

Research on the Revising Process Using Word Processors-A Literature Review

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ABSTRACT

Research on revising in a foreign language using word processors belongs to the area of CALL (computer assisted language learning). CALL research has undergone a transformation during the years: it moved from the behaviorist model to the integrative one. Research on revising in a foreign language using word processors, on the other hand, did not show any advancement, either theoretical or methodological, besides some few exceptions. This paper firstly presents the history of CALL. It then moves to the link between CALL and the use of word processors and presents the research conducted on revising in EFL using pen and paper. It finally concludes that additional research is needed on revising in EFL using word processors.

KEY WORDS: revision, word processing, pen and paper.

DEFINITION OF REVISION

Revision has been defined in a number of ways. Fitzgerald and Markham (1987) presented perhaps the most comprehensive of these definitions: "Revision means making any changes at any point in the writing process. It is a cognitive problem-solving process in that it involves detection of mismatches between intended and instantiated texts, decisions about how to make desired changes, and making the desired changes" (ibid. p. 4).

THE STATUS OF RELEVANT THEORY

In the past, several studies focused on issues such as revising with pen and paper in mother tongue, revising with word processors in mother tongue, or revising with pen and paper in an EFL context. There has been a paucity of research into revising in an EFL context using word processors. In this paper I briefly discuss revising in an EFL context using pen and paper to draw from its findings in order to apply them in future research when revising will be made in an EFL context using word processors.

Writing theory, research and pedagogy

As revising is part of the writing process, a brief discussion of writing theory is given here to provide some insights before discussing revision in both mother tongue and foreign language. Since the mid 1960s dramatic developments in written discourse and research practice have occurred (Freedman and Pringle, 1980; Hairston, 1982). These developments included the shift in emphasis from the written product to the writing process (Emig, 1971; Graves, 1983) and the renewal of interest in the importance of the social context in the development of writing abilities (Heath, 1983; Hymes, 1972). This shift in emphasis from written product to writing process

includes the realization that a single generic process of writing does not exist, that there are idiosyncratic differences in the way people write, that writing is recursive and an act of discovery for both expert and novice writers and that processes of writing can be enhanced by working with other writers (Emig, 1982; Graves, 1975). This shift started because there was a need to understand how we could help students become better writers (Zamel 1982). It was also claimed that: *“it was evident that the emphasis on process had made an important contribution to writing theory, research and pedagogy and research focusing on writing process had extended both theoretical understanding of the production of written language and classroom practice”* (Bridwell; 1980; Emig, 1971; Graves, 1975).

The limitations of writing process-oriented research and teaching were also noted. It was claimed that: *“in the enthusiasm for process, teachers and researchers might have under-emphasized the value of the end products towards which the process was directed”* (Langer, 1984). Clearly both writing process and written products had their place and it would be unwise to focus unduly on one to the exclusion of the other. As Scott alleged: *“the most important conclusion from research in writing is that the ability to write effectively not only requires knowledge of linguistic features, but it involves the activation of a series of thinking processes, the integration of which constitutes what is known as the writing process”* (Scott, 1996). This notion led to the design of the process approach to writing which was characterized by prewriting exercises, the writing of several drafts with an emphasis on revision at the macro level of content and organization and attention to mechanics (Flower and Hayes, 1981). This approach had been widely acclaimed by foreign language writing researchers who saw the need to strengthen its implementation in the foreign language curriculum. Writing experts criticised foreign language instructors who tended to subordinate writing to the mastery of grammar and vocabulary, and thus to treat writing as a product and not as a process (Barnett, 1992; Greenia, 1992).

The existing studies on foreign language writing have provided us with valuable insights mainly into the differences in the composing process used by experienced and non-experienced writers (Kroll, 1990; Raimes, 1987). Experienced writers differ from non-experienced ones in two major aspects: planning and revising (Krashen 1984; Zamel, 1983). Revising is the issue I will discuss in this literature review. A first discussion of it follows.

Revising theory, research and pedagogy

Nowadays, the existing models of writing distinguish three processes during writing: planning, translating and revising. It was claimed that, *“revision was considered as a process of text reviewing, aiming at evaluating and improving the text quality”* (Van den Bergh et al., 1993). As a result, revision is considered as a cognitively complex and costly process (Beal, 1996; Mc Cutchen, 1996) and comprises a set of sub-processes or operations used by the writer to improve his/her text (Hayes et al., 1987). In the sections that follow the link between revising and the use of word processors revising is discussed as well as revising in EFL using pen and paper. What remains to be explored is revising in EFL using word processors. This exploration will help researchers and teachers of writing to come to conclusions on the factors that have an impact on revisions made in an EFL context.

Revising and the use of word processors

Some researchers and educators have suggested that word processors make revision easier (Butterfield et al., 1996; Van den Bergh, et al., 1993). This happens because word processors offer a full range of commands that facilitate revising including those that seem most appropriate for text based revision such as the cut and paste feature. By using features such as “cut and paste” on a word processor, writers can also make many revisions to their texts without having to rewrite the whole text. The researchers implied that some characteristics of word processors facilitate the task of revision in the sense that the writing is improved and in doing so, it should impact positively on

the writing and revising process (Chanquoy, 2001). One plausible reason for this is that by facilitating revision, the cognitive load placed on writers is lessened. In addition, word processors may change writers' attitudes toward the task of writing and revising.

While the claim that word processors can improve the quality of written outcomes because they facilitate revision is intuitively appealing, there is little research that tested this issue.

Research bearing on the subject suggests that it may be more complex than it first appears. For example, it will be possible that word processors can increase the frequency of only surface revisions (that is revisions involving surface features of texts such as spelling), thus distracting writers from the constructive processes of composing, making their writing activities more novice-like. Evidence for this hypothesis came from research on composing with word processors by Daiute (1986), Hawisher (1987) and Peterson (1993).

In other research, the use of word processors was found to increase the amount of surface revisions performed by writers, but was not associated with greater amounts of text-based revisions (Daiute, 1986; Hawisher, 1987). Daiute (1986) found that when revising using word processors, writers tended to add text to the end of their written efforts rather than making additions, or other kinds of revisions, within their papers. Moreover, writing process research has shown differences in the ways in which unskilled and non-experienced and skilled and experienced native English writers revise (Bridwell, 1980; Matsumoto, 1995; Sommers, 1980; Stallard, 1974). For example, unskilled writers spend only a short time on planning before beginning to revise using word processors, and tend to adhere to the plan that was originally made, rarely changing that plan in the revising process. Skilled writers, on the other hand, spend more time on planning, changing and revising the original plan flexibly and freely whenever they have come up with a new idea in the revising process. That is, skilled writers' plans are flexible, whereas unskilled writers' plans are rather fixed (Pianko, 1979; Raimes, 1985).

Arguments against the use of word processing have also been offered. A criticism of early research with word processors was that writers were not taught how to revise. As a result, writers couldn't be expected to revise successfully, when they used word processors (Pufahl, 1984). Some researchers had speculated that certain elements of word-processing environments might actually be detrimental to the development of mature writing practices. The inability of the writer to see the entire composition on the screen at one time and the elimination of recopying, and thus rereading tasks, might discourage deeper level revisions of content and structure (Hult, 1986; Kurth, 1987). Alternatively, the complexity of the higher level editing procedures for moving and changing blocks of text might discourage writers from attempting comprehensive revisions that would otherwise be undertaken. Writers might make only surface level changes such as spelling and word substitution because they are much easier to carry out (Joram et al., 1990). This might be likely when word processors that require the use of a complex sequence of cursor and command-like sequences for block editing are used. Even the lack of typing skills might interfere with higher order processes involved in composing, adversely affecting revising (MacArthur, 1988).

In conclusion, the discussion above suggests that word processors: a) improve the quality of writing; b) increase the amount of surface revision changes and c) affect differently the writing process of unskilled and skilled writers. Additionally, when writers read their drafts from their computer screen in order to revise them they may have difficulties in conducting deeper-level revision changes. Similarly, the lack of software knowledge may inhibit editing. The above discussion, though, concerns revision in mother tongue. That is the reason why I examine revising in an EFL context.

Revising in an EFL context

This literature review aims to examine which elements in the revising process might affect revising in an EFL context and show the need of additional research on this issue. There must also be some linkages and interactions between various elements and the revising process. These

linkages are probably affected by the structure of the language that is different between Greek and English or other factors as well as the means used to revise, that is pen and paper or word processors. In this review there is an effort to explore which factors affect revising when this is made in EFL using pen and paper. From these studies information will be extracted to be applied in research (on revising in EFL using word processors) which will be conducted in the future.

Revising in EFL using pen and paper

In this section research on EFL using pen and paper will be discussed and its findings will be presented. Some foreign language studies have concentrated on revising in an EFL context using pen and paper. Hall (1990) in one of his studies, examined revision in controlled mother tongue and foreign language writing tasks. Four advanced EFL writers (21, 23, 30 and 38 years old respectively) with different mother tongue backgrounds wrote two argumentative essays in their mother tongue and two in English. For each writing task, two 90-minute writing sessions were individually scheduled. During these sessions, first and final drafts were planned, composed, and revised. Revisions were then analyzed for specific discourse and linguistic features.

Hall's first analysis concerning the level of revision, dealt with linguistic or manuscript units namely: (a) word; (b) phrase; (c) clause; (d) sentence; (e) paragraph; (f) global; and (g) surface. Global units were defined as including more than one paragraph. Surface units consisted of certain features such as marginal notations and manuscript conventions (i.e., spacing, indentation, margins, and capitalization). The analysis included the following operations of the revising process: (a) addition; (b) deletion; (c) substitution; (d) reordering and (e) consolidation. The purpose of revision focused on three subcategories associated with written discourse: (a) informational; (b) grammatical/ mechanical; and (c) cosmetic. This analysis targeted examining the effect that revisions have on the meaning of the text, i.e., whether they affected presentational aspects (surface revisions) of the text, or the meaning of it (text based revisions). The results indicated that a) the most prevalent types of revisions conducted in both languages were substitutions; b) revisions of informational purpose were the most numerous in both languages and c) time was important in order the students to reread their texts to revise them when revising in an EFL context. These results also showed that there were striking similarities across the two languages, meaning that the advanced EFL writers were capable of utilizing a single system of revision across languages. These findings were supported by Gaskill's (1986) report that surface changes dominated more in both L1 and L2.

In contrast, Zamel's (1983) report of six case studies indicated that most revisions have been global. They involved deletion, addition and rewriting of full sentences and reorganization/expansion of paragraphs, as well as creation of new material. Zamel also indicated that all her subjects, who wrote several drafts, taking from four to eighteen hours to do so, tended to deal with surface syntax, vocabulary, and spelling changes in later drafts, using the first drafts to focus on content and global issues. This was in contrast with Hall's finding that found substitutions to be the most prevalent revision types in the final revised draft. Specific mistakes that remained the same, even after multiple revisions, included: errors in the use of articles and agreement between subjects and verbs. The results showed that specific types of revisions were conducted in the first draft and others in later ones. Concerning the correction of errors it was shown that only some types of errors were corrected.

Raimes (1987) examined a range of composition processes in eight EFL college writers using think-aloud protocols. With regard to revision, Raimes used Perl's (1981) coding system, which distinguished between revision for meaning and editing of surface form. Revision included changes in "*word choice, substitution of different structure or words, additions and deletions of words or phrases*"; editing was defined operationally as changes "*aimed at grammatical accuracy, such as deletion of an -s ending*" (p.447). Of approximately 500 changes made in 16 essays, 55%

constituted revision for meaning (text based). The results showed that when students revised in EFL using pen and paper they mostly conducted deep revisions.

Porte (1996) also examined how less skilled writers might go about emulating what the more skilled writers do when they revise in an EFL context. This study investigated the revision strategies of 15 Spanish native speaker undergraduates enrolled in second- year English philology classes writing four compositions in two different discourse types (narrative and argumentative) and in two time conditions (more and less than 60 minutes). More specifically, students were invited to write and revise four compositions in English in contrived writing sessions in class: (a) a timed session (60 min) using the discourse type "*personal expression*"; (b) a timed session (60 min) using the discourse type "*argument*" with a different topic to session (1); (c) a timed activity over two 60 minute sessions with an interval of 3 days between sessions using discourse type "*personal expression*" with a different topic than sessions (1) and (2); (d) a timed activity over two 60 minute sessions with an interval of 3 days between sessions using discourse type "*argument*" with a different topic than in sessions (1), (2) and (3).

Each student's writing was assessed and graded as follows: (a) a classification of "*poor*" (30-45%) on a grammar proficiency test; (b) an "*average*" score (51-67%) in a placement composition evaluation using the Jakobs et al., (1981) scale; and (c) in the opinion of their previous instructors each had been constantly underachieving with respect to EFL performance both in class work and homework. Subjects were not told how to revise. Post-writing interview protocols were also analyzed to find out more about the previous foreign language writing experiences of each student. Their results suggested that the overwhelming majority of revisions recorded were of a surface nature. This research adds to Hall's results in the sense that we cannot underestimate the effect of composition topic on revision frequency and quality. One thing we do not know is whether a student's ability to identify himself or herself with a given topic directly encourages more or fewer revisions. This study like Hall's one also showed that time was important, so the students had to reread their texts to revise them.

More recently, Sengupta (1998) explored the relation between types and purpose of revision with text improvement. Students in two form four/five classes in a Hong Kong secondary school were taught to revise their first drafts for six writing tasks completed over one academic year. A selection of students' writings both original and revised was analyzed for revision changes. This analysis showed that all revised texts were longer and more elaborate in meaning. Six student writers were then investigated to examine how they interpret the influence of their revisions on their texts. The results showed that the most popular revision operation was substitution and the most common purpose of revision was informational. It was also found that no major improvement was found in the text despite the revisions conducted. This showed that the means of revising in EFL (pen and paper) does not have an impact upon types, quality and purpose of the text.

In a later study Sengupta (2000) described an investigation of the effects of explicit instruction in revision. The learners were from two secondary classes in a school in Hong Kong, who learned to revise. Both groups received instructions in revision after they finished writing the first draft. Writing performance, at the beginning and end of the research, was measured and compared with a third group that did not learn revision strategies but completed the same pre-and post-test task. The data indicated that explicit teaching of revision strategies had a measurable influence on writing performance. It was suggested that language teachers should consider multiple drafting as an alternative to completing a new writing task in their classes as explicit instruction in revision might contribute towards developing an awareness of discourse-related features in second language writing.

The research studies described above revealed the following: 1) there were striking similarities across two languages, in the sense that the most prevalent types of revisions conducted in both languages were substitutions; 2) revisions of informational purpose were the most numerous in both languages; 3) specific types of revisions were conducted in the first draft and others in later

ones; 4) only some types of errors were corrected in subsequent drafts; 5) when students revised in EFL using pen and paper they mostly conducted deep revisions; 6) time was important in order that the students reread their texts to revise them; 7) the means of revising in EFL (pen and paper) did not have an impact upon types, quality of and purpose of the text; 8) explicit teaching of revision strategies had a measurable influence on revised outcome. What has to be examined further is whether these results persist when revision is conducted in a foreign language context.

CONCLUSIONS- REVISING IN EFL USING WORD PROCESSORS

In the previous section it was shown that some studies found that when revising in EFL using pen and paper students make mostly deep revisions and they also make different types of revisions in the original draft and different in the following ones. Some other researchers (e.g. Daiute, 1986; Joram et al., 1992) investigated revising using word processors in mother tongue and its effect on either the quality of written product or number of kinds of revision changes. They looked at revising using word processors in mother tongue only. Some other researchers focused on writing through word processing in an EFL context (e.g. Hyland, 1993), but did not pay attention to the detail of revising. Research on revising using word processors in mother tongue, revising in EFL using pen and paper and writing in EFL using word processors provided some insights into these areas. However, no previous research has been reported on revising in an EFL context using word processors. A literature review conducted by Greene (2000) also showed a lack of research into revising in EFL writing using word processors. Future research is needed to shed light on this aspect. The gains from this research will be multi faceted. It will inform teachers on what steps to follow to teach their students in order to have a well understood by the reader text. Students will also be used to revising in order to have clearly expressed written outcomes.

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