school that she vaguely remembered. D8, P15, line 252 of Interview 1 (D8) In her mind, failing the test meant she couldn't go on to pursue more education or training in the field of her choice.

This is Helen's take on the writing assignment: "Then We Explain How It Works"

Initially, Helen came up with the notion of asking, "Does anyone know how the Italian coffee maker operates?" to open the manual. Her need to know the answer to this question became clear to her after a little pause in reading the text. "Then we explain how it works" was Helen's request after Lucy had simply written "No!" As illustrated in Excerpt 8, Helen not only saw the writing as a question, but she also worded the text's introduction as a question: "Not only did Helen interpret the writing task as a question, but she even phrases the start of the book itself as a question."

Excerpt 8: Genre and Literary Criticism (Interview 1, D8, P15, line 32 ff.)

[...] Helen: [inaudible] Thank you. How to convey this was the question, and thus we had/have halted to go on the next phase in the process. No matter what happens, we should have said yes and then asked what you thought... correct? It is possible to view the entire paragraph as a question since f was a question in the first place. [I utter the word mhm] The question's wording We / I then realised that something wasn't quite right in this situation. Somewhere (00:05:00-4) something is missing, in my opinion. Coffee was made accessible to all dyads during their writing activity, so they may rely less on prior knowledge of the topic. Helen and Lucy, on the other hand, avoided using it when they were unsure of where to pour the water since they didn't think it was necessary to do so. Helen's motive for her conduct is clearly obvious in Excerpt 9, which is as follows:

Excerpt 9: Genre and Literary Criticism (Interview 1, D8, P15, line 82)

A few minutes later, I realised that they [=the researchers] either do it now or brew coffee to test if we set it down correctly, which I believed was the most likely scenario. Yes.

However, despite the fact that Helen viewed the writing work and the opening of the book as a question, she stayed true to the writing goal of the text, which was to produce a standard handbook. The best method to see if a manual is useful is to actually use it. Excerpts 8 and 9 may be construed as a show of genre competence despite their unusual style. Helen's response to being asked if she had ever written a manual alludes to an oral event she had previously experienced (Excerpt 10). A guide's fundamental role was also accomplished by her description of that spoken scenario. She also mentioned that a handbook can only be written or spoken if the author has a thorough understanding of the subject matter.

Genre and Topic Knowledge in Excerpt 10 (Interview 1, D8, P15, line 90 ff) D8, P15, line 90 ff.) (Interview 1)

There is no denying that my father turns to me for help when he is having technical difficulties with his cell phone; I show the process to him. You must/I can do the same thing, therefore that's all there is to it! For the simple fact that I've used a cell phone before.

According to her, the most important piece of advice that she could give someone who was in a similar situation would be to make sure that you thoroughly test your stuff (Excerpt 11). To put it another way, she didn't put too much attention on the form or mechanics, as one might

anticipate from a novice author (Graham, Schwartz, & MacArthur, 1993). The fact that she had no idea what to expect from a printed manual meant that her understanding of the genre was restricted.

Excerpt 11: The Evaluation Process (Interview 1, D8, P15, line 102 ff.)

Let me know how you would go about it and if it doesn't work, we can do it together and see if that works. - It's possible to read this and think, "Well, no one understands that, start by reading it for yourself," and I'd answer, "Yes, first and foremost, read it for yourself, because I would not comprehend this." because I wouldn't be able to understand this myself.

"testing" was no longer a topic of debate following Helen's comments on Task 2. With an enthusiastic "excellent," Helen reacted to Lucy's praise of the letter she and Lucy had written, calling it "mmh, good" (Interview 2, D8, P15, line 90). She displayed some scepticism, though, when asked if the letter would persuade the buyer. For her, the question was whether a 5 percent discount would be acceptable to the customer (Interview 2, D8, P15, line 92). During the collaborative writing process, she was also unsatisfied with the letter, but she was unable to properly communicate her unhappiness ("Something I do not like," D8, Task 2, line 119).

Even though they performed a more in-depth study of the problem, Helen and Lucy failed to create writing goals for their letter in Work 2, in line with their failure to assess whether or not their text was any good or not (Excerpt 12). In both Task 2 and Task 1, the explanation was seen as the primary purpose of the task.

Lines 20–22 of D8 Task 2 (D8 Task 2). Explanation of Writing Task 2 (Extract 12)

Helen: Our supervisor has sent us an email, and we must reply to it in writing. As a result of [shows email]...

That's [also pointing to the email] something we'll have to explain to Lucy, isn't it? Helen: You're absolutely accurate.

Task 2 was a challenge for Helen since she lacked a model to follow (Interview 2, D8, P15, lines 64–68). She didn't show any more experience in writing an argumentative letter throughout the interview (Excerpt 13).

Understanding the Genre (Excerpt 13) (Interview 2, D8, P15, line 100) Interviewer: What do you think constitutes an excellent letter, in your view?

Helen: Just double-check that the time and date are right. And, of course, with the fewest potential errors.

At "school," Helen usually used to describe the literacy course, she remembered completing an assignment similar to this one. It's clear that she focused on the letter's outside characteristics, such the date and where to put "to" and "from," and subsequently on the content within, in her discussion of that "school" assignment. Interview 2 (D8, P15, line 76).

Since the collaborative writing process was the first point of reference for the study, the interview data bolstered this understanding, as previously indicated (in sections 5.3 and 5.4). After this step (sections 5.5 and 5.6), data is collected via follow-up interviews regarding aspects of the collaborative writing process that cannot be directly related to the collaborative writing process..

Methodological problems remain unsolved at the halfway point of the study 5.5.

In spite of Dyad 8's limited use of planning, the research presented here shows that conveying information is the primary method employed while writing. As a whole, the research of the writing process does not disclose anything unexpected. If you combine Tasks 1 and 2, you'll see that Helen has more writing expertise (at least when it comes to manuals as opposed to argumentative letters) than you'd anticipate from someone who is just starting out. Some of the events in the writing process might be described and understood much better if they were linked to the interviews and manuscripts. It's unclear whether or not these writers use a different writing approach while working alone as opposed to in groups of two, as several of their responses to interview questions were ambiguous.

It was shown that participants in the present study might forget particular events that occurred throughout the collaborative writing process, which was an issue in the prior study. Similar conclusions have been reached in the case of individual writing by Janssen et al. This is especially true for Helen, who, for example, was unable to remember why she had ignored Lucy's suggestion to read the writing assignment a second time during the second work

(Excerpt 14). For both Task 1 and Task 2, Helen could only give a superficial summary of the writing process. (For further information on Writing Task 1, see Excerpt 4).

An enormous chasm (Interview 2, D8, P15, line 51 ff.)

Interviewer: With your letter, you had already made tremendous progress. After then, Lucy gave the sense that she wanted to hear the tasks again, especially the one with Mr Fässler on the phone. Lucy was right. To be honest, you were a little hesitant about it. It's not clear why this happened.

It's possible, but I'm not sure why. Helen [laughing]

Lucy couldn't remember, for example, why the role allocation had changed during the second writing session, as seen in Excerpt 15:

An enormous chasm (Interview 2, D8, P16, line 42f.)

[...] This is what I was told by the interviewer: There is a reason for the second shift in who is writing, remember? Is your memory strong? Lucy: It's happened before. I have no idea what's causing this. To put it simply, I'm so äh that I'm at a loss for words. There you have it. It's all here in the form of words.

If the topic of the collaborative writing process was brought up, Helen could use it as a springboard to talk about other comparable writing experiences, but she struggled with inquiries that went beyond the writing project they had just done (Excerpt 16). Both writings were considered good by her, but she could not provide any arguments as to why. Her writing partner, Lucy, omitted an illustration from the handbook, which puzzled her because she had previously emphasised that illustrations were an important aspect of guides elsewhere (Excerpt 17).

The Meaning and Importance of Writing (Interview 2, D8, P15, lines 143–146) is an abbreviated version of the passage. Interviewer: What does it mean to you to write?

Helen: I don't know what to say. — Yes, I would say so. Interviewer: How important is writing to you? Honestly, Helen, it doesn't matter that much.

Excerpt 17: Self-Evaluation and Genre Knowledge (Interview 1, D8, P15, lines 91–98) follows. Interviewer: What are your impressions, and how well did you do?

What a terrific idea.

Interviewer: Then why do you believe you're so good?

Helen: Right on target. — In response to / To be honest, I just thought it was a really well-written piece of work. I have no idea what's causing this. [laughing] Interviewer: In your view, a good handbook should have the following aspects.

Helen: Additionally, a user manual that contains an accompanying image would be a good illustration of this.

During the second interview, Helen displayed just minimal strategic understanding in the response to the hypothetical circumstance (Excerpt 18). When asked how she usually coped with issues in coming up with ideas, she was unable to identify a specific approach she would use. Instead, she said she'd get in touch with someone who could help. Other procedures like proposing and assessing also have approaches that were comparable to hers. There was a noticeable trend of people asking help with their writing in this phase of the interview. Finally, Helen came to the realisation that a competent writer is also one who can support others in their writing efforts ("And then I can approach her and ask her for aid," Interview 2, D8, P15, line 112).

Lines 171–174 of Interview 2, D8, P15; Interview 2, D8, P15, lines 171–174) from Excerpt 18:

Interviewer: What should you do if you can't come up with a topic for a piece of writing? What do you do if you find yourself in this situation?

Helen: Do I have the option of approaching a person in the room and asking them? What could I possibly write about the teacher if I were to do so? [...]

Interviewer: What if you already know what you want to write about and are looking for a topic? Putting your thoughts down on paper may be a challenge for you, but you may already have an idea. What do you do if you find yourself in this situation?

Helen: If you'd want to offer a hand, I'd be happy to oblige. You can write on my behalf if I give you some ideas.

While conducting interviews, researchers inquired about how the participants may approach an assignment if they were working alone to better understand the differences between solo and collaborative writing. Her lack of self-control and lack of time would have dictated a different approach had she been writing alone (Excerpt 19). She made it clear that if she found an error or omission, she would rip out the offending phrase and begin again from scratch. Since Lucy took over writing when Helen was having problems, this sort of behaviour went unnoticed during the collaborative writing process.

Extract 19: Another Solving Process (Interview 1, D8, P15, lines 43–52) is an extract from this section.

Interviewer: In the event that you were forced to complete this assignment on your own, how would you proceed?

Helen: Afterwards, I'd more - I'd realise that something was lacking instantly. However, despite my struggles with writing, I have to pause and consider how I may express this before - sure, that is incorrect - and then I cross it out because I lack patience [laughs]. Yes.

How would you describe the feeling of being unable to wait for anything?

Helen: Do I have the ability to give up quickly? Yes. Leaving out a word because I don't know what it means leads to the text becoming/ f/ which is no longer totally accurate. [...]

You have to make a decision at this point, whether you want to keep it or change it? That, or I'll start again from scratch. Helen: Either way, I'll do it.

Interviewer: Do you want me to use the complete text or just a single word? Helen: I'm referring to the full piece of writing.

If Lucy had been working on her own project, she, too, would have written differently. She said that if she had had the chance, she would have written at her own pace (Interview 1, D8, P16, line 38). In fact, she said more than once that Helen couldn't keep up with her since she was moving so quickly.

Both instances show that the writing habits of participants are influenced by the collaborative setting. This was notably true in Helen's situation, to a large extent. It appeared that the relative talents of the authors were the primary determinants of the writing process. In general, it's safe to infer that authors with poor writing skills put more strain on the writing

process than those with better writing skills. It's a virtue of this chapter's approach because the setting as a whole gives significant insights into the different writers' writing processes.

5.6 The Effects of the Experiment

It's critical to keep in mind that this is an experimental situation, so proceed with extreme care. Due to their embarrassment about their work, adult struggling writers do not want to be observed or videotaped while they are writing (Sturm, 2010). The addition of these elements will, it follows, have an effect on the writing process.

It was evident to both members of Dyad 8 that they were participating in an experiment, and both were aware of it. The moment Lucy pulled Helen's pen out of her hands in Task 1, Helen said, "They see everything that we write" (D8, Task 1, line 115). Instead of keeping a low profile throughout the writing process, Lucy made eye contact with the camera by lifting her beverage in a toasting gesture toward the camera. Lucia repeatedly made fun of the customer's name during Task 2: "Mr. Fräßler from fressen," which means "to eat," rather than "Mr. Fäßler," was one of her favourite pick-up lines. Comments were assigned to any such instances in the database.

Table 3 shows that, in most cases, the large majority of dyad members commented on their own writing, as indicated in a more thorough assessment of all comments. As a way of putting it, they looked at and evaluated the method they write as well as their own writing talents. The vast majority of comments are made in a non-confrontational way. While Helen's reaction was to be humiliated by her bad spelling or handwriting, it appears that many dyad members with weak writing abilities reacted in the same manner (see Figure 1). Dyad 4 or Dyad 5 are examples.

Both members of Dyad 8 appeared exhausted after their interviews. After the second writing exercise (Excerpt 20), Lucy freely declared that she was comfortable with it, and Helen simply answered that she had no problem with it. At the end of the interview.

An Experiment as Repetitive Situation (Interview 2, D8, P16, lines 402–405) is the subject of this excerpt (20).

Finally, how did your interview go? I'd want to know what you think. Lucy: It's been a drain on my energy. ... [laughs out loud] Not at all.

Interviewer: What did you find tiring about the experience?

Lucy: No, you have to think about it first. I mean, I'm starting to feel a little worn out. A long day was behind them.

Theorizing and Deliberation

An investigation of how adults who struggle with writing accomplish a task and the level of their writing skills was the goal of this study. Other concerns addressed in this inquiry were whether the multi-method approach (video recordings with interviews and textual analysis) was capable of capturing these two topics and if it was feasible for this investigation to be conducted.

According to the findings, the proposed combination of techniques, when applied to the study of collaborative writing, yields a wealth of helpful information. With struggling adults, collaborative writing may be a useful tool and a good starting point for discussion about their writing skill, identity as authors and notions of what constitutes good written work. They may use it regularly in interviews and connect with other personal writing experiences, which is incredibly beneficial for struggling adult writers. For researchers interested in studying collaborative writing processes, retrospective interviews can be a useful tool even if participants lack the ability to recall cognitive processes or accurately recount the timeline of events (1996).

Furthermore, it has been shown that this multi-method approach is effective in obtaining insights into the individual writing talents of struggling adult authors, as has been demonstrated. The approach taken here advances our understanding of how individuals in this specific group of struggling writers deal with higher-order writing skills such as genre knowledge, planning, and evaluating the effectiveness of texts by contributing to existing research on fundamental writing skills such as spelling. Section 5 results about Helen, including the two zoom-ins on her, provided compelling evidence of this fact. Adult struggling authors share many characteristics with their younger counterparts who are also struggling, according to the data (Dockrell, 2009; Graham, Schwartz, & MacArthur, 1993; Troia, 2006). Because of her insufficiently developed core writing abilities and her portrayal as a struggling adult writer, Helen has many similarities with other struggling adult writers. Furthermore, as an example, her writing orientation is local, which means that she does not

address writing issues in terms of a specific writing goal or the overall project. According to this, she only has a rudimentary understanding of strategy.

As a consequence of the investigation, more information is available on the characteristics that set struggling adult authors apart from their younger counterparts (Harris, Graham, Brindle, & Sandmel, 2009). The fact that she can pinpoint a fundamental writing obstacle, such as her inability to think and write at the same time, shows that Helen is an adult who has a good sense of her own abilities as a writer. Because she believes writing is a communication process, she feels it's appropriate to test a written handbook based on the reactions of readers. It is crucial that she shows a comprehension of manuals, even though she depends heavily on oral experience gained from earlier encounters. For example, when three data sources are merged into one, the characteristics of young struggling authors that are unusual are clearly visible.

Despite these advantages, the current study has a few drawbacks, which are as follows: An important caveat is that the results of this sub-study are mostly based on anecdotal evidence from one specific case. It is also important to realise that the collaborative atmosphere has an influence on the writing process from a methodological aspect. As Helen asserts, if she had difficulty spelling on her own, she would cross out the entire handbook. However, she doesn't do this here. Because her husband is in charge of the transcribing, she is out of luck. Collaboration has a limited influence on participants' writing abilities while they are present; it does not completely reorganise them. Although Helen is partnered with a partner who has better writing skills, such as Lucy, she still fails to write smoothly or accurately, and she also does not take the initiative to begin activities such as creating a writing goal.

A multi-method approach, as proven in this study, may result in data that does not necessarily fit together in a straight line while viewing the collaborative writing process, doing follow-up interviews, and creating texts. Follow-up interviews and the written texts of the collaborative writing project reveal some of the events that occurred during the process of writing back to the original incident. Interpreting such documents, however, should be done with utmost care. These traces should always be evaluated in combination with events that occurred throughout the writing process or remarks made during interviews that give alternate explanations to

prevent leaping to conclusions too hastily. Participants may approach collaborative writing in a different way than they would if they were writing alone, therefore this is necessary.

Additionally, researchers could investigate how adult writers who are having difficulty completing writing assignments in groups fare when left to complete them on their own. Finding out the strategies they use that are wasteful or unsuccessful is an area that requires additional investigation. Systematizing the analysis of all three data sources – protocol for video observation, written texts, and follow-up interviews – is also required to make conclusions more easily transferable between cases.

From a teaching perspective, the following points need to be made clear. Teachers should learn more about their students' writing processes and writing knowledge, as well as about effective writing instruction that results in a statistically significant improvement in writing skills, because the literacy courses did not result in a statistically significant improvement in writing skills within three months. Collaborative writing has unique traits and rewards that may require additional training for educators. Using Helen as an example, and generalising to all students, teachers must address specific inadequacies, notably in genre knowledge and writing abilities, in order to assure success.. To do this, teachers will need to move beyond the conventional product-focused writing lessons. As a result, evidence-based writing practises, such as teaching the writing process and demonstrating writing techniques, must be implemented in order for writing abilities to increase (MacArthur & Lembo, 2009). Writing education for struggling adults should take into consideration special qualities of adult writers such as their awareness of their own identity as writers and their prior oral literacy experiences in order to improve this evidence foundation even further.

It was revealed that none of the adult literacy instructors interviewed (including Helen's teacher) used collaborative writing as a teaching strategy (Sturm & Lindauer, 2014). Educators should know how different forms of collaboration affect students' ability to write. Adult learners benefit from their teacher taking on the role of thinker, while the students take on the job of transcriber. While the method used by Helen's instructor may have affected her performance on Tasks 1 and 2 in the sub-study, it's not apparent if this role allocation with her mother and sisters was already ingrained in Helen's psyche prior to the research. This is an area where case studies may be quite useful. It is possible for teachers to see how

particular teaching strategies encourage adult struggling writers to engage in unfavourable writing behaviour or to utilise an inefficient writing strategy.

Collaborative writing might be tested in future studies to see whether it can assist struggling adult writers improve their writing skills. Moreover, teachers might use collaborative writing in literacy courses to obtain insight into the tactics adopted by (struggling) adult learners in order to gain insight into their own teaching methods, as well.

Neither the students' reading and writing skills nor their motivating characteristics differed between dropouts and those who finished the course (Sturm & Philipp, 2013b).

As a whole, Switzerland has more dialects than any other country. In formal situations, Swiss High German is employed, especially when writing documents. Switzerland's High German is nearly identical to Germany's High German.

While writing a report, some participants said it would be best not to return a call from a disgruntled customer.

It took nearly three hours to complete the written work and one-on-one interview in some cases (Dyad 6 spent roughly 75 min. on the Task 1; after a 10-minute break, one interview lasted an additional 75 min.).

Although all pairs had read their texts again before to this assignment, they had done so primarily in terms of their own local interpretations, rather than as a global depiction. Because they had previously spent 75 minutes on the writing job, only Dyad 6 decided not to re-read their work for Job 1, which was a substantial amount of time. Due to just having typed five keywords in the first phase, Dyad 16 came to an abrupt end in the second phase.

Researching, socialising, chatting, bargaining, organising, monitoring, awarding, punishing, and documenting are all examples of supporting activities. Since every supporting activity is based on the writing assignment, they assume that all supporting activities are included in a cooperative writing process.

It's more or less a mechanical process because the transcripts already documented who was talking and writing when.

Fictional names are also used.

Only one of the dyads tested used a different collaborative writing strategy. One member of dyad 16 wrote the handbook while the other drew a picture of the coffee machine in concurrently. In Dyad 16, there was hardly little bargaining.

To begin, did anyone see the coffee maker? Helen (00:00:22-8). Coffee utensils are all that is on my mind right now. "Yes" is the correct answer. "Yes" is the correct answer. "Yes" is the correct answer. Neither of them is looking away from the coffee machine. — Do you know how to make coffee with this [shows the coffee maker]? Oh, and one more thing: did anybody else write that? - Is there a coffee machine in the house?

Lucy: the notepad is rotated counter-clockwise Well. "He," "He," "He," "He," "He," "He,"
While concurrently writing "Questions," he continues to type.

Children with learning or writing difficulties often see tasks as questions that need answers, and Helen's interpretation is an example of this. In Graham's (1990) words: For more detail on this, see Section 5.4, which deals with the interview data. The most common source of inspiration for Lucy's thoughts was a sentence she had scribbled down:

D8, Task 1, lines 40–42) Extract 2: Creating New Concepts Lucy: [slowly writes and speaks: strainer; 00:02:26-0] Restocking coffee powder is also on the list of tasks. -Lucy: [reading through] Put the filter in [writing and speaking slowly: and replace the coffee powder]. - Helen: That's right. Put the strainer in and replace the coffee powder, Lucy says, as she reads.

Distributions like this illustrate that participants in collaborative writing have a wide range of roles to perform. Whoever is transcribing will follow a similar pattern: creating ideas, transcribing, and then generating additional ideas.

The collaborative writing environment and the adoption of the reactive writing style by Dyad 8 test participants may be to blame for this role assignment.

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closer look at Helen, her approach to problem-solving and the specific writing skills she possesses. As Helen is more of a struggler than Lucy, this study promises to be a valuable addition to our understanding of struggling adult authors.

What Happened to Helen's Transcribing Skills? What's the reason Helen wasn't transcribing?

This is what Helen said to the interviewer when she was asked to explain why Lucy began to write. She illustrates this in the third excerpt:

Writing and Thinking, Third Excerpt (Interview 1, D8, P15, line 26)

My assumption is that she can think and write. In addition, it's difficult for me to make a point explicit before putting pen to paper.

Thus, Helen refers to herself as the thinker and Lucy as the writer many times during the conversation. In addition, she claims that she and Lucy have regularly worked on grammar tasks together during the course, but they have never written jointly and have always followed the same procedure.

Several times, Helen brought up the topic of thinking and writing. In terms of methodology, how she describes the videotaped collaborative writing and other writing events is critical. excerpt 4 shows how Helen began their writing process and how she views the writing process in general, only to add an event that goes beyond the writing process. As a nod to this, the term "always" is used.

(Author's emphasis): Interview 1, D8, P15, line 10ff. Interview 1, D8, P15, lines 10ff., emphasis added by the author)

First and foremost, we questioned about the coffee maker's operating procedure. And when we first found it, well, it was straightforward to me, too. However, there is one exception: writing. Despite my best efforts, I am unable to keep up with all of the ideas that come to my mind. [...] Faster than we can move our hands, we can move our thoughts. By the time I get down to write this, I've already completely forgotten about it.

Lucy persuaded Helen to transcribe throughout the collaborative writing process (Task 1). Although she had just given a new concept, Helen couldn't remember which one to write down when she eventually took up the pen. Of course, her troubles might be attributed to external circumstances like poor work coordination or her close relationship with Lucy.

During the collaborative writing process, Helen's struggle with the interaction between thinking and writing was clear (Task 1). For some reason, Helen was always having to go back over her work and fix her faults (Excerpt 5). The more Helen wrote, the more mistakes she made in spelling and grammar (this is also borne out by the results of the writing fluency test t1, cf. Appendix A). When Lucy began writing incomprehensibly, such as "Arreiqu" instead of "As necessary." she took over transcription.

(D8, Task 1, lines 97–101) Helen is drafting and rewriting
Extracted from D8, Task 1, lines 97–101, Helen is now drafting and rewriting.

And so on]; and so forth; and so forth; and so on. In Helen's case, [00:04:39-4], If you're looking for the plural form of any of the above words, then you've come to the right place. [00:04:41-2] [sat den] To put it another way (sixth bullet point) [writes:

That is why [he points to the word] I / sit Helen: Isn't that the case?

A big congrats to both of you, Lucy and Helen. They both burst out laughing. Ahead of time:
- The first. Sit has been replaced with [crossed out sit and replaced by an isit] I'm sorry, but I think I've spelled it incorrectly again. - "It" (00:04:52-7) has been crossed out and replaced by "ist." Alternatively, it might be. [is] [...]

Lucy started writing in the fourth minute of Task 2, and Helen followed suit, but this time on her own (maybe this can be attributed to the fact that she had already developed some familiarity with this activity during Task 1). Lucy was forced to take over writing duties when Helen's exhaustion led to spelling errors. When it came to the phrases "thinking" and "writing," Helen used the same method she had for Task 1 when discussing this writing exercise in the interview's retrospective phase.

During the stage of the interview when participants were invited to envisage writing a story or describing an event tied to a recipe, Helen was asked what she would do if she knew what she wanted to write about but didn't know how to put it into words (section 4.3). As demonstrated in Excerpt 6, she sought a role distribution similar to that seen in the collaborative writing process:

Writing Skills - The Art and Science of Writing (Excerpt 6) (Line 174 of Interview 2, D8, P15) Let me know if you can help me out for a few minutes. You'll write for me, and I'll tell

you what to write. When the interviewer dug a bit deeper, Helen admitted that she hadn't utilised this strategy in a long time. It wasn't obvious from the interview how often she uses this technique. She did, however, talk about how her sisters and mother aid her in writing: they first ask her what she wants to write about and why she wants to write it (Excerpt 7). Additionally, Excerpt 7 depicts the collaborative writing process's role assignment in numerous ways:

The 7th Excerpt: Writing and Thought (Interview 2, D8, P15, line 192)

[...] Think about what you want us to write, and then tell us. To summarise, it is acceptable to assume that Helen's cognitive load is not considerably raised by reactive writing in the experimental setting as compared to when she writes alone or with the aid of individuals other than Lucy.. As previously mentioned, Helen's t1 writing fluency text exhibited similar difficulties with accuracy. According to her, this was not the first time she had undergone a similar procedure.

It is not possible to determine if Helen's ability to complete Tasks 1 and 2 was limited by a lack of some fundamental cognitive abilities. During the first interview, Helen mentioned that she had taken a test in school that she vaguely remembered. D8, P15, line 252 of Interview 1 (D8) In her mind, failing the test meant she couldn't go on to pursue more education or training in the field of her choice.

This is Helen's take on the writing assignment: "Then We Explain How It Works"

Initially, Helen came up with the notion of asking, "Does anyone know how the Italian coffee maker operates?" to open the manual. Her need to know the answer to this question became clear to her after a little pause in reading the text. "Then we explain how it works" was Helen's request after Lucy had simply written "No!" As illustrated in Excerpt 8, Helen not only saw the writing as a question, but she also worded the text's introduction as a question: "Not only did Helen interpret the writing task as a question, but she even phrases the start of the book itself as a question."

Excerpt 8: Genre and Literary Criticism (Interview 1, D8, P15, line 32 ff.)

[...] Helen: [inaudible] Thank you. How to convey this was the question, and thus we had/have halted to go on the next phase in the process. No matter what happens, we should

have said yes and then asked what you thought... correct? It is possible to view the entire paragraph as a question since f was a question in the first place. [I utter the word mhm] The question's wording We / I then realised that something wasn't quite right in this situation. Somewhere (00:05:00-4) something is missing, in my opinion. Coffee was made accessible to all dyads during their writing activity, so they may rely less on prior knowledge of the topic. Helen and Lucy, on the other hand, avoided using it when they were unsure of where to pour the water since they didn't think it was necessary to do so. Helen's motive for her conduct is clearly obvious in Excerpt 9, which is as follows:

Excerpt 9: Genre and Literary Criticism (Interview 1, D8, P15, line 82)

A few minutes later, I realised that they [=the researchers] either do it now or brew coffee to test if we set it down correctly, which I believed was the most likely scenario. Yes.

However, despite the fact that Helen viewed the writing work and the opening of the book as a question, she stayed true to the writing goal of the text, which was to produce a standard handbook. The best method to see if a manual is useful is to actually use it. Excerpts 8 and 9 may be construed as a show of genre competence despite their unusual style. Helen's response to being asked if she had ever written a manual alludes to an oral event she had previously experienced (Excerpt 10). A guide's fundamental role was also accomplished by her description of that spoken scenario. She also mentioned that a handbook can only be written or spoken if the author has a thorough understanding of the subject matter.

Genre and Topic Knowledge in Excerpt 10 (Interview 1, D8, P15, line 90 ff) D8, P15, line 90 ff.) (Interview 1)

There is no denying that my father turns to me for help when he is having technical difficulties with his cell phone; I show the process to him. You must/I can do the same thing, therefore that's all there is to it! For the simple fact that I've used a cell phone before.

According to her, the most important piece of advice that she could give someone who was in a similar situation would be to make sure that you thoroughly test your stuff (Excerpt 11). To put it another way, she didn't put too much attention on the form or mechanics, as one might anticipate from a novice author (Graham, Schwartz, & MacArthur, 1993). The fact that she

had no idea what to expect from a printed manual meant that her understanding of the genre was restricted.

Excerpt 11: The Evaluation Process (Interview 1, D8, P15, line 102 ff.)

Let me know how you would go about it and if it doesn't work, we can do it together and see if that works. - It's possible to read this and think, "Well, no one understands that, start by reading it for yourself," and I'd answer, "Yes, first and foremost, read it for yourself, because I would not comprehend this." because I wouldn't be able to understand this myself.

"testing" was no longer a topic of debate following Helen's comments on Task 2. With an enthusiastic "excellent," Helen reacted to Lucy's praise of the letter she and Lucy had written, calling it "mmh, good" (Interview 2, D8, P15, line 90). She displayed some scepticism, though, when asked if the letter would persuade the buyer. For her, the question was whether a 5 percent discount would be acceptable to the customer (Interview 2, D8, P15, line 92). During the collaborative writing process, she was also unsatisfied with the letter, but she was unable to properly communicate her unhappiness ("Something I do not like," D8, Task 2, line 119).

Even though they performed a more in-depth study of the problem, Helen and Lucy failed to create writing goals for their letter in Work 2, in line with their failure to assess whether or not their text was any good or not (Excerpt 12). In both Task 2 and Task 1, the explanation was seen as the primary purpose of the task.

Lines 20–22 of D8 Task 2 (D8 Task 2). Explanation of Writing Task 2 (Extract 12)

Helen: Our supervisor has sent us an email, and we must reply to it in writing. As a result of [shows email]...

That's [also pointing to the email] something we'll have to explain to Lucy, isn't it? Helen: You're absolutely accurate.

Task 2 was a challenge for Helen since she lacked a model to follow (Interview 2, D8, P15, lines 64–68). She didn't show any more experience in writing an argumentative letter throughout the interview (Excerpt 13).

Understanding the Genre (Excerpt 13) (Interview 2, D8, P15, line 100) Interviewer: What do you think constitutes an excellent letter, in your view?

Helen: Just double-check that the time and date are right. And, of course, with the fewest potential errors.

At "school," Helen usually used to describe the literacy course, she remembered completing an assignment similar to this one. It's clear that she focused on the letter's outside characteristics, such the date and where to put "to" and "from," and subsequently on the content within, in her discussion of that "school" assignment. Interview 2 (D8, P15, line 76).

Since the collaborative writing process was the first point of reference for the study, the interview data bolstered this understanding, as previously indicated (in sections 5.3 and 5.4). After this step (sections 5.5 and 5.6), data is collected via follow-up interviews regarding aspects of the collaborative writing process that cannot be directly related to the collaborative writing process..

Methodological problems remain unsolved at the halfway point of the study 5.5.

In spite of Dyad 8's limited use of planning, the research presented here shows that conveying information is the primary method employed while writing. As a whole, the research of the writing process does not disclose anything unexpected. If you combine Tasks 1 and 2, you'll see that Helen has more writing expertise (at least when it comes to manuals as opposed to argumentative letters) than you'd anticipate from someone who is just starting out. Some of the events in the writing process might be described and understood much better if they were linked to the interviews and manuscripts. It's unclear whether or not these writers use a different writing approach while working alone as opposed to in groups of two, as several of their responses to interview questions were ambiguous.

It was shown that participants in the present study might forget particular events that occurred throughout the collaborative writing process, which was an issue in the prior study. Similar conclusions have been reached in the case of individual writing by Janssen et al. This is especially true for Helen, who, for example, was unable to remember why she had ignored Lucy's suggestion to read the writing assignment a second time during the second work (Excerpt 14). For both Task 1 and Task 2, Helen could only give a superficial summary of the writing process. (For further information on Writing Task 1, see Excerpt 4).

An enormous chasm (Interview 2, D8, P15, line 51 ff.)

Interviewer: With your letter, you had already made tremendous progress. After then, Lucy gave the sense that she wanted to hear the tasks again, especially the one with Mr Fässler on the phone. Lucy was right. To be honest, you were a little hesitant about it. It's not clear why this happened.

It's possible, but I'm not sure why. Helen [laughing]

Lucy couldn't remember, for example, why the role allocation had changed during the second writing session, as seen in Excerpt 15:

An enormous chasm (Interview 2, D8, P16, line 42f.)

[...] This is what I was told by the interviewer: There is a reason for the second shift in who is writing, remember? Is your memory strong? Lucy: It's happened before. I have no idea what's causing this. To put it simply, I'm so äh that I'm at a loss for words. There you have it. It's all here in the form of words.

If the topic of the collaborative writing process was brought up, Helen could use it as a springboard to talk about other comparable writing experiences, but she struggled with inquiries that went beyond the writing project they had just done (Excerpt 16). Both writings were considered good by her, but she could not provide any arguments as to why. Her writing partner, Lucy, omitted an illustration from the handbook, which puzzled her because she had previously emphasised that illustrations were an important aspect of guides elsewhere (Excerpt 17).

The Meaning and Importance of Writing (Interview 2, D8, P15, lines 143–146) is an abbreviated version of the passage. Interviewer: What does it mean to you to write?

Helen: I don't know what to say. — Yes, I would say so. Interviewer: How important is writing to you? Honestly, Helen, it doesn't matter that much.

Excerpt 17: Self-Evaluation and Genre Knowledge (Interview 1, D8, P15, lines 91–98) follows. Interviewer: What are your impressions, and how well did you do?

What a terrific idea.

Interviewer: Then why do you believe you're so good?

Helen: Right on target. — In response to / To be honest, I just thought it was a really well-written piece of work. I have no idea what's causing this. [laughing] Interviewer: In your view, a good handbook should have the following aspects.

Helen: Additionally, a user manual that contains an accompanying image would be a good illustration of this.

During the second interview, Helen displayed just minimal strategic understanding in the response to the hypothetical circumstance (Excerpt 18). When asked how she usually coped with issues in coming up with ideas, she was unable to identify a specific approach she would use. Instead, she said she'd get in touch with someone who could help. Other procedures like proposing and assessing also have approaches that were comparable to hers. There was a noticeable trend of people asking help with their writing in this phase of the interview. Finally, Helen came to the realisation that a competent writer is also one who can support others in their writing efforts ("And then I can approach her and ask her for aid," Interview 2, D8, P15, line 112).

Lines 171–174 of Interview 2, D8, P15; Interview 2, D8, P15, lines 171–174) from Excerpt 18:

Interviewer: What should you do if you can't come up with a topic for a piece of writing? What do you do if you find yourself in this situation?

Helen: Do I have the option of approaching a person in the room and asking them? What could I possibly write about the teacher if I were to do so? [...]

Interviewer: What if you already know what you want to write about and are looking for a topic? Putting your thoughts down on paper may be a challenge for you, but you may already have an idea. What do you do if you find yourself in this situation?

Helen: If you'd want to offer a hand, I'd be happy to oblige. You can write on my behalf if I give you some ideas.

While conducting interviews, researchers inquired about how the participants may approach an assignment if they were working alone to better understand the differences between solo and collaborative writing. Her lack of self-control and lack of time would have dictated a different approach had she been writing alone (Excerpt 19). She made it clear that if she

found an error or omission, she would rip out the offending phrase and begin again from scratch. Since Lucy took over writing when Helen was having problems, this sort of behaviour went unnoticed during the collaborative writing process.

Extract 19: Another Solving Process (Interview 1, D8, P15, lines 43–52) is an extract from this section.

Interviewer: In the event that you were forced to complete this assignment on your own, how would you proceed?

Helen: Afterwards, I'd more - I'd realise that something was lacking instantly. However, despite my struggles with writing, I have to pause and consider how I may express this before - sure, that is incorrect - and then I cross it out because I lack patience [laughs]. Yes.

How would you describe the feeling of being unable to wait for anything?

Helen: Do I have the ability to give up quickly? Yes. Leaving out a word because I don't know what it means leads to the text becoming/ f/ which is no longer totally accurate. [...]

You have to make a decision at this point, whether you want to keep it or change it? That, or I'll start again from scratch. Helen: Either way, I'll do it.

Interviewer: Do you want me to use the complete text or just a single word? Helen: I'm referring to the full piece of writing.

If Lucy had been working on her own project, she, too, would have written differently. She said that if she had had the chance, she would have written at her own pace (Interview 1, D8, P16, line 38). In fact, she said more than once that Helen couldn't keep up with her since she was moving so quickly.

Both instances show that the writing habits of participants are influenced by the collaborative setting. This was notably true in Helen's situation, to a large extent. It appeared that the relative talents of the authors were the primary determinants of the writing process. In general, it's safe to infer that authors with poor writing skills put more strain on the writing process than those with better writing skills. It's a virtue of this chapter's approach because the setting as a whole gives significant insights into the different writers' writing processes.

5.6 The Effects of the Experiment

It's critical to keep in mind that this is an experimental situation, so proceed with extreme care. Due to their embarrassment about their work, adult struggling writers do not want to be observed or videotaped while they are writing (Sturm, 2010). The addition of these elements will, it follows, have an effect on the writing process.

It was evident to both members of Dyad 8 that they were participating in an experiment, and both were aware of it. The moment Lucy pulled Helen's pen out of her hands in Task 1, Helen said, "They see everything that we write" (D8, Task 1, line 115). Instead of keeping a low profile throughout the writing process, Lucy made eye contact with the camera by lifting her beverage in a toasting gesture toward the camera. Lucia repeatedly made fun of the customer's name during Task 2: "Mr. Fräßler from fressen," which means "to eat," rather than "Mr. Fäßler," was one of her favourite pick-up lines. Comments were assigned to any such instances in the database.

Table 3 shows that, in most cases, the large majority of dyad members commented on their own writing, as indicated in a more thorough assessment of all comments. As a way of putting it, they looked at and evaluated the method they write as well as their own writing talents. The vast majority of comments are made in a non-confrontational way. While Helen's reaction was to be humiliated by her bad spelling or handwriting, it appears that many dyad members with weak writing abilities reacted in the same manner (see Figure 1). Dyad 4 or Dyad 5 are examples.

Both members of Dyad 8 appeared exhausted after their interviews. After the second writing exercise (Excerpt 20), Lucy freely declared that she was comfortable with it, and Helen simply answered that she had no problem with it. At the end of the interview.

An Experiment as Repetitive Situation (Interview 2, D8, P16, lines 402–405) is the subject of this excerpt (20).

Finally, how did your interview go? I'd want to know what you think. Lucy: It's been a drain on my energy. ... [laughs out loud] Not at all.

Interviewer: What did you find tiring about the experience?

Lucy: No, you have to think about it first. I mean, I'm starting to feel a little worn out. A long day was behind them.

Theorizing and Deliberation

An investigation of how adults who struggle with writing accomplish a task and the level of their writing skills was the goal of this study. Other concerns addressed in this inquiry were whether the multi-method approach (video recordings with interviews and textual analysis) was capable of capturing these two topics and if it was feasible for this investigation to be conducted.

According to the findings, the proposed combination of techniques, when applied to the study of collaborative writing, yields a wealth of helpful information. With struggling adults, collaborative writing may be a useful tool and a good starting point for discussion about their writing skill, identity as authors and notions of what constitutes good written work. They may use it regularly in interviews and connect with other personal writing experiences, which is incredibly beneficial for struggling adult writers. For researchers interested in studying collaborative writing processes, retrospective interviews can be a useful tool even if participants lack the ability to recall cognitive processes or accurately recount the timeline of events (1996).

Furthermore, it has been shown that this multi-method approach is effective in obtaining insights into the individual writing talents of struggling adult authors, as has been demonstrated. The approach taken here advances our understanding of how individuals in this specific group of struggling writers deal with higher-order writing skills such as genre knowledge, planning, and evaluating the effectiveness of texts by contributing to existing research on fundamental writing skills such as spelling. Section 5 results about Helen, including the two zoom-ins on her, provided compelling evidence of this fact. Adult struggling authors share many characteristics with their younger counterparts who are also struggling, according to the data (Dockrell, 2009; Graham, Schwartz, & MacArthur, 1993; Troia, 2006). Because of her insufficiently developed core writing abilities and her portrayal as a struggling adult writer, Helen has many similarities with other struggling adult writers. Furthermore, as an example, her writing orientation is local, which means that she does not

address writing issues in terms of a specific writing goal or the overall project. According to this, she only has a rudimentary understanding of strategy.

As a consequence of the investigation, more information is available on the characteristics that set struggling adult authors apart from their younger counterparts (Harris, Graham, Brindle, & Sandmel, 2009). The fact that she can pinpoint a fundamental writing obstacle, such as her inability to think and write at the same time, shows that Helen is an adult who has a good sense of her own abilities as a writer. Because she believes writing is a communication process, she feels it's appropriate to test a written handbook based on the reactions of readers. It is crucial that she shows a comprehension of manuals, even though she depends heavily on oral experience gained from earlier encounters. For example, when three data sources are merged into one, the characteristics of young struggling authors that are unusual are clearly visible.

Despite these advantages, the current study has a few drawbacks, which are as follows: An important caveat is that the results of this sub-study are mostly based on anecdotal evidence from one specific case. It is also important to realise that the collaborative atmosphere has an influence on the writing process from a methodological aspect. As Helen asserts, if she had difficulty spelling on her own, she would cross out the entire handbook. However, she doesn't do this here. Because her husband is in charge of the transcribing, she is out of luck. Collaboration has a limited influence on participants' writing abilities while they are present; it does not completely reorganise them. Although Helen is partnered with a partner who has better writing skills, such as Lucy, she still fails to write smoothly or accurately, and she also does not take the initiative to begin activities such as creating a writing goal.

A multi-method approach, as proven in this study, may result in data that does not necessarily fit together in a straight line while viewing the collaborative writing process, doing follow-up interviews, and creating texts. Follow-up interviews and the written texts of the collaborative writing project reveal some of the events that occurred during the process of writing back to the original incident. Interpreting such documents, however, should be done with utmost care. These traces should always be evaluated in combination with events that occurred throughout the writing process or remarks made during interviews that give alternate explanations to

prevent leaping to conclusions too hastily. Participants may approach collaborative writing in a different way than they would if they were writing alone, therefore this is necessary.

Additionally, researchers could investigate how adult writers who are having difficulty completing writing assignments in groups fare when left to complete them on their own. Finding out the strategies they use that are wasteful or unsuccessful is an area that requires additional investigation. Systematizing the analysis of all three data sources – protocol for video observation, written texts, and follow-up interviews – is also required to make conclusions more easily transferable between cases.

From a teaching perspective, the following points need to be made clear. Teachers should learn more about their students' writing processes and writing knowledge, as well as about effective writing instruction that results in a statistically significant improvement in writing skills, because the literacy courses did not result in a statistically significant improvement in writing skills within three months. Collaborative writing has unique traits and rewards that may require additional training for educators. Using Helen as an example, and generalising to all students, teachers must address specific inadequacies, notably in genre knowledge and writing abilities, in order to assure success.. To do this, teachers will need to move beyond the conventional product-focused writing lessons. As a result, evidence-based writing practises, such as teaching the writing process and demonstrating writing techniques, must be implemented in order for writing abilities to increase (MacArthur & Lembo, 2009). Writing education for struggling adults should take into consideration special qualities of adult writers such as their awareness of their own identity as writers and their prior oral literacy experiences in order to improve this evidence foundation even further.

It was revealed that none of the adult literacy instructors interviewed (including Helen's teacher) used collaborative writing as a teaching strategy (Sturm & Lindauer, 2014). Educators should know how different forms of collaboration affect students' ability to write. Adult learners benefit from their teacher taking on the role of thinker, while the students take on the job of transcriber. While the method used by Helen's instructor may have affected her performance on Tasks 1 and 2 in the sub-study, it's not apparent if this role allocation with her mother and sisters was already ingrained in Helen's psyche prior to the research. This is an area where case studies may be quite useful. It is possible for teachers to see how

particular teaching strategies encourage adult struggling writers to engage in unfavourable writing behaviour or to utilise an inefficient writing strategy.

Collaborative writing might be tested in future studies to see whether it can assist struggling adult writers improve their writing skills. Moreover, teachers might use collaborative writing in literacy courses to obtain insight into the tactics adopted by (struggling) adult learners in order to gain insight into their own teaching methods, as well.

Neither the students' reading and writing skills nor their motivating characteristics differed between dropouts and those who finished the course (Sturm & Philipp, 2013b).

As a whole, Switzerland has more dialects than any other country. In formal situations, Swiss High German is employed, especially when writing documents. Switzerland's High German is nearly identical to Germany's High German.

While writing a report, some participants said it would be best not to return a call from a disgruntled customer.

It took nearly three hours to complete the written work and one-on-one interview in some cases (Dyad 6 spent roughly 75 min. on the Task 1; after a 10-minute break, one interview lasted an additional 75 min.).

Although all pairs had read their texts again before to this assignment, they had done so primarily in terms of their own local interpretations, rather than as a global depiction. Because they had previously spent 75 minutes on the writing job, only Dyad 6 decided not to re-read their work for Job 1, which was a substantial amount of time. Due to just having typed five keywords in the first phase, Dyad 16 came to an abrupt end in the second phase.

Researching, socialising, chatting, bargaining, organising, monitoring, awarding, punishing, and documenting are all examples of supporting activities. Since every supporting activity is based on the writing assignment, they assume that all supporting activities are included in a cooperative writing process.

It's more or less a mechanical process because the transcripts already documented who was talking and writing when.

Fictional names are also used.

Only one of the dyads tested used a different collaborative writing strategy. One member of dyad 16 wrote the handbook while the other drew a picture of the coffee machine in concurrently. In Dyad 16, there was hardly little bargaining.

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Book review: Traditions of Writing Research

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The editors of Traditions of Writing Research created an eclectic collection of short essays for publishing in the journal Traditions of Writing Research using the contributions from the 2008 conference Writing Across Borders (henceforth WRAB). As a result, I've included the following language from WRAB's initial Call for Papers to further clarify the selection process: " 'This conference brings together the many writing researchers from across the world, drawing on all disciplines and focusing on all elements of writing across the lifespan and across all segments of society,' according to the conference's website. "This will be an opportunity to learn from other research traditions, exchange our findings, identify common agendas, and set the framework for future communication and partnerships," according to the website (<http://www.writing.ucsb.edu/wrconf08.html>). A guide or anthology would hope to discover articles that fit neatly into pre-existing categories, but the WRAB conference is all about forging new research paths and bridging gaps between previously unrelated ones. Keeping in line with their mission of bridging cultural barriers, this anthology features voices that are rarely heard together. An Argentinean etymological society is one of the 31 organisations that have contributed to this collection of etymological entries. Accordingly, there are no discipline-specific divisions in the book, nor do any of the parts match to specific research approaches or theoretical frameworks. Others report on new research projects that have not yet been published in this book. in this collection of scholarly essays

This review goes into great length about the five categories that organise the book's 31 pieces, as well as the ways in which those articles support those categorizations. The following paragraphs summarise my final opinions on the book and the contribution it makes to the field.

An edited collection of "wide-ranging survey of the best writing research now under process around the world, at least as represented at the 2008 WRAB conference" according to its editors, is what this book is all about (Bazerman et al, xi). Sampler-style chapters allow readers to "taste" a specific study subject and peruse a bibliography they may not be familiar with, according to my impressions. Section names and the book's content will be better understood if concise summaries of each subject are provided, so please bear with me.

Part 1: "Approaches in a Variety of Geographical Locations"

'Approaches in various regions' is separated into two parts, each including three articles. Various educational policies and systems from all across the world are represented, as are projects and study materials. The editors' intention to communicate that writing research is an international phenomenon, not limited to any specific country, language, or continent, is obvious from the preface of this book.

There have been a total of six publications, four of which are syntheses of different intellectual traditions that are rarely encountered together. Included here are papers on "Writingology" by Huijun, Delcambre and Reuter on French didactics from elementary school to university, Arajo on Brazil's genre study and Garca et al. on Spanish writing instruction for students with and without learning difficulties, just to name a few examples.

As a result of national efforts to improve writing teaching in schools, two papers in this collection highlight the educational advantages that can be achieved. The "top-down" institutionalised change that has been undertaken in Norway has resulted in positive outcomes, according to Dysthe. Writing teaching in Portugal has improved thanks to the efforts of Pereira and other members of her study group.

Academic writing in school settings is the subject of all of the articles in this section, and they all draw on diverse sources to back up their arguments.

Part 2: "Writing Education in Political and Historical Contexts"

Writing education in political and historical settings is the focus of four pieces selected by the editors for publication in this new area, which is titled "Writing Education in Political and Historical Contexts." When it comes to negotiating power and position, writers do the same thing they do when it comes to negotiating their language and writing. With the usage of the

term "political," the editors hope readers to examine the dynamics of power relations and how they affect literacy and educational achievement. The editors use the term "historical" to imply a time dimension that many writers in the field of writing education address by tracking progress or accumulating data through time.

Post-Soviet nations, notably Poland and Armenia, are the focus of two of the pieces. Ornatowski chronicles the educational method in Poland between 1945 and 1999, in which he claims that the country moved away from a Stalinist socialist objective toward a more individualist and critical approach. Students at Yerevan State University were observed for two years as they advanced from mimicking what the author terms "Western-style pedagogy" to mediating such methods for their own ends, as evidenced by the students themselves. The results of this study were published in this book (p. 99).

South American circumstances are the focus of the second and third works in this section. Slvia Cintra shows how people's capacity to deal with the tensions between the rural and urban worlds is closely linked to their ability to gain access to and practise literacy in Brazil. This article by González Pinzón discusses the "return to reading and writing education" that is taking place in Colombian institutions, and how this should be prioritised over reading comprehension in the context of higher education.

Ideological assumptions impact educational methods for teaching and enhancing literacy skills in all of these papers.

The final portion of the book is called Research in Primary and Secondary School Practice.

This third part compiles a total of eight papers on literacy research in elementary and secondary schools. Even if all of the items are linked to a grade school, not all of them are directly related to student education. Among the topics addressed in this field are the development of student writing and language skills, teacher training, and the mental processes of students.

There are five sections dedicated to the findings of studies into the writing processes of elementary and secondary school students. Four of them have been created for the first time with the help of classroom research. The study focused on particular instructional tactics and interventions. It is possible for students of all ages to engage in the revision process, even if

they are just a few years older than their peers. How students' writing improved as a result of specific interventions is described by Lvarez Angulo and Garca Parejo, and Romero and Walker describe how students who wrote for a bilingual radio project improved their written English because of multimodal interactions that took place during the project's production (including speaking, listening, reading, and writing). An essay by Tolchinsky and Salas examines how Moroccan and Chinese 5-8-year-olds learning Catalan link spoken language to written language in their second language. One piece focuses on the cognitive processes that authors go through as they refine their trade. There is a strong possibility that children's ability to communicate vocally in writing may be hindered by transcription methods (such as handwriting and typing).

The last three articles in Part 3 deal with topics related to education and teacher development. Using two case studies as examples, Null argues that instructors, rather than curricular materials, should be held responsible for driving change in the literacy classroom because they negotiate and adjust instructional texts to achieve their own goals. Faulkner, Rivalland, and Hunter's study on the Writing Project in Australian schools focuses on how teachers learned and utilised writing expertise in order to educate and assess their students in a similar manner. Because the National Writing Project (in the U.S.) provides teachers with the social and professional support they need to overcome the hurdles that prevent them from writing about their teaching, it has shaped instructors into authors. All of these publications provide frameworks based on fascinating facts, despite the fact that the articles' topics and research literature alter at times.

"Research in Higher Education Practice." is the title of the fourth part.

It opens with a study of 275 universities outside of the United States and Canada on Writing Across the Curriculum (WAC/WID) programmes, which is followed by a discussion of what was found. The Thaiss essay serves as a suitable beginning point for future investigation in this field, as all of the pieces below focus on literacy practises in classes other than first-year composition. In contrast to the other four sections of the book, this section's various pieces can be divided in several ways.

Results from a variety of studies are presented in three articles. According to Wake, in an attempt to better meet the educational needs of international students, Australian institutions

are utilising dialogic argument to help students in a capstone economics course face complicated rhetorical issues. Inglese claims that students who were exposed to multimodal representations of social scientific writers through print and television interviews produced better writings than their counterparts who were not exposed to multimodal representations. They show via thorough textual analysis that students may adopt some science genre rules for the purpose of establishing evidence through written communication in a beginning oceanography course in the United States.

Three items in this section challenge the academic institution's assumptions regarding literacy, which are usually kept hidden from students. Liew and Ball show that students are expected to bring a type of academic literacy to casual social interactions by producing and uploading texts online for the purpose of dialogic interchange in the academic setting. According to Carlino's research, literacy education in the social sciences is still "taken for granted" (p. 285), and there are some differences between what interviewees believe literacy instruction should look like and what they actually do when it comes to teaching it. As knowledge is written in the so-called "free environment" of the Internet, Starke-Meyerring examines the tensions between what types of institutional values and social genres are privileged over others in digital writing environments such as Wiki, Scholarpedia, and OpenWetWare in the final article in this section. In light of the reasons outlined in this section, we should rethink the tasks and procedures we assign to pupils.

Here, you'll study about ideas and approaches for analysing writing and the creative process. In this final portion of the book, the editors present us with six pieces that support various frameworks, techniques, and unique units of analysis for research. Aside from the fact that it is nearly difficult to keep track of all the differences in this field, writing studies are also distinct. The WRAB conference's theme is compatible with the following range, which looks to be reasonable.

For the sake of both research and teaching students how to write for a range of professional and academic contexts, Russell uses an approach combining activity theory and phenomenology in the book he wrote. Rogers then summarises qualitative longitudinal studies of writing in order to propose important qualities that researchers may investigate for future work on writing development. Because of the chronology of this publication, the

author claims that there has only been one longitudinal study on student writing in second language writing, which I consider to be erroneous information. Ilona Leki's (2007) *Undergraduates in a Second Language: Challenges and Complexities in Academic Literacy Development* and Christine Tardy's (2009) *Building Genre Knowledge*, both of which are available online, are two recent reports of longitudinal research in second language writing.

In two of the articles, real-time process research is detailed using statistical modelling and eye movement monitoring. To put it another way, statistical modelling of keystroke data is a strategy for handling vast volumes of data that researchers must gather if they are to obtain a thorough insight into the writing process in real time and realistic environments. Interested in the mechanics of writing, the authors offer an approach that integrates eye monitoring and keystroke recordings to better understand how people write. In the framework of writing research, Nelson and Grote-Garcia explore the connections between methodology and epistemology throughout the book. Using Nelson and Grote-study Garcia's framework, starting researchers and graduate students will be able to comprehend how researchers make judgments regarding project design and data analysis in the future.

A framework for teaching and critically analysing literary silences is provided by Huckin in the final chapter of this part, as well as the final chapter of the whole volume. When considering what and who is missing from this collection, it is both creative and difficult for us to close the book with this argument on the value of silences. All of the entries in this last part on theory are from universities in Europe or the United States, which makes sense when seen in light of Huckin's work.

Conclusion

Writerly Styles In the foreword of the book, the editors emphasise that the book should portray writing studies as a sampling. By include a variety of opinions, the editors achieved their goal by creating an international, rather than just Western European or United States-centric, writing research atmosphere. Writings from this book have been translated into Catalan (in Catalan translations), Chinese (in Catalan translations), French (in French translation), Norwegian (in Norwegian translation), Polish (in Polish translation), English (in English translation), Italian (in English translation). Writing in a second language has also been the subject of a few studies: Foreign students writing in English include Armenians,

Chinese, and Moroccan students who are studying Catalan, Mexican immigrants who are learning English, and non-native Italian speakers who are writing in their own language..

The editors have also included a number of theoretical and methodological frameworks in this book. A sampling of the methodologies included in the book include surveys, ethnographic interviews, critical and functional discourse analysis, real-time cognitive process tracing using keyboard and eye movement data recording, and real-time eye movement and eye tracking. This collection incorporates a substantial amount of sociocultural and Vygotskian analysis, which should come as no surprise.

Studying writing is an arduous endeavour no matter where you are in the globe, as demonstrated by this collection, which covers a wide range of topics and disciplines. Perhaps the editors should have done a better job of structuring this collection to help readers better comprehend how the many articles fit together. We should look forward to the WRAB conference and its editorial board in the future for their potential to uncover writers whose interactions defamiliarize our writing-study traditions.

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Writing as a Learning Activity

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Is there a function for writing in the process of learning? It's important to know what aspects of writing play a part in the learning process. To what extent should educators promote and facilitate the use of writing as a learning tool among their students? Those are the types of pressing questions that the new cutting-edge book, *writing as an educational activity*, is working hard to address. Since its start in the late 1970s, evidence-based research on writing-to-learn has grown into a thriving and lucrative area of study. As well as highlighting current issues and developments, this collection's editors intend to bring out challenges and opportunities that remain for the field going forward. With these goals in mind, they've brought together specialists and research organisations from nine countries, ranging from cognitive psychology to literature to linguistics and even history education. Writing-to-learn research is a truly multidisciplinary endeavour, as evidenced by the thirteen chapters of this edited volume, which draw on various theoretical paradigms (e.g., classic cognitivism; social constructivism; situated cognition; semiotics) and employ various methodologies (e.g., grounded theory) (e.g., laboratory experiments; quasi-experimental interventions studies; design experiments; phenomenographic studies; discourse and content analysis; etc.).

A wide range of viewpoints on writing may be found, from a look at the past to the present day.

The book's opening chapters, written by Klein, Boscolo, Gelati, and Kirkpatrick, are informative and helpful. the strong text approach (Britton 1982; Emig 1977; Applebee 1984) and analytic writing view (Applebee 1984), authors use historical views to trace writing-to-origins learn's to the present day Rather than relying on the writing process itself, modern cognitive views believe that writing's impacts are more influenced by the writer's cognitive

strategies or processes while they are engaged in it. The shift from a concentration on textual medium to cognitive processes as the major driver of writing-based learning is the first notable trend that can be observed in regard to the present volume (see Figure 1). Tynjälä, Mason, and Lonka's (2001) key work in this subject, *Writing as a Tool for Learning*, predicted the present trend of writing education. Nevertheless, several chapters in this collection give in-depth qualitative examinations of writers' cognitive processes in connection to specific writing-to-learn tasks, such as argumentation, explanation, and summarising.

Additionally, a second emphasis is placed on the mental processes associated with writing for the purpose of learning.

Throughout the book's chapters, a recurring topic is the shift from cross-curricular to disciplinary writing (Klein et al., 2014). The cognitive processing perspective and historically oriented approaches of writing to learn have one thing in common: they both consider writing to learn as a process that is impartial toward the specificities of each subject. Researchers in these traditions frequently construct and investigate writing assignments to help students better understand the material. But these scholars are more concerned with teaching students how to write on specific topic than than teaching them how to write in a variety of different writing styles from other disciplines. Research on writing-to-learn emphasises the need of teaching students the genres of writing that have evolved historically and convey the epistemological commitments that are pertinent to a particular scientific subject, a key finding in the area (Bazerman, Simon & Pieng, 2014). A number of chapters in the most recent version demonstrate this development in a paradigmatic fashion, including the following: There are three genres of history instruction: recording, explanation, and argumentation. Van Drie et al. (2014) analyse the processes of historical reasoning connected with each genre. An essential cultural practise for historians is one that students may learn through realistic writing assignments. While developing arguments is an important part of writing in history, students must also learn to utilise the "Writing in history not only requires students to develop arguments, but it also requires them to use the domain specific language and 'grammar' of history." of history in their writing. (van Drie and colleagues, 2014, pp. 98-99)

Changing from a "lonely problem solver" view of writing to one that emphasises situated and distributed cognition is the third tendency that the book highlights (Klein, 2014). For example, writing may be regarded a kind of distribution and placement since it is typically done in partnership with members from a scientific or practice-based group to adopt and replicate socially negotiated writing procedures. (Lave and Wenger, 1991). For the sake of illustration, the peer-review process may be considered as an ideal illustration of a located yet distributed activity. Intertextuality is a literary theory concept that Bazerman, Simon, and Pieng (2014) use to emphasise the situated nature of writing. According to Bazerman, Simon, and Pieng (2014), "...writers enter into and contribute to a discussion by drawing on communal resources, characterising and reformulating prior discussion, and commenting on specific statements of others" (Bazerman et al., p. 250). Examples of how reading and writing are intertwined are provided in several chapters of the book, which follows a contextual approach to learning. Consequently, the situated approach acknowledges the importance of a writer's writing context, notably the texts accessible for reading and the chances for collaboration with peers in the development of text. Using these qualities, you may learn to read, understand, and take part in the creation of meaning (Nykopp, Martunen&Laurinen, 2014). Individual authors' cognitive processes and written outcomes are supported and moulded by these individuals. Klein (2014) found that "the intricacy of the students' [written] explanations was not the consequence of sophisticated individual writing skills." following a qualitative investigation. Instead of being the product of a positive writing environment, it appeared to be the result of peer cooperation.

In addition to that, there are a number other notable features.

Given the importance of a positive learning environment and the wide variety of text sources authors frequently draw from while crafting their works, it's no wonder that several chapters focus on writing to learn from a variety of sources (e.g., Wiley et al., 2014; Mateos et al., 2014). Writing in or outside a subject is mostly dependent on prior reading of more than one book, even though the writers of these chapters do not necessarily adhere to the situated cognition approach. Several authors, including Mateos and colleagues, describe writing-to-learn as a hybrid endeavour, one in which learning takes place in tandem with reading and writing. Specifically, the chapters by Wiley et al. and Mateos as al. are notable since learning

from multiple sources has hitherto been studied largely in studies on text comprehension (for example, Anmarkrud, Brten, and Strms, 2014; Stadtler&Bromme, 2013; Wiley et al., 2014). Consequently, this study focused on two unique areas: text comprehension research and writing to learn research To help bridge this gap, Wiley et al. and Mateos et al. have each written chapters. Several writing-related cognitive theories are cited to back up their claims. Rouet, Perfetti, and Britt's document model of multiple text comprehension and Bereiter and Scardamalia's knowledge transformation model (1987) are a few of the hypotheses that have been put out in the past several decades (1999). Integrating many lines of research, the authors discover critical cognitive processes needed for integrating and synthesising data. Additionally, their research shows that students of all ages and educational levels often struggle with writing assignments like synthesising information from several sources.

An additional highlight of the book is the lengthy and painstakingly executed intervention studies aimed at supporting students in obtaining long-term knowledge and writing skills. Del Longo and Cisotto (2014) explain in detail a multi-week quasi-experimental intervention aimed at improving university students' oral and written argumentation abilities. Students were instructed to write short personal essays by Dikilitaş and Bush (2014) in order to help them build their vocabulary while learning a second language. An intervention study conducted by Gelati, Galvan and Boscolo (2014, this volume) aimed at teaching fourth-grade students key skills for writing summaries based on an in-depth analysis of the cognitive processes underpinning the production of summaries was carried out for five months. As a whole, these studies indicate how children of all ages and educational levels may be taught key writing-to-learn skills at different degrees of difficulty.

In my opinion

To stay on top of the subject, anybody interested in writing should check out Writing as a Learning Activity. In addition to exhibiting contemporary theoretical tendencies, the collection of chapters also exhibits the range and interdisciplinarity of empirical methodologies used to examine how writing could help learning. Some well-known concepts, such as Bereiter and Scardamalia's (1987) knowledge transforming model, are examined in depth in the chapters. There are several ideas on writing and learning that have changed and become more distinct throughout time, as well as theories that are still changing. For

example, a variety of novel theoretical views are being examined such as Perfetti's (1999) many documents model and the situated cognition approach by Perfetti, Rouet, and Britt (1999). (1999). For further information on this topic, see Klein, 2014. As a consequence, when I read the chapters, I found the theoretical assessments to be consistently advanced and the empirical studies, which were mostly qualitative, to be detailed and engaging. However theoretically sound, most of this study was purely exploratory, with no attempt made to put any theories to the test. To be able to test theories more thoroughly, I wanted to see "Stronger" study designs that may be used by researchers in psychology. There were still some unsolved questions at the end of the book, despite the fact that the book demonstrated clearly feasible and also persuasive interventions to encourage writing-to-learn. Considering that students were "prescribed" specific writing exercises in the majority of studies, I questioned if students got a grasp of the epistemic potential of writing by completing research-created assignments. Research on writing as a means of learning has thus far failed to adequately investigate how motivational components of writing influence students' ability to learn. At the same time, I feel like I've learned a lot from the book. Among the book's best lines is the following: "The relationship between writing and learning is not limited to specific writing to learn activities." There is a strong connection between writing for academic and professional purposes and learning.

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Measuring Writing

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To understand both writing processes and writing interventions, as well as writing interventions themselves, it is sometimes necessary to assess text quality. However, the idea of 'text quality' is commonly misunderstood or misunderstood. A more precise understanding and explanation of what it means to be a good writer is the purpose of this book, according to the editors. Chapters in the book are broken down into the following categories: definitions of writing skill, rater effects, and automated essay scoring, to name a few.

Talent for writing can be interpreted in many ways.

This book begins with a discussion of whether writing skills may be applied to a variety of topic areas. Also, how many of a student's texts must be chosen before a generalisation about their writing skills can be drawn? The validity and generalizability of Schoonen's findings are demonstrated by the use of data collected from a large sample of students at three distinct times in time and for three separate writing projects in two languages. A student's written English as a Foreign Language competency may be gauged by looking at three to four tasks, each of which is graded by two raters, as explained by Schoonen for secondary school students. In L1, on the other hand, it is absolutely necessary. Seven to ten tasks with a double-rated grade are required.

The results show that generalizability in L1 tasks is significantly hampered because intra-writer variability in L1 activities is larger than in L2 writing. It's sad to say but that's the case. Findings show that tasks are more valuable to generalizability than raters are. Even among older students, writing in a foreign language is more stable than writing in one's own language, according to Van den Bergh et al results. 's (1st year university students vs. 9th

graders). Analysis on four dimensions is used to contrast the four dimensions of content (argumentation), conclusion (conclusion), and text structure. If you're looking for something that can be used across a wide range of subjects, you'll want to use analytical ratings rather than holistic assessments. Concerned about Schoonen's excessive quantity of tasks, Van den Bergh and colleagues are more reasonable: We conclude that using a single text as the only criterion for research yields no useful results. A reliable conclusion cannot be obtained from research that uses a single text as a criteria for evaluation. This is on page 32 of the book. The number of raters is the same. Any number of raters, ideally many, must come to an agreement on the overall quality of the various texts.

Methods of evaluation

In this part, we'll look at three distinct kinds of rating methods. To highlight the benefits and drawbacks of various rating techniques, Neumann uses multiple assessment studies based on research findings from the United States and Germany. These include holistic, analytical, and mixed models. Olinhouse, Santangelo, and Wilson continue to explain the American approach of evaluating writing. Most tests in the United States are only given once, are restricted to a specific genre, and are evaluated as a whole. Writing standards are seen as a degree of competency in these assessments, on the other hand (which comprises more genres and skills). Writing in L1 isn't a common practise, as the previous chapters have shown. It is also possible that results made from a single event and one genre that have been holistically scored may be confined to the genre under consideration, if at all This results in a picture of pupils' writing talents that is too narrowly focused. A wider range of tasks must be assessed, hence new solutions must be developed.

Input from a rater

The usage of a range of genres might lead to an increase in the variability of writing projects in terms of interpersonal relationships. Raters, on the other hand, might be a source of uncertainty (see also He et al. 2013). In the third segment, two chapters are devoted to this topic. More than 60 (!) different parameters were considered by Barkaoui and Knouzi's team of six raters as they evaluated two jobs based on around 20 attributes. Their rationale is that writing studies should take into account more than just test results. Despite the fact that this technique is exciting from a research aspect, it is not very practical or beneficial in

educational settings. While completing current writing assignments, Weigle and Montee focus on the use of textual borrowing as an important strategy. It's critical that students learn to read and write together since this reflects the kind of writing they'll encounter in college and the workplace. A lack of consensus among the five raters on how best to include sources into the essays was exhibited. There were also considerable variances in perspectives, which demonstrated the need of providing clear instructions and training to raters, particularly when they originate from varied backgrounds..

A computer software evaluates the content of an essay.

The book ends with the answer, which the reader may have already figured out by this time in the novel. Although it may appear that some processes cannot be automated, this is not necessarily the case. Ratings would be a lot easier if this were implemented, at the very least. What if some of the measures you're looking at are "simple to define" yet show strong relationships with more "complicated" measurements? Automated essay scoring is the subject of two chapters in this book. IntelliMetric and E-rater (both of which are American) are included in McCurry's overview of the Educational Testing Service's computer scoring tools (ETS). According to McCurry's review, machines can't give the same degree of grading validity that humans can. Withaus focuses on the problems of employing Automated Essay Evaluation for the analysis of multimodal writing in his last chapter. As McCurry did before, Withaus (together with Weigle and Montee) focuses on modern multimodal writing in addition to the strategies already mentioned in the chapter. There are no immediate solutions to this problem, however there are several possibilities for future research (also Burstein, Tetreault, & Chodorow, 2013; Deane, 2013). I recommend Chermis and Burstein's Handbook of AEE: Current Applications and New Directions if you want to learn more about Automated Essay Evaluation.

Here's what I think:

Must admit that the primary reason for my review was to learn about how to do a study on multilingual essay writing processes and how to enhance my own research by using the metrics in this book. In light of this new knowledge, I now know that I should employ activities that are suited for a variety of situations and genres, have been double-reviewed, and are evaluated holistically and analytically. However, did finishing the book answer my

initial question? Can you, on the other hand, point a fresh PhD student in the right direction for the answer? No, I can't help you with either of these requests. The book may be valuable to those who are looking for fine-grained information on scoring system characteristics (including automated techniques), processes, and the influence of raters. An important link is also made between the book's topics, first by the sharp and well-argued introduction, and subsequently by the individual authors. There are several cross-references and examinations of findings that contradict one another, as well as some answers in certain situations. Yet another flaw in this work is how exhaustively it covers every little aspect. The ability to pick an assessment strategy that is most suited to our research goals is something I, and I assume other researchers, would want to have in place. It is my wish that I could pick a number of texts, raters and so on that would match our requirements.

Many people who read it will reflect on the fact that they will never be able to do what they have set their minds to after completing. A minimum of three to four texts in a foreign language and seven to ten (!) written in the native tongue are required to be eligible for consideration. The texts will be evaluated by at least four raters on at least forty criteria. It's important to note that there's still a long way to go before we can begin to define text quality, particularly in terms of how to conduct reliable and practical research on the link between writing processes and text quality. Because these studies focus on more basic and methodological issues, it's probable that their conclusions won't be applicable to other, more practically oriented research projects.

Though the book makes it clear that having a small group of young students write one text in their mother tongue and then having this written work rated by a single rater is not a very sensible way to determine their writing competence, I believe that this rating is not a reliable indicator of their writing competence. According to the prologue of the book, "[...] writing skill cannot be reliably measured by means of a single writing product per writer," There must be many texts written by each author, as well as multiple raters for each literary output. Training raters, creating exact rating rubrics, and including benchmarks are all important concerns as well. the tenth page) If you want an accurate picture of a student's writing process in their native language, you need at least three processes in L2 and four processes (within a

genre) in L1 to acquire an accurate reading of their writing style (see also Rijlaarsdam et al., 2011).

It's possible that certain journals' limits on the dissemination of study findings contribute to the issue raised in the introduction, namely the fact that writing quality indicators are typically not well described to allow for comparisons between studies. Researchers may be required to be exceedingly concise when describing measurements due to the article's length limitation. This book provides a wealth of information for researchers working in the subject, and the sharing of questionnaires and statistical tools would be of great use to them. However, other media have become aware of this added value and now require detailed material descriptions to be supplied with their stories. Many other periodicals allow their readers to access additional content online. The Journal of Writing Research is one such example.

As previously said, I hope that scholars in the future will continue to produce relevant language dependent and independent measures that may be automated and made freely available to the scientific community.

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**Use of AEE Technology for Feedback Generating on Written Text: A
Revolution in Academic Writing Domain**

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AEE, a computer-generated grading system that delivers written comments on the quality of written texts, is the topic of this book. It is already possible to find both commercial and non-commercial AEE applications that feature a scoring engine that provides automatic scores based on techniques like artificial intelligence (AI), natural language processing (NLP), and latent semantic analysis. AEE scoring engines are taught using human ratings, and AEE is being used for summative assessments in tests such as the TOEFL and the Graduate Management Admissions Test, in combination with human ratings. In addition to spoken feedback, many AEE programmes also incorporate written feedback in the form of comments and corrections. Using written AEE feedback to give formative input in writing courses has grown in popularity in recent years, especially in American schools at the secondary and postsecondary levels. The book is a follow-up to *Automated Essay Scoring: A Cross-Disciplinary Approach*, which was published in 2003 and is the subject of this volume. Published in 2003, (Lawrence Erlbaum Associates) The writers of this book intend to provide a comprehensive summary of the past decade's advancements in the field. According to the preface, the term "automated essay evaluation" has been changed from "automated essay scoring" to "automated essay evaluation." AEE alias AES's assessment-oriented roots were examined in the preceding book, which focused on the test scores and the software used to create these findings. Computational-linguistic and psychometric theories were greatly inspired by it. The introduction appears to be setting the stage for the new book to broaden its reach by offering written AEE feedback aimed toward teaching as well as opinions on

educational policy and writing research alongside those of computational linguists and psychometricians.

AEE is shown in the novel as a problematic topic. Because of the "terrified" the author of the preface goes so far as to state that he is "the drumbeat of criticism concerning AEE" about writing the foreword (p vii). Some of the most prominent thinkers in the world, including Noam Chomsky, have signed an online petition titled "Professionals Against Machine Scoring of Student Essays in High-Stakes Assessment," which has been reported in a number of media, including the New York Times. Critics of the AEE programme have voiced concerns about the program's authenticity and integrity and about the possible repercussions of writing for a non-human audience, as is acknowledged by the prologue. It appears that this volume will address these problems by evaluating the current data supporting AEE's value in connection to students' writing, as well as an informative and well-balanced discussion of the topic.

Synopsis

There are four loosely organised sections, according to the preamble. Introduces AEE and its development history; also discusses various concerns with AEE. The sections that follow provide a quick overview of each of the four components. Because neither the introduction nor the table of contents specifies where the sections begin and end, I have used my own judgement to establish the beginning and conclusion of each part.

Section 1: Introduction

Section 1 focuses on AEE and research paper preparation. Second-year college students in the United States can use AEE as a quick evaluation technique to identify those who require remedial writing assistance. In the chapter, AEE is suggested for this purpose because of both the drop in remediation rates and the statistically significant favourable correlations between AEE scores, SAT scores, and writing portfolio scores as reasons. Detailed discussion of AEE scoring and comments may be found in Chapter 3. There are numerous insights regarding AEE's capabilities (or lack thereof) that are applicable to writing in general even though this book focuses on EFL and ESL. The chapter concludes with a brief review of the effectiveness of automated feedback in helping students improve their writing.

The second section is titled

In the second part, certain AEE programmes' traits and capabilities are explored in further depth. Computational linguistics and psychometrics affect the chapters in this area, and numerical feedback is emphasised rather than written feedback in the chapters. Chapter 4 discusses the E-rater software, developed by the Education Testing Service, which uses natural language processing to identify linguistic elements in a document. Pearson Knowledge Technologies' Intelligent Essay Assessor is based on Latent Semantic Analysis (LSA), which is detailed in Chapter 5. There are two types of assessments being used in West Virginia schools: summative (WESTEST 2) and formative (West Virginia Write). Intellimetric, a technology developed by Vantage Learning, uses a combination of linear analysis, Bayesian analysis, and Latent Semantic analysis. At Carnegie Mellon's Language Technologies Institute, LightSIDE, a programme that uses open source technologies, was first created in Chapter 8.

Section 3 of this document

Section 3 focuses on psychometric issues related to AEE, and again emphasises scoring rather than textual input. Chapter 9 focuses on the logistics and limits of automated short response scoring. This chapter examines the validity of AEE by examining how the logic that drives the assignment of scores to essays when automated scoring is applied may change when human raters are used. Findings from this chapter show that AEE scoring is able to measure certain parts of writing, but not all aspects of writing, based on the current data. In Chapter 12, a heavily psychometric and statistically oriented chapter, we go into great depth on scaling and norming for automated essay scoring. Chapter 13 delves at the relationship between AEE scores and human assessments. "Reader drift," which relates to a human inclination toward deviation from scoring criteria, is extensively covered in Chapter 14. AEE may also be used to monitor the performance of human raters, which is detailed in Chapter 15.

Section 4

There are a number of current developments in the field of AEE discussed in Section 4, including the use of AEE to evaluate discourse coherence in essays (Chapter 15); current techniques in the grammar error detection of AEE (Chapter 15); using AEE to evaluate

discourse coherence (Chapter 16); and using AEE to identify attitudinal expressions (Chapter 18). In Chapter 19, which examines AEE systems, the connections between AEE scores and human scores are explored in depth. The book's last chapter examines the role AEE can play in the Single Core State Standards Initiative (CCSSI), which is a common set of education standards for Language Arts/Literature and Mathematics in the United States for K-12 students.

Evaluation

As a whole, this book provides an excellent overview of the current status of AEE systems, even if it is a tad lengthy. You may find this book useful if you wish to understand how AEE systems function, what their capabilities are like, and how these capabilities compare to the capabilities of human raters or those of other AEE systems. From the most fundamental to the most cutting-edge research, this book gives an excellent summary of the most significant advances that have happened in the previous ten years. Validity, dependability, and norming, among other things, are all addressed in great detail. These are all crucial problems in the construction of meaningful and accurate automated scoring systems.

It is unfortunate that the book fails to meet its goal of providing a comprehensive vision of AEE that incorporates opinions from writing research and educational policy, as well as those from other disciplines. " Again, it looks like the book was primarily created for audiences in the disciplines of computer assisted language learning and psychometric analysis. It is reasonable to assume that this is the case, given the backgrounds of the vast majority of the writers and the fact that many of them work for or are somehow closely associated with the companies that design and market AEE systems.

Writing researchers and educationalists may find themselves bewildered and probably a bit disappointed by the book's lack of theoretical and pedagogical ideas drawn from writing research or writing teaching. No insights into how AEE written feedback is utilised in schools as a kind of formative evaluation, how it affects authors, or how it might be successfully integrated into classroom instruction are supplied to readers. While AWE is discussed in one of the two chapters on writing instruction, nothing is said about its usage in the writing classroom in the other (Chapter 2). Another (Chapter 3) includes both summative and formative applications of AEE and is by far the most beneficial in terms of writing study and

education. In particular, Chapter 3 is the most intriguing. It's also worth noting that Chapter 18 does relate the continuous development of AEE to a cognitive model of writing and, via this, to particular abilities and processes, which is a good development in the area.

The book's major concentration is on AEE systems rather than writing or authors. On the other side, many of the negative claims regarding AEE have focused on its supposed influence on writers and the writing process. This is a common theme. The book is unable to address many of the concerns levelled about AEE systems since it essentially excludes authors from the equation. When it comes to assessing various components of the writing process, AEE systems have limits that the book candidly and openly acknowledges. A brief review of the effects of AEE on students' writing is all that is provided. Two chapters (Chapter 3 and Chapter 15) make short reference of the impacts of AEE feedback on students' writing, but neither goes into considerable length regarding these or gives anything that approaches a full examination of the research on the issue. This is problematic since there is a growing body of work that analyses the impacts of AWE in terms of the quality of students' writing, the effects of AEE on students' writing processes, the effects on student and teacher perceptions, and the utilisation of AEE systems in the classroom. Not only is there no reference of this literature here, but there is no mention of it anywhere else in the book.

It promises more than it can give when it comes to comprehensiveness and scope as a comprehensive guidebook for automated essay grading. While there are some unmet promises in this book, those promises may be overlooked if the reader accepts the book for what it is: a detailed and rigorous examination of AEE scoring systems and their capabilities as well as the psychometric qualities they possess and their continual development.

**A Book Review on The Evolution of a Person's 'Written and Spoken
Language Development Across Lifespan' by Liliana Tolchinsky**

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The current book was prepared as a tribute to Liliana Tolchinsky's excellent work as a researcher in the field of writing development. Researchers from across the world who were affected by or inspired by Liliana Tolchinsky's thoughts and research have been brought together to help the editors of Written and Spoken Language Development Across the Lifespan accomplish their aim.

The editors Perera, Aparici, Rosado, and Salas wrote an introduction to the book in which they go into great depth on Liliana Tolchinsky's professional background. Liliana Tolchinsky's outstanding career, which is full of ambitious and creative initiatives, global partnerships, and achievements, is well-illustrated in this introduction. In total, there are 19 chapters in this book, all of which are devoted to studying how languages emerge. Part I focuses on early literacy development, whereas Part II covers later literacy development.

There are two sections to this review. By swiftly presenting each chapter and showing the similarities and contrasts between them, this part introduces the reader to the book. This section will provide the reader a sense of the breadth and depth of the book's linguistic settings, participants, levels of language, and techniques of analysis. Second, we examine the book's content in connection to Liliana Tolchinsky's professional life, connecting the chapters with her key research interests and contributions to language development.

1. the book's content

The book is broken into two halves, each with 19 chapters, and the total number of chapters is 192. A wide variety of languages, as well as a wide range of participant profiles, methods,

and procedures are at risk because of the writers' diverse backgrounds. This section aims to describe the chapters in order to emphasise their importance in the field of writing research. Remember, this review is for a journal dedicated to producing research, not reading research, as the title may suggest. The author's very first chapter was written.

R. M. Joshi's appraisal of Liliana Tolchinsky's work has had an influence on our knowledge of writing development, and these contributions are included in that knowledge. In the second half of our review, we'll go into more information about it.

Part 1 of this article focuses on the development of early literacy skills.

Two studies in Hebrew (Aram & Levin; Sandbank), two in English (Dockrell& Connelly), two in Spanish (Shiro), one in Dutch (Verhoeven & Van Elsäcker), and one in Catalan are included in the first section of this paper. In total, nine experimental studies on early literacy were conducted in five different languages: two studies in Hebrew, two studies in English, two studies in Spanish, and one in Dutch (Veneziano). In terms of orthographic consistency and alphabet, the two languages at issue differ greatly, which offers the reader with a lot of information. Dutch, Spanish, and Catalan are usually considered to be much more opaque than English and French due to their high degree of consistency and regularity in terms of correspondences between phonemes and graphemes. In contrast, Israeli researchers are focusing on an altogether other alphabet, namely the Hebrew alphabet.

Three studies were conducted on preschoolers between the ages of 5 and 6 years old, based on their demographics (Aram & Levin; Sandbank; Vernon). A few of the other studies use elementary school students from a broad age range (Dockrell& Connelly; Verhoeven & Van Elsäcker) or from a single or two unique classes (Reilly &Posle; Soler Vilageliu et al.).

There has been a lot of study done on preschoolers.

It was Vernon's study of phonological processes and Sandbank's study of writing that examined pre-literate children, whereas the trials done by Aram and Levin examined mother-child relations. Researchers Aram and Levin studied the influence of mother-child connections on early literacy development before formal reading and writing training was introduced. They surveyed a wide range of moms to learn about their attitudes about education in general and their expectations for their children's literacy development in

particular. They also videotaped the mother and her kid's interactions while the toddler completed a four-word writing assignment, which was filmed. Many variables were taken into consideration, including the amount of teaching given and the demand for accuracy. Hierarchical regression was used to reveal that mothers' task mediation added an extra variance to their children's literacy evaluations, in addition to the mothers' views. There were two studies: one with 94 kindergarten students and the other with 140 students at the beginning of primary school. As part of Vernon's research for this book, two tests were conducted with 140 first-grade students to better understand the syllable's function as well as its structural characteristics (Study 2). According to the authors, the different sorts of replies were categorised using voice segmentation and spelling problems as qualifiers. According to the findings of the researchers, the syllabic structure appears to have influenced both phonological and written outcomes in Spanish-speaking youngsters. Sandbank performed this research, which recruited 24 preschoolers between the ages of 5 and 6. A board game requires participants to write down the rules in Hebrew during three separate sessions. Working together in small groups, the children were urged to speak with one another and to exchange knowledge so that they might help one other out. In order to play the game, the students had to write three phrases on a card. This emphasised the importance of writing as a means of conveying a message. There are several factors that determine the quality of children's sentences: phonological segment accuracy, alphabetic principle use, etc. In addition, the authors tracked each child's progress over the course of three writing sessions, revealing a range of growth paths (advances, fluctuations and regressions). The researchers decided that the quality of their work was better when they collaborated with one another rather than performing it on their own.

Children in elementary school were the focus of a recent study.

Both Dockrell and Connelly examined how oral and written language interacted in the English language at two separate points in its development (Grade 3 and 5). An experimental approach focusing on sentence level performance was employed to better explore the link between essential language abilities. They hoped to obtain a better grasp of the idea creation process by comparing oral and written sentence development skills (i.e., construct as many sentences as possible containing two specified words). There was a lot of attention paid to the

links between the tasks of generating oral and written sentences, as well as other oral and writing abilities, in order to demonstrate the connectivity and distinctiveness of the subcomponents of idea creation processes. Last but not least, since all of the preceding studies focused on monolingual children, Verhoeven and Van Elsäcker's study explored the disparities in literacy performance between monolingual and bilingual children as well as the influence of many contextual factors on reading skills. In order to study the impact of school predictors and home environment factors on children's reading levels, they conducted a regression analysis in reverse.

Cross-sectional and long-term studies

Both a longitudinal and a cross-sectional approach were used by the authors to study the evolution of written language abilities over time (Reilly & Posle). Soler Vilageliu and his colleagues made substantial contributions to this work by conducting a long-term study of the motor aspect of writing. It was shown that handwriting skills in Grade 1 had a significant influence on a wide range of abilities in Grade 5. (reading comprehension and spelling). Copying a word list was a part of the Grade 1 curriculum for the first time. Handwriting was digitised using a digitiser, allowing for the collection of information regarding a variety of dynamic writing performance aspects (e.g., writing time, trajectory, velocity changes). A standardised assessment for writing abilities (word, sentence, and paragraph levels) and reading comprehension was conducted four years later for the second part of the project. A cluster technique was used to categorise children into "low skilled handwriters" and "high skilled handwriters." based on the data obtained in grades 1 and 2.

By comparing the two cluster members, they were able to ascertain if these graphomotor outcomes may predict future literacy achievement. When it came to reading comprehension and spelling, the "high skilled handwriters" outperformed the overall population. The researchers discovered fascinating links between early handwriting skills and later orthographic aptitude and reading comprehension. Two sets of children were studied in Reilly and Posle's experiment: the "Young Group," which included children aged 6;5 to 8;11, and the "Older Group," which included children aged 9;0 to 13;6. They looked examined the correlations between standardised scores in several language measures (tests that measured phonology, vocabulary, morphology, and syntax), as well as the correlations between written

and spoken tales by researchers Reilly and Posle. Writing and describing a situation when someone made the student furious or sad was the last task. The quantity of semantic propositions, narrative structure, and story components were all taken into account when calculating the final score, as were a variety of linguistic structural types (such as morphology and syntactic depth faults). The researchers used a correlational strategy to examine the link between isolated language structure performances and naturalistic language structure performances in this study. The cross-sectional design allowed them to see the changes that happened with time, thus they chose a developmental perspective.

1.2 Part 2: Development of literacy later in life

A total of nine chapters are devoted to the subject of children's subsequent literacy development. This section examines a variety of linguistic contexts, including three studies conducted among Spanish speakers (Aparici, Rosado & Perera; Bel & Albert; Salas, Llauro, Castillo, Taulé & Marti), two in Italian (Arfé & Pizzocaro) and two in French (Ailhaud, Chenu & Jisa), and one each in English and Hebrew (Aparici, Rosado & Perera; Bel (Berman). Both Hebrew (Nir & Katzenberger) and Arabic (Sha'shoua & Katzenberger) are included in the book (Nir & Katzenberger). The chapters in this book dealt with a wide range of topics related to the evolution of writing across time. In contrast to a single experiment, the great majority of writers looked at things from a textual perspective, rather than a sentence perspective. When it came to writing assessment in educational contexts, a single research was conducted.

Structure of the sentences

To demonstrate their comprehension, Arfé and Pizzocaro asked the children to compose sentences in both oral and written forms, as well as complete a sentence reformulation task. The researchers wanted to find out if there were any changes in writing expression connected with developmental and individual differences that might be detected through the use of oral and written sentence generation activities. For this exploratory experiment, they gathered data from children in grades 2 through 5, and found that the written sentence production task was the most sensitive to developmental changes. Second-generation writers who struggled with written expression might be identified by completing a similar written sentence production assignment, according to the researchers (through logistic regression). As a researcher, I

found it interesting that this study included children with normal development as well as children who struggled with writing.

Analyses at the discourse and textual levels

Most of the other authors worked on non-fiction and non-explanatory pieces, both of which were given to them on a whim. Consequently, it is considered a naturalistic framework for study since participants have a considerable level of freedom in the substance of their works. The authors did not look at the same characteristics of the participants' products, despite the fact that the assignments were fairly comparable.

The two studies done in Hebrew by Nir and Katzenberger and Ravid et al. originated from the same database, as did the third research conducted in English by Nir and Katzenberger (i.e., The Israeli Writing Standards Project) (i.e., The Israeli Writing Standards Project). Individuals who took part in this project were asked to submit personal narratives about their experiences as well as an explanation essay on a given topic area. Four distinct age groups were examined by Nir and Katzenberger using a cross-sectional technique (Grade 4, Grade 7, Grade 11 and adults). They studied the methods through which people construct their written works. To determine the total number of clauses, the authors divided the corpus into three categories: descriptive, generic, and interpretative. For their study, the authors analysed their data by looking at how different sorts of clauses were distributed among different ages, which they found to be rather fascinating. Only seventh-graders were studied by Ravid and his colleagues, with a special attention paid to socioeconomic status (SES). As they read, they considered the idea of tying SES to the content they were studying. The "high SES" and "low SES" groups were compared using ANOVAs and a dyadic analysis, and both were shown to be statistically different.

At the level of discourse, many researchers have focused on comparing and contrasting the oral and written modes. Students and adults aged 9, 12, and 17 years old were the subjects of a research by Aparici et al. that focused on the development of relative clause creation. They looked at the quantity and qualitative functions of relative clauses in oral and written text productions from the standpoint of discourse to determine the amount of relative clauses. Students were expected to provide narrative and explanatory materials, both in writing and speaking. In terms of structural and discourse analysis, they found quantitative and qualitative

shifts. High school pupils and adults alike affirmed the complicated syntax of expository writings, as well as a higher frequency of relative clauses in expository texts (i.e. a greater number of relative clauses in expository texts) than narrative texts (i.e., a greater frequency of relative clauses) (see Figure 1). With regard to linguistic literacy and language repertoire development, author explored many aspects in the chapter relating to discourse style analysis and quality of conversation. Students from four different grade levels in English and Hebrew schools contributed oral and written accounts to a database that he analysed. Using samples from participants' writings, the chapter highlighted the distinctions between speech and writing narratives such as total text length, the frequency of hesitation indications, and the usage of clause-combining. Four other age groups were also analysed, with a focus on one particular aspect of the Spanish language: the usage of the null pronoun during conversation as opposed to the production of written content. The authors looked at how often the null pronoun was used in the stories and did research on it. We utilised repeated-measures ANOVAs to look for differences between groups and assess how the modality affected those differences (oral vs. written). Ailhaud and colleagues used two chronometric measures, stop length and writing rate, to examine the planning processes of children and adolescents aged 9 to 16 years old while they were engaged in text production as part of their research. When writing narrative and expository texts for this project, students had to choose between writing them in writing or speaking them out loud. The authors wanted to know if the sort of syntactic units employed in a piece of writing might be influenced by the sequence in which they were presented, as well as by the stage of development, the type of text produced, and the amount of time spent on preparation (clause, propositional, etc.). Students' pauses were shorter when they initially constructed the spoken text before writing it down, according to the research (for seventh graders).

To evaluate what is written

Finally, Salas et al. focused on the topic of evaluating text. They analysed the written output of Spanish children between the ages of nine and twelve, as well as those between the ages of sixteen and adulthood. The texts were assigned points based on a range of holistic criteria by independent raters. Researchers were interested in determining whether or whether the linguistic indicators (such as lexical density and the amount of adjectives) in the texts (e.g.,

the average content-word length) were connected with differences in points awarded by the judges. The data was analysed through the use of correlations and multiple regressions.

2. Discussion

R. M. Joshi's first chapter on Liliana Tolchinsky, a pioneer in the area of writing who made significant contributions to research, covers both her pioneering position in writing and her contributions to research. According to the author, Liliana Tolchinsky had a big impact in three areas: Preschoolers have a natural awareness of writing, which is why it's important to study the process of writing development in the context of the language they're learning and the specifics of their orthography. Each chapter was examined in the context of Liliana Tolchinsky's three most significant contributions to the field of writing, rather than each chapter being examined individually.

The following is a definition of writing as a distinct research area:

Long ago, writing was thought of as just "speech written down," However, many scholars now question this long-held belief. One of the book's main focuses was to examine the relationship between oral and written languages, as well as the peculiarities of written language.

They concentrated on the development of handwriting, a new and difficult production skill that every youngster must learn.. The team of Soler Vilageliu and other researchers We were reminded by the authors that this part of writing has been disregarded in writing studies in favour of spelling and transcribing abilities. However, the process of writing necessitates the growth of this advanced talent. Writing cannot be viewed as "speaking on paper." since it requires graphomotor talents that are exclusive to writing and necessary for handwriting performance.

The assessment procedure is another unique feature of the writing mode. A vast number of writing-related experts tend to be interested in changing the way written production is assessed, particularly in the context of schools, in regards to this topic. Ravid et al. and Nir and Katzenberger used data from the "Israeli Writing Standards Study," a study designed to improve the way texts in Hebrew are graded by giving standards to teachers, as well as data from other sources. Salas et al. also added a chapter to this topic. In order to better understand

the link between linguistic features and total quality ratings awarded by four expert judges, they focused on text quality evaluation. Cross-sectional design allowed them to shed light on the developmental stages that instructors should keep in mind while judging the quality of their students' texts.

Several of the contributors to this collection were interested in investigating how oral and written language modes are related to one other as well as how they are created and transmitted. They did this in order to highlight the distinctions between written and spoken forms of expression. For their research, Reilly and Posle used standardised assessments, as well as written and spoken narratives, to examine a variety of language components. These researchers followed the development of the child's relationship with their teacher throughout the length of his or her primary school years, using a longitudinal technique. In their study, Dockrell and Connelly looked at the link between oral and written sentence production. Children's ability to write sentences was aided by their ability to speak, and this link developed with time, according to the study's findings. The chapter by Bel and Albert also includes a comparison of oral and written language in order to better comprehend the development of Spanish language, including, among other things, the usage of the null pronoun. According to their findings, the modality of Spanish had a major impact, with greater ambiguity being seen in spoken Spanish than in Spanish written down. Berman evaluated a wide range of features of the tales, including the number of repetitions and the length of the narrative text, as part of the same research. According to a study conducted by Ailhaud et al., they explored if the order in which modalities were provided (oral or written) had an influence on many stages of text creation, as well as whether oral preparation may have a favourable impact on the written production of narratives. It was necessary for the students in the chapter by Aparici, Rosado and Perera to produce written and spoken texts that were both narrative and explanatory. Structural and discursive theories were used to show both quantitative and qualitative changes. For high school students and adults in general, they found a considerable increase in the number of relative clauses in written mode when compared to oral mode.

Questions of how oral and written language are linked have been less commonly examined in the literature. Contributing to work relating speaking and writing, more especially to

discourse level, the writers indicated above have made a significant contribution. As a result of these studies, it can be concluded that the written modality has a wide range of sentence forms, pronouns, relative clauses, and other sorts of clauses, which are all evidence of the richness of the written modality at various levels of language. Literacy is defined as "gaining mastery over a broader and more flexible linguistic repertory while also becoming more aware of one's own spoken and written language systems" by Liliana Tolchinsky, and this book provides an outline of that concept (Ravid&Tolchinsky, 2002, p. 420).

The writing skills of young children are improving.

Before they begin formal schooling, several researchers, like Liliana Tolchinsky, defended the idea that preschoolers already have some comprehension of writing. For Liliana Tolchinsky, the study of early written language acquisition, with a specific focus on writing abilities, was her primary interest. Part I of the series on early literacy had three chapters devoted to the topic of preliteracy.

The study by Aram and Levin examined the effect of mother-child interactions on young children's early literacy development. It's necessary to learn to read and write using phonological processes, thus Vernon gave two tests to test this. For the book, Sandbank provided an essay in which she compared the writing of preschoolers who collaborated in a group setting with those who wrote in isolation. They all improved their writing skills because they learned from each other in small groups and were able to build on each other's prior knowledge.

Pre-literate youngsters already have a working knowledge of written language, according to these studies. Here, the focus was on writing skills, particularly in terms of semantically-based knowledge for young children, which was consistent with prior work done by Liliana Tolchinsky. Adding this perspective to the literature is a welcomed and important addition.

Writing from a cross-linguistic perspective

A few chapters in this book are devoted to the history of spelling as it has evolved across different orthographies. LiyanaTolchinsky made an important contribution by pointing out that bilingual and monolingual children do not grow in the same way since the patterns of development vary based on a variety of factors, including orthography. Due to the enormous

number of studies published in English-speaking nations, this book covers numerous studies done in linguistic contexts outside of English.

Salas et al. study took into account the specifics of the orthography in question. A more opaque orthography in English than in other languages has led to a large number of studies on text production processes, according to the authors. When evaluating the quality of a piece of writing, it is important to keep in mind that the quantity of linguistic consistency might have an influence on the conclusion of a writing project. A compelling need exists to research the mechanisms involved in the generation of text in a very consistent orthography, such as Spanish, for which their experiment was carried out. Nir and Katzenberger and Ravid et al., on the other hand, conducted their research in Hebrew-speaking contexts and were motivated by the need to better understand their home language. Readers are given a lot of information about a language and its alphabet, which isn't usually the subject of academic study. They also emphasised the peculiarity of the Italian dialect, citing its complex grammar/morphology as necessary for the recovery of syntactic structures as well as the construction of sentences. —Arfé&Pizzocaro The null pronoun, which may be found in other Latin languages, was a focus of Bel and Albert's research because they felt it was particularly useful in Spanish. Using data from the United States and Israel in the same chapter, Berman provided a way for academics to track language development in a discursive situation. Those writers made substantial contributions to our understanding of languages and their unique qualities.

Researchers Verhoeven and Van Elsäcker compared monolingual and bilingual individuals on a range of linguistic abilities when it came to biculturalism. According to their findings, bilingual children do not acquire writing skills in the same manner as monolingual children.

There are many ways to look at language development and the development of other languages from a cross-linguistic viewpoint, and these chapters all contribute to this knowledge. Using this book, students may compare and contrast languages in a fun and interesting way. All things considered, it is possible to examine the differences across languages at the level of phoneme-to-grapheme transcription, which has been demonstrated on several times. Intriguingly, this book examines how grammatical and morphological variations between languages explain discrepancies in text production growth and grammatical and morphological differences themselves.

3. Conclusion

Liliana Tolchinsky's research interests are aligned with the findings of an interdisciplinary book, *Written and Spoken Language Development Over the Lifespan*. Cross-sectional and longitudinal studies are used to gather data on a wide range of topics, from the earliest stages of language acquisition to the most advanced stages. Learn about language development in a number of contexts, including typical vs atypical development, multilingualism, consistent versus opaque orthographies, and a range of alphabets (Latin vs. Hebrew). It is difficult to investigate the relationships between oral and written language since it requires the analysis of a vast number of linguistic elements. Many different methods of analysis are used by the contributors to this volume, which not only provides a comprehensive overview of language development but also provides an in-depth look at the development of language at various levels like semantics, syntax and morphology as well as spelling and handwriting execution.

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The First Language vs. the Foreign Language: A Study

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Putting pen to paper when you don't speak the language is a challenge. When writing in a foreign language, Esther Odilia Breuer employs a boxing analogy to depict the challenging task of balancing cognitive processes and avoiding the "punches" of the first language (L1) to the foreign language (L2), which requires the writer's training, flexibility, and endurance (FL). The fight between the L1 and FL for supremacy is a major topic of Breuer's PhD dissertation, which Peter Lag has recently published as a book in the Text production and Medium series (Eds. Eva-Maria Jakobs and Dagmar Knorr). "when, how, and in which areas the battle between the L1 and the FL takes place, which methods [writers] use in order to shield themselves from the 'attacks' of the L1, and when they fail and have to take a strike" (First language against foreign language) (Chapter 1, p. 4). Writing in FL has been shown to have three distinct problems: (1) fluidity, (2) mistakes, and (3) revision, all of which Breuer examines in great length in comparison to writing in L1. Breuer also looks at the connections between these characteristics. Node switches, code switches, content, type, and other faults are used by Breuer to classify and classify error and revision data in order to better comprehend L1-initiated "attacks" on FL (i.e., negative transfer from the L1 on the FL). As a theoretical framework, Breuer's Bilingual Tripartite Architecture (or Parallel Architecture) serves as a starting point for the classification system's categorization.

Six chapters are included in the book's total runtime. After a description of Breuer's Bilingual Tripartite Architecture in Chapter 2, she reviews the current literature on the qualities of L1 and FL writing that are relevant to her study in Chapter 3. To round things off, in Chapter 3 she discusses her research's potential next steps. There is an explanation of the study's design and data gathering and analysis procedures in Chapter 4. To conclude, Breuer triangulates the

main results in Chapters 5–7 by discussing the findings relating to productivity and fluency, as well as mistakes and revisions (Chapter 8).

a framework through which to analyse theoretical issues

"wholistic" multi-lingualism, according to Breuer's Bilingual Tripartite (or Parallel) Architecture, may be understood as a "completely competent speaker-hearer" who uses two or more languages either independently or in a blended fashion (Chapter 2, p. 23). The Bilingual Tripartite Architecture is based on Jackendoff's (monolingual) Tripartite Architecture and has three unique components (phonology, syntax and semantics). Unlike phonological structure, which is present in both the L1 and FL, syntactic structure is language-specific and so cannot be found in either the L1 or FL. When it comes to the structure of a notion or idea, the language in which it is presented has no bearing on it. According to this paradigm, none of the three structures is considered to be more important than the others. Instead, the structures work in tandem and are connected by two-way interfaces. For example, it is conceivable to identify interfaces not only between structures inside a single language (e.g., between the phonological structure of L1 and the syntactical structure of L1), but also between structures in two or more languages (e.g., between L1 phonology and FL phonology) (e.g., L1 phonological structure - FL syntactic structures). All other structures are tied to the conceptual structure that is not reliant on language. As opposed to Francis' (2004) Bilingual Tripartite Parallel Architecture, which treats the multilingual lexicon as two separate systems, the Multilingual Tripartite Architecture treats the bilingual lexicon as a single system. Activating this bilingual lexicon prior to the syntactical and phonological structures (as in Francis's model) is not required, but rather functioning as an interface between these structures. L1 and FL orthographic structures enable a more efficient quadripartite architecture to be built on top of the existing bipartite architecture.

A suitable phrase would be Breuer's Bilingual Tripartite Architecture, which is a dynamic system in which L1 and FL rules and objects are active at once and all language structures influence one another. With the help of this complex network, Breuer is able to describe and explain the L1 assaults on the FL (but also the influence of the FL on the L1). Because both the FL and the L1 are active at the same time in FL writing, there is rivalry between the linguistic structures for execution in the FL writing environment when using the FL interface.

Consequently, it is plausible that the L1 takes leadership and slams the FL with a deadly blow. 'Yesterday, I met the new decano [dean], and he was pretty simpático [friendly]' is an example of a code switch established as a result of the L1's influence on the FL. Node switches are faults that are not full code switches but that represent the usage of the erroneous interface, leading in a phonological, syntactic, or orthographic L1 structure being dominant in a FL utterance (or vice versa). A German-English bilingual speaker in an academic setting wrote this statement to explain how node-switching functions: "I laughed because the joke was amusing because" I said (p. 43). An English-based conceptual framework and phonological structure are both activated and executed via English. In contrast, because has triggered the syntactic requirements of the German counterpart 'weil', which requires the verb to be at the end of the subordinate phrase in formal written German. Syntactic node-switches are the most common kind, however node-switches may be found in a wide range of forms. There are node-switches that are phonological, orthographic and punctuational, syntactic, semantic, and genre specific. It is hypothesised that purposeful use of node-switches and code-switches results from a writer's failure to control or restrict L1 activation, as well as other conditions, such as a lack of FL proficiency and cognitive stress.

A framework for the study of methodology

Using the theoretical framework above, Breuer studies the writing processes of ten German students studying English philology (English language and literature) in order to understand and interpret their writing (enrolled on average for 7.6 semesters in higher education). All of the students were given the same due date for one basic essay (in Florida) and four academic essays (two in the L1 and two in the FL). Each student was also told to use a range of preparation strategies for their academic papers. These strategies included taking notes while writing one essay and freewriting in the other. These assignments included a SE (simple essay), L1N (German academic essay using the note-taking planning strategy), FLN (English academic essay using note-taking), L1F (German academic essay using the freewriting planning method), and FLF (freewriting planning technique) assignment (English academic essay using freewriting). Additionally, we discovered that a particular preparation technique might assist students lessen their reliance on their native language when it comes to writing in their second language.

Triangulation is used to obtain and analyse data, which is described as a method that incorporates many sources. Data was gathered by a mix of computer keyboard logging, questionnaires, and retrospective interviews. The data analysis process includes, among other things, a comprehensive quantitative and qualitative study of both process and product data. Breuer is particularly interested in three process data characteristics: productivity, fluency, and the frequency of revisions. The length of the finished text and the number of words and characters generated, as well as the amount of time spent on the task, the distribution of time across the writing processes, and a comparison of stopping and active writing time are all factors that contribute to productivity (if applicable). Specifically, bursts are studied in terms of their frequency and duration, with special emphasis devoted to the average number of words and characters per burst, as well as pause and review intervals and the location of burst endings. Among the most important aspects of the revision analysis are the types of revisions, the number of "double" revisions, and the distribution of revisions across writing processes, as well as P- and R-bursts and rewriting iterations. The revision count and the number of characters produced without revisions are also major considerations. The classification system of node-switches, code-switches, content, type, and other defects is used for both the revision analysis and the product analysis (i.e., the error analysis). The inaccuracies in the planning as well as the mistakes in the final texts are the subject of the error analysis (quantity, types of error, distribution of errors over error types).

Results

It is possible for Breuer to look at the conflict between L1 and FL writing from several angles because of the study's wide research design: (1) L1 versus FL writing; (2) note-taking vs freewriting planning inside and across the L1/FL (and vice versa). This gives her the ability to look at the link between process and product metrics from a variety of angles.

Both language and planning, according to Breuer's findings, seem to have an effect on output and fluency levels. Compared to the FL, productivity in the L1 was greater, leading to longer texts, higher output rates, and quicker processing speeds. The freewriting planning strategy seemed to boost productivity, however this impact was more pronounced in the L1 group than in the L2 group. No obvious link could be found between language and planning or the allocation of time across writing activities because of vast range of intra-individual

variability. Planned writing reduced burst frequency and increased burst duration, both of which were seen during freewriting. This suggests that preparation influenced fluency. We may conclude from this study that while people were taking notes, they were more likely to exhibit this pattern. Using simply burst length in the formulation process (and only when assessed in characters), fluency was influenced by language, with the L1 language having a greater impact on this. According to these findings, L1 speakers are more productive and fluent than those who speak other languages. No matter how effective it looks to be in both languages, the freewriting planning method isn't generally employed to help writers engage more with the text they're creating and avoid their processing slowing down. A more thorough editing process was found to be necessary as seen by the mistake analysis, which showed that the enhanced processing speed brought about by freewriting did not necessarily improve linguistic quality.

Performance flaws may emerge for a variety of reasons, two of which being language and planning. While the L1 academic essays had a larger number of mistakes than their FL counterparts, FL texts featured a smaller number of errors than L1 academic essays (see table). Even though the writers were writing in their own language, Breuer says this shows that the academic genre is still seen as a foreign language by the authors, even while they were in their L1 linguistic setting. The great majority of the faults were node-switches, signalling a negative transfer from the L1 to the FL, as seen by the sorts of mistakes caused in the FL plans and final texts. To a varying degree, the L1 influenced the FL plans and final texts and planning requirements. As a result, even while there were more mistakes in FL note-taking plans, this did not always have an effect on the formulation process. The authors' preferred writing styles in the L1 and FL (Mozartians against Beethovians, as proposed by Breuer) were shown to have an influence on the quality of their final texts, which might be attributed to their planning strategy. Freewriting had more mistakes than note-taking, including syntactic node changes, even if the planning techniques seemed to produce particular node switches. The reverse was true for the note-taking condition (e.g., genre node-switches). There are several ways in which the planning approaches interact with interfaces between the conceptual and phonological as well as orthographic and syntactic structures, according to Breuer's interpretation of these results.

Revision was shown to be impacted by both language and preparation, according to Breuer's research. However, it is important to note that the amount of time spent on final revision was very restricted in his experimentation. Revision rates were lower in the L1 (as judged by the amount of characters written) than in the FL, and greater in planning by note-taking than free writing. Results from a research found that the FL note-taking condition had the greatest percentage of final text modifications. Due to a lack of or decreased stimulation of the FL formulation process, increased L1 usage during planning, and difficulties in obtaining FL words throughout the formulation process, this may be the cause. A familiar monitoring strategy was used by FL participants, whereas L1 participants displayed more flexibility. A more significant impact on revision was shown in the FL than in the L1, where participants utilised monitoring techniques that they were more comfortable with, but in the L1, monitoring methods were more flexible. Revision and error analyses were undertaken concurrently in order to reveal the L1 and FL's fight. The participants showed to have difficulty discriminating between the effect of L1 and other factors when writing in the FL. However, apart from minor adjustments in orthographic code-switching, the majority of the changes that participants made to their FL plans and final texts concerned language-independent issues such as typos and content problems. The results suggest that participants were more able to recognise the effect of L1 on FL writing in the freewriting condition during planning than they were in the formalised condition during formulation and revision while developing and editing their replies,

In my opinion

Breuer has accomplished the tough challenge of turning his doctorate dissertation into a book with a narrative that is both simple to read and well organised. Before the results chapters begin, a creative summary shows the linkages between theoretical chapters and chapters pertaining to the actual study that was carried out in the lab. Even more so, these outcomes chapters begin and end with a short restatement of the hypotheses, which serves to further improve the text's cohesiveness.

The book is a treasure trove of important information that is well-written. Every aspect of the study's planning and execution is meticulously documented, including every choice made during the task design and every mistake and revision categorization system used. The data

analysis and reporting of findings are substantial, however they may be too complex for the publishing style that was selected. When discussing all types of errors and revisions, regardless matter how often they occur, a reader may lose focus on the most important findings. In addition, the use of just descriptive statistics inhibits a clear understanding of the impact of language and strategy on product and process metrics (due to the limited sample size). Analyses using non-parametric statistics might have yielded more information. It is possible that further study may enhance the methodological features, such as the reliability of coding mistakes and revisions. Breuer's study had the researcher check the mistakes and corrections oneself, although a panel of coders could be a better option for this kind of investigation.

As a translation researcher, I found this book to be an excellent introduction to the topic of writing-process research. Process execution or text quality differences are the focus of the vast bulk of existing research on L1 vs. FL writing. L1 and FL writing product and process measurements are only briefly discussed in a few research studies (e.g., Van Weijen, 2008). She keeps her promise, but at the same time introduces another aspect into the contrastive L1-FL process-product mix, which is the effect of planning.

It is also notable that this study provides systematic empirical evidence of when and in what form "L1 attacks" in FL writing occur, which is a first in the literature. Writing in a foreign language can be hindered by a lack of fluency in one's native language, as well as aided by it. Using an error and revision classification system he devised himself, Breuer, on the other hand, is able to make the "L1 attacks" in FL writing visible and comparable between assignments. Furthermore, according to the author, Breuer's Bilingual Tripartite Architecture appears to be a suitable model for attempting to understand how and why 'L1 attacks' occur. A more thorough examination of the model's actual strengths and weaknesses could have been accomplished through a systematic examination of how the study's findings support and contradict the premises on which the model and its components are based. In spite of this, *First Language versus Foreign Language* is a thought-provoking work that contains a wealth of topics that could be explored further in writing didactics and possible L1-FL writing studies in the future. The L1 has a reputation for throwing punches when it comes to

translating into other languages, including French and Spanish, so I'd recommend it to both writing teachers and researchers.

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