

COMPUTER- MEDIATED, SOCIAL-CONSTRUCTIONIST APPROACH TO WRITING

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ABSTRACT

*The purpose of this presentation is to explore and suggest ways by which computers can be incorporated and best exploited to promote **social-constructionist/process-genre** writing in foreign language teaching and learning environments in Greece. Given, however, the inexhaustible range of Computer Assisted Language Learning (hereafter CALL) programs and the evolving nature of the field of CALL itself, it would be too ambitious an attempt to explore all the possible computer applications available. The focus, therefore of this paper is on how certain easily accessible types of software, namely the **Word Processor** and the **Internet** can constitute a powerful teaching aid or medium, through which second language learners in Greece can develop effective writing skills.*

KEY WORDS: *Social-constructionist/process-genre writing, Computer Assisted Language Learning, Word Processor, Internet*

INTRODUCTION

Nowadays, the subject of Computer Assisted Language Learning (hereafter CALL) has become a specialised field of study and numerous articles have been written on its benefits and effectiveness with reference to particular educational goals, such as increasing learners' motivation; expanding access to unlimited types of authentic input; creating conditions for experiential learning and enhanced achievement; promoting interaction, socialisation and acculturation; creating greater flexibility for learning leading to individualisation and learner autonomy; and finally, facilitating the development of certain skills.

One of the skills that seems to have benefited and been greatly affected by the use of computers in the language classroom is the skill of writing. The computer, especially through the Word Processor and the Internet, which will be the focus of this presentation, has positively contributed to the development of learners' writing for two main reasons. Firstly, because of its features and functions and the effect that these have on the teacher and his/her preparation and classroom management, on the variety of possible learning activities, and on the final product; and secondly, because of the effect that its use has on language learners and what its applications enables them to do and how it motivates them to write Piper (1987:122-124).

PROPERTIES OF SPECIFIC APPLICATION ENVIROMENTS

• The Word Processor

The Word Processor is seemingly the most accepted generic tool in education and can function as a very useful tool for a writer to develop a highly effective writing process. The effectiveness, however, of this tool and its productivity depend on the approach followed that should focus mainly on composing and not on computing (Hyland, 1993:21).

Apart from its apparent effect on learners as a motivating force to concentrate, to produce and perfect their own work, it also eases the actual physical process of writing. Features and functions such as: the greater amount of text displayed on screen compared to a paper page of the same size; the availability of on-line aids such as the spell or grammar checker and the instant provision of feedback; the legibility of the text displayed and the relative ease of entering new text or a picture, a sound or even a video segment in a document, or deleting, moving and changing an old text; and finally, the public nature of the text display; make the Word Processor an attractive tool for the teaching of writing.

In other words, the Word Processor provides such an environment that is highly motivating and encourages experimentation, less writing apprehension as well as willingness to spend time composing, revising, editing and producing longer texts. Moreover, it promotes the externalisation of the thinking and reasoning processes as students reconstruct their thoughts in the processes and outputs of the medium, and collaboration among the students since they seem to be more responsive to advice (Pennington, 1996a: 8; Piper, 1987:123).

Taking, thus, all the above into account and considering Pennington's (1996b: 126-127) view on writing on computer, it seems that the Word Processor has positive cognitive/affective effects- which refer to the learners' view of writing and their attitudes towards it; positive process effects- which concern the learners' way of writing; and finally, positive product effects- which refer to the learners' written texts.

These effects, thus, create a favourable context whereby through the use of computers the process of writing evolves from a highly **natural** process to a highly **effective** one, resulting in good written products (Ibid).

To sum up, it seems that the Word processor not only eases the sometimes-onerous physical process of writing since it allows the manipulation of texts for the production of high-quality documents, but also conduces to an actual improvement in writing.

• The Internet

The Internet is a general-purpose application, which is mostly related to literacy since people interact with it through reading and writing and thus it can constitute a powerful learning tool, through which learners can be taught how to write various writing genres. Learners through the electronic community of the Internet create, analyse and produce information and ideas more easily and effectively, since they are freed from the limitations of traditional writing tools (Krajka, 2000; Belisle, 1996).

Moreover, the Internet and its three basic elements, that is, web pages, e-mail and creating class Websites make the writing instruction interesting, appealing, motivating

and authentic. Thus, a Web-based writing course creates an optimum context for students to produce authentic texts for a real audience and leads to an improved level of students' writing skills, a higher student awareness of the world around them and active communication.

The Internet, that is, constitutes an intermediary step between “display” and “real” writing, since it constitutes a microcosm of what should happen in students' real-world writing. In other words, whereas in a traditional writing classroom the goal is for students to “display” a sample work, that is, carry out a writing task assigned to them and produce a paper outside the classroom, through the Internet the students write to communicate, exchange ideas and practice in real expression. Success and failure is based on how effectively students manage to develop and communicate their ideas rather than on whether they have met the linguistic and conceptual standards set by the teacher (Swaffar, 1998:180).

Furthermore, the students receive almost immediate feedback without the delays inherent in written feedback in the traditional classroom. Students, that is, can receive feedback either through *synchronous* communication with all users logged and chatting at the same time via media such as MOOs (Multi-user domains Object Oriented), IRC (Internet Relay Chat) or Web chat programs; or through *asynchronous* communication with a delayed message system such as e-mail. The teacher, in this way, can interact with a student or a group of students any time that is convenient for the students and the teacher, without being limited to the boundaries of the classroom and thus save time from class assignments (Warschauer & Healey, 1998; Swaffar, 1998:3; Belisle, 1996).

The advent of the Internet, however, seems also to have greatly affected the ‘status’ of the skill of writing, on one hand, since the need for effective written communication is becoming increasingly important, and, on the other hand, the nature of texts, which have become situationally embedded, interactive, functionally mapped, modular, navigable, hierarchically embedded, spacious, graphically rich, and customisable (Bernhardt, in Pennington, 1996a:142).

Considering, thus, the need to promote technological literacy and the potentials and benefits of CALL in the foreign language instruction, this presentation attempts to provide a rationale for the need to adopt a *computer-mediated, social-constructionist approach* (Dudley-Evans & St John, 1998:118) or as Badger & White (2000:157-160) call it a *process-genre approach* to teaching writing, and how the use of computers fits in such an approach and maybe affect it. However, before dealing with that it would be useful to see the reasons why such an approach to writing is necessary.

THE NEED FOR A DEVELOPMENTAL APPROACH TO WRITING

Warschauer (2002) in one of his recent papers points out that there is a need for teachers and educators in general to adopt a developmental approach in order to achieve a successful integration and use of technology in language education programs. In support to his argument he refers to the notions of *product* and *process*. Specifically, he points out that: in general socioeconomic theories the perspectives on the end product of what constitutes “development” focus not only on materialistic issues but on social issues as well, such as social inclusion and protection from

vulnerability, encompassing literary, social equality and democratic rights. This new perspective on the desired product has led to an increased focus on process and “how development is gained”, which is not less important than development itself (Ibid).

The same applies to language theory, which seems to have been marked by a broadened vision of desired product and a renewed emphasis on learning process (Ibid). In other words, the perspectives on the end product of learning has broadened to include not only grammatical competence but also other components of communicative competence such as pragmatic competence, sociolinguistic competence, strategic competence and discourse competence.

This, in turn, has affected the perspective of the end product of CALL as well, whose focus has gradually changed from *accuracy* to *accuracy and fluency* and finally, to *accuracy, fluency and agency*, defined by Murray (in Warschauer, 2000a) as ‘*the satisfying power to take meaningful actions and see the results of our decisions and choices*’. As a consequence, there has also been a gradual change of focus on the classroom process and actually on a combination of product and process. A combination that places emphasis on learners’ autonomy, collaborative learning and development *and* enhancement of language learning strategies, all of which will help learners continue their learning and communicative innovation even outside the classroom (Warschauer referring to Markee, 2002).

What was discussed above is directly related both to the teaching and learning theory of writing and to CALL. First of all, the elements, this new combinational, developmental perspective on language learning emphasizes, also constitute a direct or indirect advantage of CALL. Moreover, as far as the teaching of writing is concerned, it seems that there is an obvious need for language teachers to develop a widened perspective both on the end product and the process of writing, and consequently a need to adopt a combined (product and process), computer-mediated approach to teaching writing.

The fact that the computer no longer constitutes merely a tool or stimulus for language learning but also in a broader sense, especially with the advent of the Internet, a social environment within which learners will need to perform effective communicative transactions, suggest that the product of writing should expand to involve not only the traditional genres such as letters, essays, stories, etc.; but also new genres such as e-mails or web pages. This, however, does not mean that the objective of the language learning process is to enable learners to make use of technology, but that, as Warschauer (2002: para7) points out, ‘*both English and Information technology are tools to allow individuals to fully participate in society*’.

As regards the process of writing, judging from the above, it seems that the central element of learners’ autonomy assumes greater significance, since the notion of autonomous learning seems to be the key issue to success in the age of information. Thus, neither memorization that the product-oriented approach is based on is so much important in this information-rich age since genres evolve rapidly, nor the teaching of generalized strategies of planning, writing, revising that the process-oriented is based on seem to be sufficient (Warschauer & Healey, 1998; Dudley-Evans, 1998:118). Therefore, a newer approach to writing is needed: the computer-mediated, process-genre approach or socio-constructionist approach, which will train and encourage

learners to develop *'metaskills of critique and innovation, which will help them beyond the skills of deploying any particular technology'*, as Warschauer (2002:para12) states, or any particular genre of writing, as the presenter would add.

THE COMPUTER - MEDIATED, SOCIAL - CONSTRUCTIONIST APPROACH

The computer-mediated, social-constructionist approach to writing draws on Integrative CALL and on three major approaches to teaching writing: the product approach, the process approach and the genre approach (cf. Figures 1,2&3 respectively). In order, therefore, to see the rationale behind this approach, it would be useful first to discuss briefly what the characteristics of each approach are in terms of writing and writing development and then examine how the computer-mediated, social-constructionist approach builds on the results of genre analysis and the advantages of the product and process approaches, and what the role of the computer is in this approach.

Integrative CALL

Integrative CALL seems to have developed along with the new, integrative approaches to teaching, such as content-based, task-based and project-based approaches in order to provide learners with the opportunity to integrate the various aspects of the language learning process with technology within a meaningful and authentic context. Thus, learners through interaction do not only develop language as an internal system, but also enter new communities and familiarise themselves with new genres and discourses, which entails that the context of interaction and the nature of the community are extremely important (Warschauer, 2000a).

This is also related to the new objective of CALL and of language learning, which along with accuracy and fluency aims at developing agency, and *'the power to construct a representation of reality, a writing of history, and to impose reception of it by others'*, as Kramsch et al. (in Warschauer, 2000a) add. In other words, Integrative CALL gives learners the potential to create something of their own within a real and authentic context/ environment, where they can display their work in public and receive immediate feedback, as for example by designing Web-pages for a real purpose.

This development of CALL has been based on two relatively new developments: the Internet and the Multimedia computers (e.g. CD-ROMs), which allow both the learners and the teachers to have access to a variety of media (texts, graphics, animation, sound and video) on a single machine (Warschauer, 1996).

As it is easily understood, these two *'most dramatic and far reaching'* technological developments, as Levy (1997:31) characterises them, with the wide range of informational, communicative and publishing tools readily available to students and teachers along with the Word Processor constitute a powerful tool that allows for more integrated use of technology and makes such use imperative, since learning to read, write and communicate through the computer has become an essential feature of modern life (Warschauer & Healey, 1998).

The Product Approach And The Genre Approach

The product approach (Figure 1) and the genre approach (Figure 2), which can be regarded as an extension to the product approach, focus on the message-text, that is the product –the written composition, analysing style, organisational patterns, and rules of usage. The only difference between the two approaches is that the genre approach places emphasis on the social context that writing is produced and the social purpose it is produced, resulting in different kinds of writing.

Model Text → Comprehension/Analysis/Manipulation → New Input → Parallel Text

Figure 1: The Product Approach (Robinson in Dudley-Evans & St John, 1998:116)

Exposure to samples of genre → Construction of a text with students & teacher → Independent construction of text by learners

Figure 2: The Genre Approach (Cope & Kalantzis, in Badger & White, 2000:156)

As regards writing development, both approaches view writing development as the analysis, manipulation and imitation of input of model texts provided to the learners (Badger & White, 2000:155).

The Process Approach

The process approach, on the other hand, focuses on the writer, paying special attention to the process of writing itself and the development of the writing abilities within that encoder-writer rather than the composed product. Writing is seen as a thinking process in its own right, a cognitive – problem-solving process that involves conscious effort and involves an interaction among other processes (Figure 3), which might occur simultaneously and affect one another (White and Arndt, 1991:4; Trimmer, 1998:3).

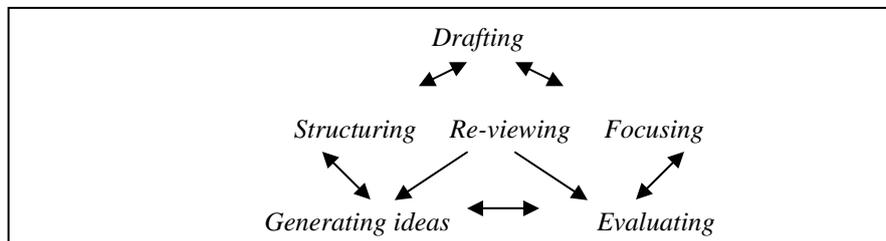


Figure 3: The Process Approach (White and Arndt, 1991:4)

Writing development, on the other hand, is seen as an unconscious process that takes place when the teacher facilitates the practice of writing processes (Badger & White, 2000:155).

Strong And Weak Points Of The Approaches To Writing

All three approaches seem to have both strong and weak points, according to Badger & White (2000) and Dudley-Evans & St John (1998). To start with, while the product approach recognises the fact that learners in order to write they need to be given linguistic knowledge about the text, and that imitation can help them learn in some way; it fails to recognise the important role of skills involved in writing since it focuses exclusively on the end-product.

The process approach, on the other hand, acknowledges the importance of the skills involved in writing as well as the critical contribution of the learners' potential to the process of writing, since it focuses on *how* and *what* the writer does when s/he writes; it fails, though, to provide learners with sufficient input, which would give them insights on the linguistic knowledge required, on what kind of texts writers produce and why. Writing, thus, is seen, according to Badger & White (2000:155), from a "monolithic" perspective '*being produced by the same set of processes*', no matter what is being written or who the writer is.

In other words, the process and the product approach fail to recognise that writing is primarily a communicative activity. What this entails is that although the process approach takes into account the individual writers and readers, it fails along with the product approach to take into account the broader context, that is, the social situation that writing takes place and the purpose of writing.

This, in turn, reveals the positive aspect of the genre approach, which admittedly takes into account the significance of the social context and the knowledge of genre, which is a key element in communication and which involves an understanding both of the expectations of the discourse community it addresses and the relevant conventions in terms of structure, language and rhetoric (Dudley-Evans & St John, 1998:116-115). However, the fact that this approach fails to recognise the cognitive nature of the writing process and the skills involved in this process, proves to be its major weakness, since it sees the role of writers as '*largely passive*', as Badger & White (2000:157) state.

TOWARDS AN INTEGRATION OF APPROACHES AND THE COMPUTER

The aforementioned approaches, on the one hand, seem to oppose each other, on the other hand, however, they seem to complement each other (Badger & White, 2000:156-157; Dudley-Evans & St John, 1998:118). Thus, the computer-mediated, process-genre or social-constructionist approach seems to be most effective since it is informed by and combines insights of the product, genre and process approaches to writing along with the benefits of Integrative CALL.

The basic assumptions that this approach is based on are that writing is a social act and involves linguistic knowledge (product, process approach and Integrative CALL), awareness of the social situation in which writing takes place as well as the purpose for writing (genre approach and Integrative CALL) and finally, the process skills involved in writing (process approach and Integrative CALL). In terms of writing development, it is assumed that it takes place by drawing the learners' potentials (process approach

and Integrative CALL) and by providing learners with sufficient input to which they respond (product, process approach and Integrative CALL)- [Badger & White's (2000:156-157) definition of the social constructionist/process-genre approach adapted to fit in a computer-mediated approach].

As it is obvious, one of the basic premises of this approach is that writing constitutes a social act within a broader context. The implication that this premise has on the role of the writer-learner is that the learners have to relate the act of writing to a particular situation and a particular purpose that comes out of this situation, something which is facilitated through the use of computer, since it provides learners with sufficient input and a meaningful, authentic social context where writing takes place. Thus, the learners should be encouraged to consider their role as a member of a discourse community. This entails that learners should be aware of the norms and the expectations of the community-audience they address (Dudley-Evans & St John, 1998:118) in terms of meaning-tenor, of information content-field, and presentation-mode (Badger & White, 2000:158), before drawing on their knowledge about language used in a particular genre and applying certain skills appropriate to this genre (Ibid).

As far as the development of writing is concerned, a suggested framework in this approach, illustrated in Figure 4, would see writing being developed in four main stages: the *awareness-raising stage*, the *support stage*, the *practice stage* and the *feedback stage*, all of which involve 'hands-on' computer work and a full integration of all the receptive and productive skills.

At the awareness-raising stage (Figure 4), where the computer acts as a tutor, tool, stimulus and as a social environment, the students are *exposed to various texts or corpora of texts*, mainly through the Internet, and analyse them regarding genre elements and features, especially moves, i.e. units that relate both to the writers' purpose and the content they wish to communicate (Dudley-Evans & St John, 1998:89, 118). Further to this, through consciousness raising activities, language awareness activities or even metacommunicative tasks -i.e. tasks that focus on language form and use - provided on the Word Processor or on the Internet, the learners realise how important it is to be *considerate towards the intended audience* and *become aware of the linguistic features* of each text-type: typographical, discourse organisation, paragraphing, sentence structure and length, information packaging in sentences, cohesion, verbs and verb forms, and nouns and noun groups.

At the support stage or pre-writing stage, the processes of *idea-generating* and *focusing* take place (Figure 4), within a real-life-like or even real life situation and a real purpose for writing provided by the computer (computer-stimulus and social environment). Using both *guided* techniques (e.g. statement prompts, wh-questions, simulations, etc.) and *unguided* ones (e.g. brainstorming, discovering etc.) the teacher tries to generate in the writers the formal and content schemata stored in their long-term memory, and enable writers to identify the purpose for writing and the intended readers along with their expectations and needs, and generate ideas about the language, the actual content and its organisation.

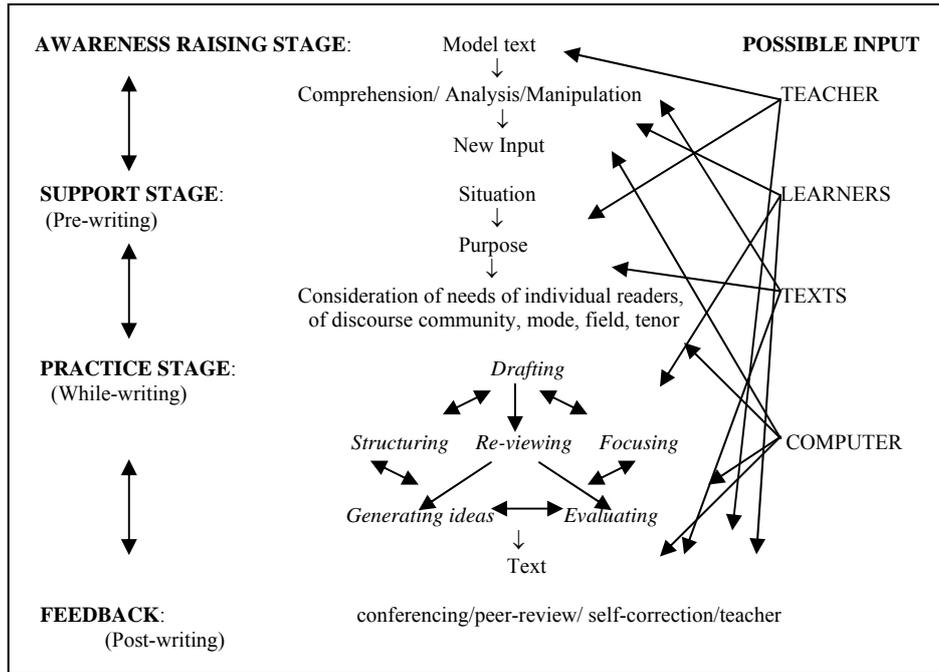


Figure 4: A Framework For Writing Skills Development (combining elements of the product and process approaches along with the social-constructionist approach and Integrative CALL)

Then the students-writers focus their ideas on the main point they want to communicate considering the situation, their purpose, their audience and the viewpoint they want to establish.

At the practice stage or composing stage, students are given the opportunity through the use of computer (computer-tool) to experiment with the features discussed in the awareness-raising stage and the ideas they have come up with in the support stage, already stored on the computer and readily available at students request. The students, at this stage, firstly, *structure* (Figure 4) their ideas (White & Arndt, 1991: 78)-i.e. select and arrange their ideas so that their message is conveyed and received successfully. Students, according to Trimmer (1998:5), go through a systematic process-which he calls planning- of giving shape to their ideas transforming them into a first draft. Once the students have made a rough plan, they are ready to write. During this process- i.e. *drafting* (Figure 4)- according to White & Arndt (1991:99), the concerns of the reader begin to assume more significance. The students experiment with ways of presenting their ideas in such a way that is most appealing to the reader from the beginning to the end. The students may need to *write-revise-rewrite* several times before the final product is ready (Ibid). During the process of *revising- reviewing*

(Figure 4) the students need to stand back from their text and “embark on *global revision*”-change the content and organisation of the text- and once they are basically satisfied with the content of their text they begin “*local revision*”- perfect the smaller elements in their writing (Trimmer, 1998:5). They need, in other words, to *proof-read* for standard language conventions and *edit* their draft for accuracy of meaning, reader understanding and acceptance before writing the final version of the text.

It is at this stage that the Word processor seems to be a most effective tool since it allows students to better experiment, structure-restructure their ideas and write-revise-rewrite their drafts with relative ease. Especially during the process of revising/reviewing and proof-reading, the features and functions of the Word Processor, such as ‘cut’, ‘paste’, ‘delete’ etc., the spell and grammar checker, or the use of split screen, which can help learners to revise their drafts by enabling them to see the draft and work on their versions, or even the potential of seeing more than one document at the same time, can be of great help.

The *reviewing* (Figure 4) process requires a good sense of judgement, which is difficult for the writers since they often read what they intended to write rather than what is actually there. The fact, however, that the drafts are neat and not written by hand creates a distance between the writers and the written texts, thus they can better “*monitor*” themselves referring to decisions about purpose, audience, message and language. Through the use of technology, the learners, who usually work in pairs, learn to monitor by being monitored by someone else through the procedure of *conferencing*- working together with the teacher or a fellow student in order to clarify writer’s intentions, purpose and meaning (Ibid).

At the *feedback stage* or the *post-writing stage*, the product of the practice or composing stage is *evaluated* and even compared to experts’ texts, easily accessible through the Internet (computer- tool, stimulus and social environment) and *feedback* is provided- either *formative* (immediate intervention in discrete parts of an essay) or *summative* (a response in an overview of more general considerations in an essay), as defined by Reid (1993:218). Feedback can be provided through the comment tool available on the Word Processor not only by the teacher but also by the fellow students -*peer-correction*, since especially when working on computers students are more responsive to advice and willing to cooperate, or by the writers themselves -*self-correction*. This helps students develop strategies and skills of critical reading and learn the processes and the importance of revision; while at the same time it conduces to the students’ capacity for growth since students’ writing is not limited to only those papers that the teacher can fully annotate.

To sum up, the computer-mediated, social-constructionist approach presented in this section, views writing as a series of stages, which starts from a particular authentic situation usually generated by the computer, which functions as a tutor, tool, stimulus, social environment and leads to a text, through a flexible process, which facilitates learners’ progress by enabling appropriate input of knowledge and skills.

TECHNOLOGICAL CONSIDERATIONS

All the above suggest that the computer can easily be tailored not only to fit but also to facilitate such an approach to writing (cf. Figure 6), serving, at the same time, many educational purposes. What should be taken into consideration, however, is that

not all computer potentials are positive ones and this can affect the successful implementation of the approach.

First of all, one of the main contributions of computers to the approach is motivation. What, however, teachers should beware of is confusing “task motivation” with “syllabus motivation” (Jones, 1991:5). In other words, the motivation to carry out the task itself should not undermine and detract learners’ attention from the linguistic and learning purpose of the lesson. As, for example, in the case of a Web-project, where students might get so overexcited with the whole procedure of designing a web page or surfing around the Net that they might consider writing, which the activity intends to promote, as an unjustified brake on a fascinating task.

In addition, although the integration of CALL in the writing lesson is supposed to promote interaction, socialisation and individualisation, this potential can have a counter effect and lead to “anti-social behaviour” and isolation, which in some cases maybe positive, when for example close editing a text, but in other cases may lead to working on language in a constrained and artificial manner (Pennington, 1996a:10). Moreover, the complexity of the system and the technical details may also distract learners’ attention from the task at hand, therefore students’ computer competence should be taken into careful consideration.

As regards the Word Processor, Kantrov (1991) suggests that some of its benefits can turn into drawbacks, if it is not used effectively. To start with, the fact that the word processor eases revision, since students do not have to recopy their drafts, may discourage them from doing substantial revision. In addition, the benefit of risk taking and experimenting and the ease to delete or insert information and rearrange the text may turn into “rush-writing” or “sloppy-writing” and “less-planning”, if students are not taught to exploit the technology’s strength and overcome its weaknesses.

Another factor that can have negative effects is the “neatness factor”. Many students think that since a draft is neat and looks good there is no need for revision (“neatness effect”). Finally, the benefit of the neat appearance of the text written on a computer, which is supposed to help learners to make a more objective evaluation of what they have written than if they had written it by hand, because it creates a distance that encourages evaluation and improvement, may become a detriment. That is to say, the distance created may inhibit revision, because the writer may feel alienated from the text s/he has produced (“distancing effect”) and also reluctant to change what already appears perfect (Ibid).

As for the Internet, it is not without problems. First of all, because of its nature, sometimes it may be time consuming to access information or browse the Internet, when lines are busy due to many users, and this may lead to frustration. Moreover, the appropriacy, the quality, and accuracy of the plethora of the contents of the materials accessed through the Internet are difficult to control. Therefore, the preparation of the materials should be careful and detailed, which means that the teacher should spend a lot of effort and time. Finally, another thing that the teacher should be aware of and which concerns the use of authentic sites on the Internet is that the teacher needs to keep track of the functionality of the links because URL (Universal Resource Locator) addresses constantly change and some sites may disappear, which means that the teacher may not be able to use the same material with different classes at another time.

In conclusion, it should be said that the integration of computers seems to have infinite potentials but it has several limitations, as well. Therefore, providing students only with a computer or a software program is not enough, since working on a computer and especially networking can easily become an end in itself, if it lacks the structure needed to achieve specific educational goals (Swaffar, 1998:179).

CONCLUSION

Computers and writing seem to be interrelated. Writing, that is, seems to be the primary form of communication through computers, while computers seem to have raised significantly the profile of writing and the need for effective writing knowledge and skills, broadened because of the advent of computers, and especially the Internet, to include:

-Integrating texts, graphics and audio-visual material into a multimedia presentation, using hyperlinks to communicate messages effectively;

-Writing effectively in hypertext genres for a particular audience, which may be large and amorphous on the World Wide Web;

-And, using effective pragmatic strategies in various forms of computer mediated communication such as one-to-one e-mails, e-mail discussion lists and real-time discussion on line (Warschauer, 2000b; Warschauer, 2001).

This entails, according to Medgyes (in Warschauer, 2001), that teachers can no longer practice TENOR (Teaching English for No Obvious Reason) but they need to practice situated learning and engage learners in authentic tasks and problem-solving activities that will be of value to them in the future.

The concepts, thus, of situation, purpose, product and process should be seen from a different perspective in language learning and especially in writing, where a newer approach should be adopted, which will take into account these important concepts as well as the learners present and future needs. This approach seems to be the computer-mediated, social-constructionist approach to writing, which trains learners on how to 'keep track of' the evolving nature of genres, helps them to become autonomous learners writers and finally, encourages them to reconsider their roles as 'social actors' (a term borrowed from Dudley-Evans & StJohn, 1998:92) in a global community.

In addition, it creates a natural and authentic context where students by integrating all four skills and computing skills realize the experience of producing authentic and creative texts for a real audience, something new and therefore motivating for them. Apart from motivation the approach addresses all the problems that teachers and students usually face when teaching and learning writing. It addresses, that is, the teacher's goals and the students' needs for:

- Writing practice with a real purpose and a real audience in mind;
- Authentic input and samples of particular genres, which the learners can analyse, explore and become aware of their inner features, the content and the language used in such kind of texts;
- Materials and tasks appropriate for each learner's language proficiency, since the students can work at their own pace, make decisions and implement them as they please, especially in the Web-based framework;
- Provision of feedback, which, as in these two case studies, does not necessarily take the form of the 'right answer' but may take other forms such as non-directive

commentary (conferencing) or self-/peer-evaluation through the use of checklists and guidelines, opening thus the way to more imaginative, more flexible and less directive materials (Sheerin, 1991:150);

- Sufficient time, since students can work on their own even outside the classroom by following the analytic guidelines provided and by communicating with the teacher and the other members of the team (e.g. through e-mail);

- And finally, for students' assessment, which, given the open-ended structure of the lessons that allow students to make use of exploratory tasks, is mainly based on the degree and the quality of the fulfillment of these tasks, that is, the presentation of an end-product.

To sum up, taking into account Brandl's (2002) set of guidelines concerning pedagogical and instructional issues the framework suggested justifies the use of the medium since the learning tasks take full advantage of the potential of the medium. That is, students can go through the stages in a non-linear fashion in order to carry out the task more effectively, they are exposed to various multimedia resources, the content of which the learners can select, and generally experience the lessons as an activity that prepares them for the future within a real world context.

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