DOI: 10.4312/elope.11.2.89-98

Gabrijela Petra Nagode

Karmen Pižorn Mojca Juriševič University of Ljubljana

Slovenia

The Role of Written Corrective Feedback in Developing Writing in L2

Summary

Feedback plays an important role in developing L2 writing in young learners. The article provides a brief overview of the history of giving feedback and of some contemporary views within this field. Special attention is paid to cognitive perspectives, such as the influence of written corrective feedback on short-term memory, the influence of focused and unfocused written corrective feedback on error correction, the influence of written corrective feedback on a particular category of error, the influence of direct and indirect written corrective feedback and combinations of various types of written corrective feedback, and the influence of educational background and L2 learning background on the effectiveness of written corrective feedback in terms of sociocultural perspectives. The main aim of the article is to present readers (especially teachers) with the variety of aspects of giving written corrective feedback in developing L2 writing and thus in enabling young learners to develop their L2 writing skills more effectively.

Key words: L2, young learners, writing, corrective feedback, written corrective feedback

Vloga povratne informacije pri razvijanju pisne spretnosti v dodatnem jeziku

Povzetek

Povratna informacija pomembno vpliva na razvijanje pisne spretnosti mlajših otrok v dodatnem jeziku. Sledi kratek pregled zgodovine dajanja povratne informacije ter sodobni pogledi na to področje, med katerimi so posebej izpostavljeni kognitivni vidiki, kot so na primer vpliv pisne povratne informacije na kratkoročni spomin, vpliv fokusirane in nefokusirane pisne povratne informacije na odpravljanje napak, vpliv pisne povratne informacije na določeno vrsto napake, vpliv neposredne in posredne pisne povratne informacije in kombinacije različnih načinov dajanja pisne povratne informacije ter vpliv izobraževalnega okolja in predhodnega znanja dodatnega jezika na učinkovitost dajanja pisne povratne informacije (družbenokulturni vidik). S člankom želimo predvsem predstaviti bralcem (učiteljem) razsežnost dajanja pisne povratne informacije pri razvijanju pisne spretnosti v dodatnem jeziku. Posredno želimo vplivati na učence, da bi lahko s pomočjo pisne povratne informacije hitreje in bolje razvijali pisno spretnost v dodatnem jeziku.

Ključne besede: dodatni jezik, mlajši učenci, pisna spretnost, povratna informacija, pisna povratna informacija

The Role of Written Corrective Feedback in Developing Writing in L2

1. Introduction

The ability to write well enables one "to participate fully in many aspects of society" (Cushing Weigle 2011, 4). Within a certain culture, writing in the first language (L1) has a common purpose; however, the specific purposes of individual situations can also be addressed. According to Vähäpässi's (1982) general model of writing discourse, we write "to learn, to convey emotions, to inform, to convince or persuade, to entertain, delight or please and to keep in touch". In terms of cognitive processes, we write to reproduce, organise or reorganise, and invent or generate something (Cushing Weigle 2011, 8). The ultimate purpose of writing in many cultures is literacy.

Compared to the purpose of writing in L1, the purpose of second language (L2) writing is rather diverse: there are numerous situations of L2 use, in the school environment and beyond, with children and adults. The purpose of learning L2 and writing, as a part of this, is also related to one's (lack of) desire to integrate into a new culture. Some other motivating factors in learning L2 and consequently L2 writing may be grades, higher proficiency, learning new information, a future job or promotion, and impressing the teacher or other students (Cushing Weigle 2011, 37). In terms of the child's purpose in learning L2 (not only writing), we can distinguish between immigrant children who are members of a minority and children living in a bilingual environment, and other, non-immigrant children who learn L2 at school. Minority children have to learn L2 for survival, whereas for majority children L2 represents enhancement. All children learn L2 in order to make progress at school (Cushing Weigle 2011, 5-6).

Taking into account the importance of writing, this article explores the role of feedback in developing L2 writing in young learners. The main focus is on the variety of aspects of giving written corrective feedback in developing L2 writing and thus in enabling young learners to develop their L2 writing skills more effectively.

The structure of the article is as follows. In section 2, some definitions and models are presented to familiarise the readers, especially teachers, with contemporary concepts of writing. An insight into the history of giving feedback is given in section 3, along with the issues of the development of the understanding of error and Krashen's theory of second language acquisition. In section 4 research of written corrective feedback is presented. Section 5 shifts from theory to some practical aspects underlining positive teacher-student communication and the timing in giving feedback to writing. Finally, the conclusion suggests some answers to the open question of giving written corrected feedback.

2. Definitions and models of writing

Writing ability can be defined as a linguistic, cognitive, social and cultural phenomenon (Cushing Weigle 2011). However, many writing models define writing ability more precisely. Three such models have been selected for presentation in this article.

The writing model developed by Hayes and Flower (1980) consists of three basic factors: the task environment, the writer's long-term memory and various cognitive processes. The main new insight of this model is that "writing is a recursive and not a linear process" (Cushing Weigle 2011, 23), meaning that the writer moves back and forth between different phases. This meaning is not implied

if we perceive writing as a linear process. Importantly, the teacher's understanding of what writing is influences the choice of his/her pedagogic approach to teaching writing. The model can also explain students' different approaches to writing. More experienced students spend more time planning and revising, as well as editing content and organising the text, while also taking the audience into account (Cushing Weigle 2011, 22-3).

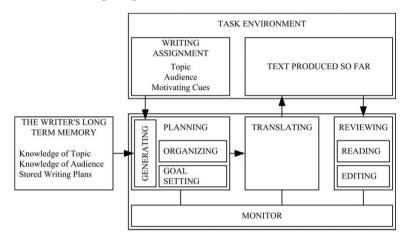


Figure 1. The Hayes-Flower (1980) writing model (Cushing Weigle 2011, 24).

In the Hayes model (1996), the dimension of motivation is added, which is composed of goals, predispositions, beliefs and attitudes, as well as the cost/benefit estimates of the writer. Reading is seen as the most important cognitive process and is defined quite precisely.

Bereiter and Scardamalia (1987) divide writing ability into two main parts: knowledge telling and knowledge transforming. Knowledge telling is rather undemanding, as it requires very little or no planning or revising; it can be described as natural. Knowledge transforming, on the other hand, is a very demanding process that has to be practised.

Grabe and Kaplan's taxonomy of language knowledge (Grabe and Kaplan 1996) divides language into linguistic, discourse and sociolinguistic knowledge. As it provides a detailed list of the components of writing, the model can serve as a suitable basis for researching the writing ability of young learners. For example, research could comprise the following parts of the taxonomy: knowledge of the written code (orthography, punctuation, paragraphing), knowledge of phonology and morphology (sound/letter correspondences, syllables, morphemes), vocabulary (interpersonal words and phrases, topic-specific words and phrases), and basic syntactic/structural patterns. If young learners of writing were being studied in terms of discourse knowledge, their knowledge of specific genres might be selected, as well as intrasentencial and intersentencial cohesion, such as conjunctions; when focusing on the sociolinguistic part of the taxonomy, the functional use of writing (purpose) as well as register and situational parameters – such as age, the language used by the writer (L1, L2), proficiency in the language used, topic, means of writing (pen and paper or computer) – could be studied (Cushing Weigle 2011, 30).

As support, children should receive most effective corrective feedback on as many factors as possible. In order to understand what effective feedback is, an insight into its history is first provided, as this is strongly related to the understanding of error. Later, the present state of research in the field of corrective feedback is presented.

3. An insight into the history of giving corrective feedback

Over time, the prevailing paradigm of learning and teaching has changed, as has the perception of error, according to different theories of children's learning. Accordingly, the ways of giving corrective feedback have changed as well.

In the behaviourist approach of the 1950s and 1960s, errors were perceived much more negatively than today (Bitchener and Ferris 2012, 4). According to the reference cited, the term error refers mainly to grammatical errors. Behaviourists believed that teachers should correct errors strictly and systematically. L1 and L2 were compared, and errors in L1 were corrected to prevent students from making errors in L2. Later, it was found that children do not make language errors due to a lack of L2 or L1 knowledge, but due to their way of thinking, i.e., they are able to produce not only different, new sentences, but also their own language rules and language, which they can develop systematically. These cognitive findings about language learning substantially reduced the importance of error and, as a result, the role of continuous error correction.

Towards the end of the 1980s, errors started to be understood as a developmental stage, which was an important turning point heralded already by Shaughnessy (1977). Making an error began to lose its highly negative connotation, which had previously often stigmatised students as being "illiterate", "irremediable" and so on. Investigation turned to the question of what an error is and, consequently, to what extent it should be focused on (Santa 2006). Truscott (1996) suggested no error correction should occur at all. As a matter of fact, questions concerning the reasons for correcting errors, which errors should be corrected, when (in which phase of writing), how and who should correct them have been asked by researchers since the very beginnings of research into second language acquisition (Bitchener and Ferris 2012, 6).

Later on, the perception of giving corrective feedback was influenced by the first general second language acquisition theory that was proposed by Krashen (1985), who did not believe that focusing on errors should play a very important role; nor, consequently, should corrective feedback (Bitchener and Ferris 2012, 27). For a deeper understanding of the reasons that led Krashen to this conclusion, the five underlying hypotheses of his theory are presented. Firstly, the acquisition-learning hypothesis distinguishes two separate processes of language learning in terms of subconscious learning (the acquisition process) and conscious learning (the learning process) (Bitchener and Ferris 2012, 9). Secondly, the monitor hypothesis claims that learning can only enable the learner to monitor or edit what is produced by his/her acquired system. Thirdly, according to the natural order hypothesis, we learn a language in a predictable order, although there are slower and faster learners. In the fourth place is the input hypothesis, which states that input has to be just slightly beyond the learner's current level; if there is sufficient input, we learn grammatical rules automatically, so there is no need to correct errors. Finally, there is the affective filter hypothesis. In order for linguistic knowledge to reach the part of the brain responsible for language acquisition, the learner's affective filter must be low; otherwise feelings such as anxiety and low self-esteem can increase. The level of the affective filter also varies according to the learner's positive or negative attitudes towards second language acquisition (Bitchener and Ferris 2012, 9-11). Taking into account these hypotheses, we could conclude that, when giving corrective feedback, teachers should not ignore the (sub)conscious processes of learning, the system already acquired by a learner, the predictable order of learning a language, providing input that is demanding enough but at the same time not too difficult, and a teaching approach that evokes positive feelings in the learners.

Over the last twenty years, research into second language acquisition has intensified, as has research into the role and treatment of error. Special attention is paid to cognitive perspectives related to

ways of processing information, as well as to sociocultural perspectives (Bitchener and Ferris 2012, 12). The influence of corrective feedback on second language learning is still being researched, and an important part of this research concerns written corrective feedback as one of the ways of giving feedback (Bitchener and Ferris 2012, 25-7).

4. Research of written corrective feedback

Written corrective feedback, according to Bitchener and Ferris (2012), can be defined as grammar/ error correction. It can be direct (the wrong word is crossed out and the right word is given), indirect (an explanation, an example, a hint is given, but not the correction itself), or focused (only one or a smaller number of errors are corrected), or unfocused (all errors are corrected). This is explained in more detail in the continuation of this paper.

Truscott's famous paper "The case against grammar correction in L2 writing classes" (1996) did not put a stop to all correction of errors, but it did trigger research on the interrelation between written corrective feedback and language improvement.

Referring to Bitchener and Ferris (2012), the main question of research into written corrective feedback is cognitive. Researchers would like to determine the degree to which written corrective feedback can contribute to the acquisition of a second language; in other words, they are interested in the effect of written corrective feedback on short-term and long-term memory. From this question, three further questions are derived. Firstly, the question of the influence of unfocused and focused corrective feedback; secondly, the question of written versus other/non-written corrective feedback; and thirdly, the difference between the effects of different kinds of written corrective feedback on L2 acquisition. Sociocultural questions deal with the learner's educational and L2 learning background, as well as with the question of how a better understanding of sociocultural theory could contribute to a better understanding of corrective feedback (Bitchener and Ferris 2012, 49-50).

The area of written corrective feedback has, to some extent, been researched in Slovenia as well. Pižorn (2013) proposes a new model of written corrective feedback, with twelve factors: educational context (aims and reasons of L2 learning, motivation to learn L2), knowledge of L2 learning theories, approach to teaching writing (process, sufficient oral and reading L2 input, feedback in pairs and groups), level of L2 knowledge, the learner's age, zone of proximal development, the learner as an individual, teacher's attitude to errors, type of written corrective feedback, and who should give feedback. As introducing the model into teaching is a process, teachers need additional training to use it as effectively as possible.

Foreign research of written corrective feedback presented in the continuation deals with the effectiveness of written corrective feedback that can be unfocused and focused, direct and indirect or combined and with the role of the educational and L2 learning background of learners related to the effectiveness of written corrective feedback.

4.1 The effectiveness of written corrective feedback on the short-term memory

The effectiveness of written corrective feedback was investigated in many early studies. L2 writers were given feedback on their drafts, and if this feedback helped them to improve the accuracy of their drafts, learning, or at least short-term learning, was proved. However, if the feedback was direct or explicit, or if the error identified by the feedback was a mistake or an oversight by

the writer, the improvements were not necessarily the result of learning. Therefore, the writers were given another writing task and improved accuracy was checked again. In order to determine whether or not the improved accuracy was a result of learning, the texts of the writers who received written corrective feedback were compared to the texts of the control group who did not receive written corrective feedback. To show the results, studies by Truscott, Hsu and van Beuningen et al. are presented.

Truscott and Hsu (2008) and van Beuningen et al. (2008, 2012), who researched the influence of the second language writing on the learning/storing of knowledge in the short-term memory, found that after written corrective feedback the number of errors in the new written texts had been reduced. However, unlike van Beuningen, Truscott and Hsu did not demonstrate that learning had occurred in terms of storing new knowledge in the short-term memory (Bitchener and Ferris 2012, 52).

According to Bitchener and Ferris (2012, 53), further research on the reasons why written corrective feedback has (or has not) been effective in error reduction in newly written texts is needed.

4.2 The effectiveness of unfocused and focused written corrective feedback on treating L2 errors

Early research dealt more with a wide range of error categories, whereas more contemporary research focuses on one or a few linguistic categories only (Bitchener and Ferris 2012, 53). Methodologically, some early studies had certain shortcomings, such as the lack of control groups; however, newer studies have been improved in this respect. Nevertheless, early studies did not find any significant differences between the correction and no-correction groups.

Studies of focused written corrective feedback (Bitchener and Ferris 2012, 59) show that although focused written corrective feedback has a positive impact on error reduction if the range of errors is limited, the degree to which we can extend the number of errors in question and still expect written corrective feedback to be effective remains unknown. Nor is there a conclusive answer to the question of which type of written corrective feedback is more effective: unfocused or focused. In fact, the interaction of feedback type could be more effective.

4.3 The effectiveness of written corrective feedback on different error categories

There have not been many studies related to this question. A clear, final answer to the questions regarding the effectiveness of written corrective feedback on different error categories has not yet been found. Truscott (1996), for example, argued that no single form of correction can help learners acquire all linguistic forms and structures. As a reason he stated that, in the case of syntax, morphology and lexis, it is not enough to understand only the form. The meaning of use and its relation to other words and parts of the language should be taken into account as well. Later he found that written corrective feedback was most effective in the case of the learners' initial texts and simple, non-grammatical errors and not in the case of syntax. Truscott believed that written corrective feedback can be effective only when the error can be understood as a discrete item (Bitchener and Ferris 2012, 63). The main open question still concerns the effectiveness of written corrective feedback on error reduction with regard to more complex language structures, e.g. syntactic structures (Bitchener and Ferris 2012, 64).

4.4 The effectiveness of direct and indirect written corrective feedback

Written corrective feedback is direct when we cross out the error and provide the correction explicitly near or above the error, or when we insert the correct word, morpheme, phrase (Bitchener and Ferris 2012, 65). Recently, metalinguistic corrections have appeared, along with a grammatical rule or added example of correct usage and an additional oral explanation. Indirect correction is made when the error is only marked (circled or underlined) or the number of errors is recorded in the margin at the end of a given line. Coding can also be considered as indirect correction.

Those who support indirect written corrective feedback suggest that it is more effective than direct corrective feedback as it directs the L2 learner towards guided learning and problem solving (Lalande 1982); it cannot, however, be claimed that language structures are internalised in this case. On the other hand, direct written corrective feedback has certain advantages: the information is clearer, more suitable for more demanding language structures and hypotheses, and more immediate. The type of written corrective feedback also depends on the level of the learner's knowledge (Bitchener and Ferris 2012, 65).

Studies of different types of direct written corrective feedback have been conducted that compare control groups receiving no correction to groups receiving direct error correction only, direct error correction and oral meta-linguistic explanation, written and oral meta-linguistic explanation, direct error correction and written meta-linguistic explanation, and direct error correction, written and oral meta-linguistic explanation (Bitchener and Ferris 2012, 68). No final answer has been given regarding which is more effective.

4.5 The role of the educational and L2 learning background of learners and the effectiveness of written corrective feedback

The effectiveness of written corrective feedback can also be influenced by sociocultural factors, such as subject/participant classification and the learners' former exposure to the target language (Bitchener and Ferris 2012, 70). Hedgcock and Lefkowitz (1994) studied three groups of participants: second language writers, foreign language writers and students of English as a foreign language who do not study in an English speaking country. They found that foreign language writers may be less motivated to receive written corrective feedback than second language writers, since their purpose of writing is more related to meeting a qualification requirement and they might not be highly motivated to learn the language to a level that would enable them to become a full member of a society. The motivation to receive written corrective feedback of students of English as a foreign language who do not study in an English speaking country has been reported as varying. In the same study the educational background of learners is introduced as a variable that can affect the students' motivation to receive written corrective feedback. Their motivation may be higher if the students have received formative (as opposed to summative) feedback, which is process-oriented. There have also been studies of the effectiveness of written corrective feedback related to other sociocultural variables, such as international and migrant students, where the former were more used to formal classroom learning and consequently receiving written corrective feedback (Bitchener and Knoch 2008). Research into sociocultural aspects will, however, have to be continued (Bitchener and Ferris 2012, 73).

5. Some practical aspects of giving written corrective feedback

Rules of supportive, positive communication can and should be applied generally when working with people, hence also in the teacher/student relationship. It is only communication of this kind that leads to a supportive, cooperative, equal, but at the same time very active student/teacher relationship (Čačinovič Vogrinčič 2008). The teacher's positive approach is most important also in the case of giving (written) corrective feedback regardless of the applied approach.

A practical example of the above is a group of researchers at the University of South Australia¹ studying the process of writing with different writing groups. They base their positive approach on the following: firstly, a positive approach encourages the writer to persist in writing; secondly, it helps him/her to see which parts have been written well and which still need revision; and thirdly, it helps others to identify and model good examples. The approach also implies some examples of positive and negative communication of teachers towards students. As far as organisation is concerned, it suggests the formation of special writing groups where the teacher offers all of the support needed. The approach is partly based on non-scientific literature dealing with the process of writing from the writer's point of view (Cole 2006).

The timing of feedback is another important practical issue in the teaching and learning process. Fluckiger et al. (2010) have found new ways of providing formative feedback more frequently, as well as ways of involving students in providing feedback to each other (peer feedback). The study involves techniques for doing so, such as midterm student conferencing and collaborative assignment blogs. The effects of using the techniques developed indicate that it is worth spending more time on giving feedback. Better products, enhanced student learning and the involvement of students as partners also contribute to a productive classroom climate, where the focus is more on learning than on grading.

How to make feedback as effective as possible has also been researched by Hattie and Timperley (2007), who propose a model by focusing attention on two frequently discussed issues: the timing of feedback and the effects of positive and negative feedback. They also suggest some practical ways of making feedback more effective in classrooms.

6. Conclusion

The issue of giving any corrective feedback, including written feedback, is broad and diverse. Different types of written corrective feedback are still being researched throughout the world, including in Slovenia. The main open question is to what extent, how and why a certain type of written corrective feedback contributes to the more rapid and, most importantly, long-lasting correction of various types of errors in writing. To motivate teachers to develop the professional attitudes that underlie their day-to-day practical work in the classroom, this article has informed them (and other readers) on the purposes of learning L1 and L2 writing, definitions and models of writing, the history of understanding errors, the effectiveness of written corrective feedback on error correction, direct and indirect written corrective feedback, unfocused and focused written corrective feedback, combined written corrective feedback, the role of the educational and L2 learning background of learners in giving written corrective feedback, the importance of positive teacher-student communication in giving feedback to L2 writing and the importance of feedback timing. Apart from the theory

96

http://w3.unisa.edu.au/researcheducation/students/feedback.asp

of giving written corrective feedback and some writing theory, the Australian approach to giving feedback on writing as well as Cole's non-scientific book dealing with the process of writing from the writer's point of view and other practical aspects might be supportive to teachers as well (Cole 2006). In the future, more evidence-based research is needed to show which models of written corrective feedback are most applicable and effective for a particular population of writers who differ in age, needs, motivation, language proficiency, sociocultural background, and many more idiosyncrasies.

References

- Bereiter, Carl, and Marlene Scardamalia. 1987. *The psychology of written composition.* Hillsdale, NJ: Lawrence Erlbaum Associates.
- Bernhardt, Elizabeth. 1991. Reading development in a second language. Norwood, NJ: Ablex.
- Bitchener, John, and Dana Ferris. 2012. Written Corrective Feedback in Second Language Acquisition and Writing. New York, NY: Taylor and Francis.
- Bitchener, John, and Ute Knoch. 2008. "The value of written corrective feedback for migrant and international students." *Language Teaching Research* 12: 409-31.
- Blakemore, Sarah Jayne, and Uta Frith. 2005. "The Learning Brain: Lessons for Education." *Developmental Science* 8 (6): 459-65.
- Cole, Joni. 2006. Toxic feedback. Hannover, NH: University Press of New England.
- Cushing Weigle, Sara. 2011. Assessing Writing. New York, NY: Cambridge University Press.
- Čačinovič Vogrinčič, Gabi. 2008. Soustvarjanje v šoli: učenje kot pogovor [Cooperation in school: teaching as conversation]. Ljubljana: Zavod RS za šolstvo.
- Fluckiger, Jarene, Yvonne Tixier y Vigil, Rebecca Pasco, and Kathy Danielson. 2010. "Formative Feedback: Involving Students as Partners in Assessment to Enhance Learning." *College Teaching* 58 (4): 136-40.
- Grabe, William, and Robert B. Kaplan. 1996. Theory and practice of writing. New York, NY: Longman.
- Hattie, John, and Helen Timperley. 2007. "The power of feedback." Review of Educational Research 77 (1): 81-112.
- Hayes, John R. 1996. "A new framework for understanding cognition and affect in writing." In *The science of writing*, edited by C. Michael Levy and Sarah Ransdell, 1-28. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Hayes, John R., and Flower, Linda. S. 1980. "Identifying the organization of writing processes." In Cognitive processes in writing, edited by Lee W. Gregg and Erwin R. Steinberg, 31-50. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Hedgoock, John, and Lefkowitz, Natalie. 1994. "Feedback on feedback: Assessing learner receptivity in second language writing." *Journal of Second Language Writing* 3: 141-63.
- Krashen, Stephen D. 1985. The input hypothesis: Issues and implications. London: Longman.
- Lalande, John F., II. 1982. "Reducing composition errors: An experiment." Modern Language Journal 66: 140-9.
- Pižorn, Karmen. 2013. "Učinki učiteljeve povratne korektivne informacije pri razvijanju pisne zmožnosti v tujem jeziku [The effects of a teacher's corrective feedback in developing L2 writing]." In *Razvijanje in vrednotenje znanja v gimnazijski praksi* [Knowledge development and assessment in grammar school practice], edited by Vineta Eržen, 63-76. Ljubljana: Zavod RS za šolstvo. http://www.zrss.si/digitalnaknjiznica/Izzivi%20razvijanja%20in%20vrednotenja%20znanja%20v%20gimnazijski%20praksi%20 ANGLE%C5%A0%C4%8CINA/#/5/zoomed
- Santa, Tracy. 2006. Dead letters: Error in composition, 1873-2004. Cresskill, NJ: Hampton Press.
- Shaughnessy, Mina P. 1977. Errors and Expectations. New York, NY: Oxford University Press.

- Truscott, John. 1996. "The case against grammar correction in L2 writing classes." Language Learning 46: 327-69.
- Truscott, John, and Angela Yi-Ping Hsu. 2008. "Error correction, revision, and learning." *Journal of Second Language Writing* 17: 292-305.
- van Beuningen, Catherine, Nivja H. de Jong, and Folkert Kuiken. 2008. "The effect of direct and indirect corrective feedback on L2 learners' written accuracy." *ITL International Journal of Applied Linguistics* 156: 279-96.
- van Beuningen, Catherine G., Nivja H. De Jong, and Folkert Kuiken. 2012. "Evidence on the effectiveness of comprehensive error correction in second language writing." *Language Learning* 62: 1-41.
- Vähäpässi, Anneli. 1982. "On the specification of the domain of school writing." In *An international perspective on the evaluation of written composition*, edited by Alan C. Purves and Sauli Takala, 265-89. Oxford: Pergamon.