

Computers in the writing process— advantage or disadvantage?

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This paper tries to find an answer to the question of whether the microcomputer could be put to meaningful use in the teaching of writing techniques to students. Attention is drawn to the fact that microcomputers are text orientated and as such, suitable for writing. Various reasons for this phenomenon are put forward. Microcomputers as well as programmes have become consumer friendly in recent times. This enhances the usefulness of the micro for the teaching of writing. At present, different writing projects are being carried out in the USA. Although scientifically founded results are as yet not readily available, there are indications that students react favourably to this new method of writing instruction. Various writing instructors have warned against the dangers of taking the new approach by storm. In this paper their misgivings are discussed.

Hierdie artikel bespreek die vraag of mikrorekenaars sinvol gebruik kan word vir die onderrig van skryfegnieke aan studente. Daar word gewys op die feit dat mikrorekenaars teksgeoriënteerd is en dus geskik is vir skryfwerk. Verskeie redes word hiervoor aangegee. Mikrorekenaars sowel as programme het gebruikersvriendelik geword in die jongste tyd. Dit verhoog die bruikbaarheid van die mikro vir skryfonderrig. Verskeie skryfprojekte is tans in die VSA aan die gang. Alhoewel wetenskaplik gefundeerde resultate nog nie geredelik beskikbaar is nie, dui gegewens daarop dat studente positief reageer op hierdie nuwe metode van skryfonderrig. Daar is verskeie skryfinstrukteurs wat waarsku teen die gevare van instorm in die nuwe benadering in. Hulle waarskuwings word voorts aan die orde gestel.

Microcomputers can be used to teach students to write better. The advantages of such an approach outweigh the disadvantages.

Microcomputers are text-orientated at present, and it seems as if this will not change in the immediate future. Only recently have we seen the introduction of optical devices that can read a page of text and input it into a computer. The basis of this process is still inputting text through a computer keyboard. A computer without a keyboard will not be regarded as a true computer. Writing, or typing, is very much the scene when we think about inputting information into a microcomputer.

There is also another reason why microcomputers will remain text-orientated for some time to come. Software development supports this notion to its

fullest extent. Think for a moment how many different word processing programmes are available for only one brand of microcomputer. If you take into account all the enhancements which are added to these programmes on a monthly basis, you can see what important role text input plays in information processing through a microcomputer.

Because microcomputers are inclined to accept text input, we should explore possibilities to let students use them to improve their written assignments.

There is still another reason for bringing students to computers or vice versa. There are many programmes available that can help students in all the stages of preparing a paper, i.e. prewriting, writing, and revision. *Prewriting* should be regarded as

the most creative part of the entire writing process. But this is the part that students tend to neglect. (According to Marcus 85% of a student's time should be spent on prewriting, 1% on writing, and 14% on revising.) In this stage they need to define their audience, find a clear statement of purpose, organize their ideas, and select information. A programme such as *Writing is Thinking* (Kapstrom Inc., Dallas, Texas—for IBM PC) is a good example of how students could be prompted to find answers to very important questions during the prewriting session. This programme, by the way, also deals with the other stages in the writing process.

The *writing* stage is the one which traditionally has received the most attention from student writers. This is the stage where they limit themselves by starting with an introduction, and working through to the conclusion. This strategy often causes a problem: Once a student has started in this manner, he may end up facing the so-called writer's block, and he does not know how to escape it. He is not able to make logical transitions between his ideas. He may also be unable to review his own sentences. Apart from *Writing is Thinking*, which could help in this area, there are also programmes such as *Format and Editor* (Drexell University, Philadelphia, PA.—for IBM PC).

In the *revising* stage students should not only look at the physical lay-out of a paper but also at the composition itself. The so-called proofreading can to a large extent be handled by spelling and style checking programmes. Examples of the latter are *RightWriter* (DecisionWare Software Inc.—for IBM PC) and *Author's Analyst* (MDS Software—for IBM PC). A program like *Writing is Thinking* will ask very direct questions at this stage. If a student is willing to answer them in all honesty the final version of his paper will benefit from it. It is estimated that 80% of students prefer to do their own typing. This leads them to let their concern for neatness overshadow the awkward phrases and illogical thought patterns in their papers.

Microcomputers and programmes have become easy to use. The term "user-friendly" is used almost exclusively to indicate the ease of use in the case of microcomputers and software. It is even more relevant in the case of software used in the writing or composing process. No student would want to

spend hours learning a software package just to find that he cannot use it without effort. We therefore find that when a word processing programme is evaluated, user-friendliness is almost every time one of the aspects which is emphasized.

Apart from word processing programmes, there are also other writer's aids that are becoming more readily available. We refer here to style analysers, spelling checkers, and composing programmes. The latter are often designed to be used without the intervention of an instructor. However, many writing instructors would prefer programmes which include a role for the instructor. An example of the latter type is *Writing is Thinking*. This programme has some limitations in terms of paragraph construction and overall length of a paper, but can be put to good use in a writing laboratory situation.

Microcomputers as well as software are becoming more affordable. It is no wonder that students tend to acquire their own facilities. With the scene set like this, educators should not hesitate to take advantage of it. Students' writing can be improved by creating the necessary facilities, and by encouraging and guiding them to use these facilities.

In the USA there are several microcomputer-based writing projects in progress at the moment, e.g. Colorado State University, Drexell University, and the Navy Programmes. So far scientifically based results are scarce. Nevertheless, computers have helped to improve students' writing according to Arms (1983). Students become enthusiastic about their written assignments, and their attitudes improve. The interaction which stems from some writing software encourages them to continue working. Furthermore they feel more confident because of the aids at their disposal. They feel they can use this new tool or aid even after the instructor has gone. They are not exclusively dependent on their instructors for producing a well organized paper. Furthermore students find they are using their time more efficiently. Not only do they find typing a faster method of making their thoughts visible, they are also impressed by the editing facilities available in writing laboratories, as well as with the software. Arms (1983) is convinced that the thinking process as well as the mechanics of producing a report are greatly enhanced by these new aids that have become available to students and writing instructors.

There are also other advantages in the use of computers in the writing process as pointed out by Southwell (1983). Computers provide a support system because they are usually available at times and places where teachers are not. The interactive nature of some programmes ensure that students are constantly involved. Students also like to use computers for their studies because they like the idea of working in private. This attitude is enhanced by the game-like nature of some programmes. A good example of this type of programme is *Grammar Examiner* (DesignWare Inc.—for IBM PC and other computers) which teaches a student to correct grammar in passages in a newspaper setting.

The successful implementation of computer-based writing activities depend, according to Shostak (1983), mainly on three factors: how creative the programmes are in solving students' problems; how successful teacher training programmes are; and how convincing programme developers are in demonstrating that computer-assisted instruction is part of the teaching of writing.

Before educators or institutions rush into computer-assisted writing instruction, they would benefit from looking at some warnings and cautions from people who have walked this road before. Elias (1985) suggests that educators should ask some very critical questions. They should ask what exactly they want the computer to do in a writing programme. They should also determine how a computer will fit into their approach to teaching writing. Many instructors are also asking today whether the writing programmes that are available are really worthwhile—are they not just the “electronic versions of our worst selves”? (Elias 1985:2).

Elias also points out some very good reasons for this predicament in which teachers find themselves. The microcomputers which can be used to run writing programmes are severely limited in memory and other facilities. Secondly, writing instructors who ask programmers to help them design such programmes, do not know enough about computers. The result is that they do not know how to describe their aims to programmers so that the latter can make sense out of it. Further, writing instructors can very often not define exactly what qualities they are looking for in students' writing in

terms a project programmer can understand.

Looking to the future, Elias sees a boom in CAI of all sorts, but essentially in writing instruction. There are various reasons for this optimism. One of the most important is an expected reconceptualization of the computer as a teaching tool. In this way some of the dangers listed above can be avoided. If we also bear in mind that artificial intelligence is only now breaking into the area of computer-assisted instruction, then text analysis should also be entering a new and exciting phase.

There are also direct problems for the user of a computer for writing. The most obvious disadvantage may be a lack of access. For students who are wholly conditioned to writing on computers, writing in any other way may be frustrating. If students become used to this facility, and then suddenly find that there are not enough facilities, it may lead to a decrease in motivation. Another disadvantage for some people is the limitations imposed by the computer screen. Some people find it very difficult to maintain an overview of a document when they see only 24 lines at a time.

Apart from limited access and screen size, writing on computers may also tempt students into making smoke-screen revisions (Gallagher 1985). They may concentrate so much on the nice appearance of a paper that they tend to neglect revising the logic and general composition of the paper. A third problem pointed out by Gallagher is that students tend to write almost too easily, too unreflectively when they use computers for this task. It is interesting to note that computer anxiety, according to Gallagher, is limited almost exclusively to staff members!

The software that is available for the purpose of writing on a microcomputer can be divided into three categories: *word processing* programmes; *composing aids*; and *after-composing aids*.

Most users of microcomputers will be familiar with one or more word processing packages. Some of the best-known ones are *Wordstar*, *Microsoft Word*, *WordPerfect*, and *Bank Street Writer*. Word processing programmes consist of a range of editing features which allow a user to manipulate text. The degree of sophistication may differ from one programme to another. A word processing

programme which may be of special interest to academic users is *Nota Bene* (Dragonfly Software Inc.—for IBM PC). This programme is strongly recommended by the Modern Language Association. Among its most outstanding features is an MLA style sheet which allows for automatic formatting of bibliographies and references according to the MLA standards.

Composing aids are now becoming more freely available. These programmes usually guide a writer through the various stages of composing. Examples of such programmes are: *Writing is Thinking* (used for composing this paper—the inadequacies which remain are those of the writer and not of this programme), *Framework* (Ashton Tate Software Inc.—for IBM PC), and *Think Tank* (Living Videotext Inc.—for IBM PC). All these programmes allow a writer to compose a paper step by step. Prompting to some degree is a prominent feature of these programmes.

After-composing aids are used by writers to check style and spelling. These are programmes that help to put the finishing touches to papers. Examples are: *Writer's Workbench* (Bell Laboratories—available on VAX computer), *RightWriter*, *Wandah* (to be published shortly—for IBM PC). *Writer's Workbench* was originally developed for technical writing, but has since been adapted for academic use by educationalists at Colorado State University. The main characteristics of this group are their ability to guide users in revising documents, check for style, punctuation and grammar errors, and help to produce a well-typed paper. It has to be pointed out, however, that these programmes tend to favour American English with regard to style, punctuation, grammar, and spelling. Some do allow for the expansion of a dictionary which makes it possible for users to insert their own vocabulary. It means that a user would want to check for this facility before deciding on a specific programme.

There is hardly any campus where microcomputers are not available. By making these facilities available to students when they first enter university—

not only computer science students—they can learn to use them. Goal-orientated instruction will also contribute to this end.

If students become familiar with using computers for writing, they should be able to produce better written assignments. This will also contribute towards a more enriched academic study programme and possibly better grades. Initial results in current writing projects point in this direction.

By introducing students to computers for the purpose of writing, a university will ensure that its students are prepared for a vocational environment where computers will be part of their everyday lives.

Writing is not about to disappear from the earth. In fact, writing with computers is just entering our daily lives. Universities should not be the last to recognize this situation, and act accordingly.

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