Using Microsoft Word with Students with Dyslexia

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ABSTRACT

The primary aim of this article provides readers with a discussion about specific tools and features of two versions of the word processing program, Microsoft Word 2003 and Microsoft Word 2007, that may be of benefit in helping students with dyslexia in their studies. As newer versions of Microsoft Word are released, so are more comprehensive features being offered to many users including students with dyslexia. In the course of this article, a selection of the most important facilities will be outlined followed by describing how each feature operates, in addition to pointing out its potential benefit for student use. The final part of the article presents the reader with a detailed discussion on the prospective benefits of using word processing software for students with dyslexia.

INTRODUCTION

The benefits of information communication technology have transformed the academic experience of students with learning problems (Morrison, 2007: 83), in particular those with dyslexia. It is, therefore, not surprising that the educational field is constantly being affected by this medium and has become an important teaching and learning tool for both students with and without dyslexia (Wahl, 1996: 1). The British Dyslexia Association (B.D.A., 2010: 1) declare the potential of using a word processor has resulted in making major differences for students with dyslexia by assisting and supporting them with the writing process (e.g. organizing and structuring ideas for those who have problems with presentation or handwriting, preparation of presentations, and help for those with handwriting problems (B.D.A., 2010: 1). The word processor is a highly important written communication tool and enables easy drafting and editing (B.D.A, 2010: 1) and as Keates (2002: 9) declares, it represents an environment in which this category of students can excel. With the evolution of the word processor and especially with the development of Microsoft Word and its abundant features, these applications provide a better mechanism for supporting the students with dyslexia.

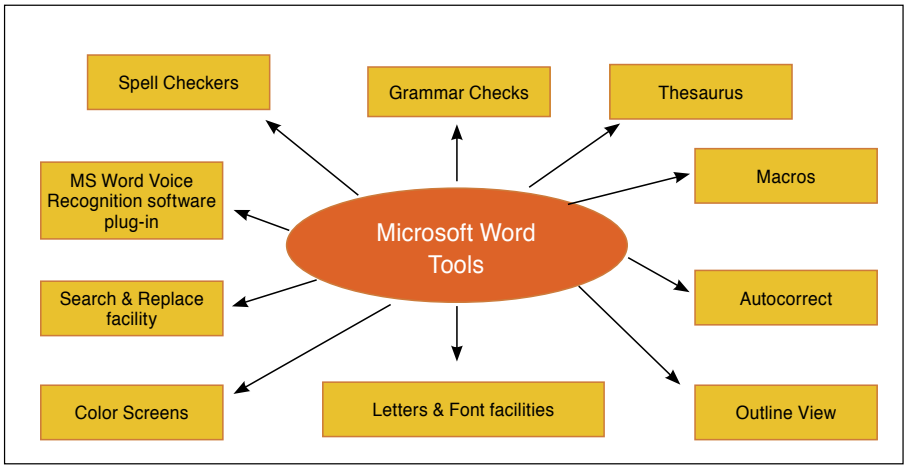

Figure 1: Range of Microsoft Word facilities

WHAT IS MICROSOFT WORD?

The Microsoft Corporation (Microsoft Corporation (a), 2008) describes the word processing application, Microsoft Word, as being a:

"powerful authoring program that gives users the ability to create and share documents by using a comprehensive set of writing tools within an easy to use MS Office user interface"

This program allows individuals to create content and documents more quickly and simply in a professional manner. The application contains a collection of tools and facilities to construct documents from a variety of predefined parts and styles, in addition to allowing students to compose information within it (Microsoft Corporation (a) 2008). Lerner (2000: 56) states that "word processing is a boon for students with learning disabilities who have difficulty in handwriting, spelling and written composition," whereby studies show the greatest difficulties have been found with aspects of grammar, punctuation, spelling, organization and coherency (Raskind, 1993: 187). Consequently, using a word processor, like Microsoft Word, may prove to be a key in addressing many of the problems experienced by these students with dyslexia.

SPECIALISED WORD PROCESSING COMPONENTS

Word processors, such as Microsoft Word, contain a collection of features that can greatly assist in the reading, writing and spelling of a document, like thesauruses, spell-checks, grammar checks, and editing facilities. MacArthur (1996, Lewis et al (in press) cited in Lerner, 2000: 454) states these tools support the reading and writing process by making it easier for the student to write, correct and revise their own writing. Lewis (1998, cited in Evans, 1999: 8) emphasises the fact that all word processing programs should provide the following range of functions to make

this reading, writing and learning process easier for students with learning disabilities, including those with dyslexia, when this program is being used:

- Word processing using voice input devices with speech feedback for the task of editing;
- Software to aid in planning and organizing ideas when preparing for writing;
- Thesaurus and dictionary;
- Software for editing spelling;
- Spellcheckers into which subject specific academic vocabulary can be entered; and
- Software for editing grammar with speech feedback to assist in detecting meaning inconsistencies.

The concept of using a word processor in an efficient and resourceful way could prove to be an impossible milestone for a student with dyslexia, but at the same time, if they can succeed in using information communication technology, this "…can lead to students becoming more confident, independent users" (Fintushel, 2001: 4).

Figure 1 presents a range of facilities in Microsoft Word that may be useful to students with dyslexia:

SPELL-CHECKERS

The use of a spell checker can act as a possible support for a student with dyslexia at college. All word processing programs come with a built-in spell checker with an interactive error alert, such as highlighting. By default, Microsoft Word automatically scans the spelling of words as they are typed and uses wavy red underlines to indicate possible spelling problems (Microsoft Corporation (b), 2010). If the user performs a series of clicks on the word, the program offers a short list of alternatives (Dyslexia Teacher, 2005).

Montgomery (1997: 134) points out that certain spell checkers and dictionaries have the capability of locating a word and determining its meaning from partial clues. But the author admits that these facilities "should be regarded as aids to discovering spelling not a substitute for it" (Montgomery, 1997: 134).

The organization AbilityNet (2002) stress the point that although word processing systems have built-in spellcheckers, they are not tailored and designed for the specific difficulties of students with dyslexia, but look more at alphabetic similarities rather than phonetic connections. Many computer spellcheckers are not user friendly when offering a correction list as quite often the program only offers words that have the first two letters in the spelling error (B.D.A., 2007). Furthermore, if the letters in a word are in the wrong order, the spellchecker may not suggest the correct word that is required. For example, if an individual types "sercle," the suggestions may be "serial," or "serve," but not "circle." This can lead to further frustration for the user. Therefore, as an alternative, the use of a handheld spellchecker could prove beneficial as this unit tries to interpret phonic spellings, e.g. "sercl" for "circle" (B.D.A., 2007).

Montgomery (1997: 134) claims these types of tools avoid the awkward task of locating the incorrect word and editing it by physically typing the correct letters. There is greater potential with these devices in terms of composing and developing ideas. Before using a spellchecker, it is recommended by the author that the student should provide a printout of the document and proof read the text before using the spell checker. This can help identify areas of difficulty that both the pupil with dyslexia and tutor can address. The purpose of this allows the students to take on some initiative and responsibility for their own learning (Montgomery, 1997: 134). The Spell Check tool in Microsoft Word 2003 is located by clicking on Tools → Spelling and Grammar or by pressing the F7 key (see Figure 2) spelling errors appear in red. Should one wish to turn the Automatic Spelling Check on/off, click Tools → Options → click on Spelling and Grammar tab; select/clear the 'Check spelling as you type' check box (Microsoft Corporation (c), 2010). In Microsoft Word 2007, the Spell Check tool is found by clicking on the Review Tab of the Microsoft Word ribbon followed by clicking on Spelling and Grammar.

GRAMMAR CHECKS

The Grammar Check tool in Microsoft Word is a type of "natural language" grammar checker that scans and warns of conditional problems by performing a comprehensive analysis of text (Microsoft Corporation (d), 2010). The Grammar Check tool may not search for all types of problems, but tries to aim toward grammar errors that are highly typical or most frequent. Fintushel (2001, 4) stresses the point that "grammar checks are not refined enough to accurately differentiate between precise grammar rules, verb subject agreement and writing styles for students whose grammar deviates significantly from the norm." Fintushel (2001, 4)

The Microsoft Word application scans grammar as it is automatically typed and uses green wavy underlines to indicate possible grammatical errors (Microsoft Corporation (b), 2010). Many of the errors can go undetected and those that are identified can turn out to be correct. When learning disabled students are being taught to write, these individuals want to write without worrying about making mistakes, but as Fintushel (2001: 4) points out "a grammar check may counteract this objective." By using Microsoft Word, the program has the facility of highlighting grammatical mistakes and offers many options for the student to select from (Fintushel, 2001: 4). The Grammar Check is located in Microsoft Word 2003 within the Spelling and Grammar tool by clicking on Tools → Spelling and Grammar or by pressing the F7 key and the text appears in green. Should one wish to turn the automatic grammar check on/off, click Tools → Options → click on Spelling and Grammar tab → select/clear the 'Check Grammar as you type' check box (Microsoft Corporation (c), 2010). In Microsoft Word 2007, the Grammar tool is located by clicking on the Review Tab and then clicking on Spelling and Grammar. See figure 3.

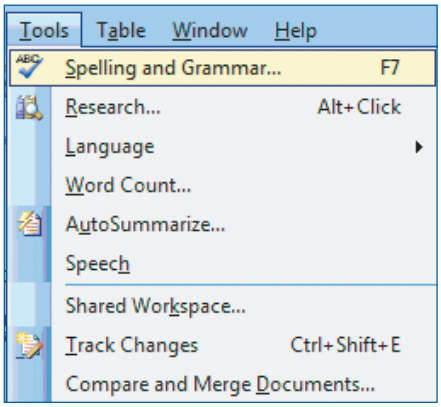

Figure 2: Spelling and Grammar facility in Microsoft Word 2003

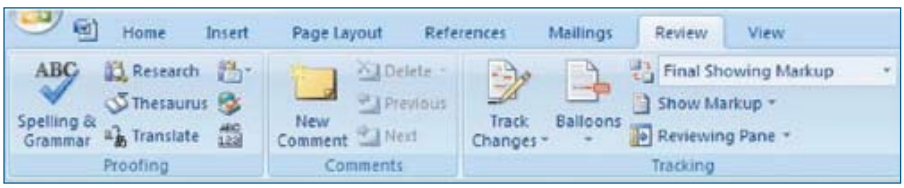

Figure 3: Accessing the Spelling and Grammar tool in Microsoft Word 2007

Figure 4: Accessing the AutoText (AutoComplete) facility in Microsoft Word 2003.

THESAURUS

In order for writing to be interesting, the student with dyslexia has to be able to express similar ideas in a variety of ways. Consequently, the use of a thesaurus could be a key in addressing some of these issues. A thesaurus can display multiple words and synonyms for the student's word selection. In Microsoft Word 2003, when a student with dyslexia identifies the word they wish to express in an alternative format, the user can press the thesaurus key, i.e. Shift Key + F7 or right click on the word and select Thesaurus. This thesaurus facility can provide a means for students to increase their vocabulary and, if used consistently, reinforces that new vocabulary (Fintushel, 2001: 5). This tool is a clever and useful feature for a visual spatial learner (Silverman, 2002: 4) and "by using this tool, students with dyslexia become confident independent writers" (Fintushel, 2001: 4). In Microsoft Word 2007, the Thesaurus tool is located within the Review Tab followed by clicking on the Thesaurus button.

MACROS

A macro can be defined as "a sequence of commands for performing a task" (Cantor, 2003: 1). These tasks may be simple, for example, inserting a word, or a complex task, such as copying data from one program and pasting it to another. Macros are used to record a sequence of actions (Microsoft Corporation (e), 2010) or for tasks that are repetitive, physically demanding or mentally tasking. They can be written to insert a person's name, address or e-mail address; insert symbols and foreign characters; insert the date and time; abbreviate words or expressions; or even open a file (Cantor, 2003: 1). Cantor (2003: 2) explains four main macro creation techniques that may be helpful to students with dyslexia when it comes to using word processing packages:

- Capture: This allows the user to record commands by typing and manipulating the mouse
- Wizards: These features guide the use through a series of questions and automatically generate a script
- Direct editing: This facility allows the user to type or insert commands into the macro editor
- Semi-automatic techniques: This tool allows the user to select, insert and edit command via a user interface to build a script (Cantor, 2003: 2)

Macro techniques help students with learning disabilities like dyslexia to perform tasks quickly and efficiently by saving time, energy and frustration. (Cantor, 2003: 6). The Macro tool can be accessed in Microsoft Word 2003 by clicking on Tools ➔ Macro ➔ Record New Macro ➔ Give the macro a name or by pressing ALT + F8. In the Store Macro In, click the template/document where the macro is to be stored. In the Description box, type a description for the macro. Finally, if the user does not wish to assign the macro to a toolbar/menu/shortcut keys, click OK to begin recording the macro. In Microsoft Word 2007, the macro tool can be accessed by clicking on the View Tab, followed by clicking on the Macro button.

AUTOCORRECT

The AutoCorrect facility is a feature available in Microsoft Word used to identify and correct spelling and other errors as they are being typed (AbilityNet, 2002). An individual can add misspellings to an "AutoCorrect" table that will automatically change to the correct spelling as the user hits the spacebar or full stop after a word. Many students with dyslexia achieve significant improvement by being allowed to add their most frequent problem words to the table. The AutoCorrect facility also has the ability to expand abbreviations into phrases or paragraphs (AbilityNet, 2002). For example, the AutoCorrect facility could be used in a sequence like: Type "y", "s" and hit the spacebar to produce "Yours sincerely." In certain versions of word processing applications, auto text entries are automatically offered as the user types on the screen. Macros work on a similar concept as the AutoCorrect facility, but these tools handle commands, as well as text and graphics (AbilityNet, 2002). An application like Microsoft Word has the added advantage of being able to autocorrect common or personal spelling errors as they are being typed (B.D.A., 2007). This tool works automatically in both versions of Microsoft Word 2003 and Word 2007.

Another similar tool to using the AutoCorrect facility is to operate the AutoComplete facility which is located within the AutoCorrect Options tool. To access this tool in Microsoft Word 2003, click Tools ➔ AutoCorrect Options; Select the AutoText tab ➔ click/unclick Show AutoComplete suggestions ➔ click OK (see Figure 4).

OUTLINE VIEW

When students with dyslexia are planning to write about a topic in Microsoft Word, the individual may find it helpful to use the Outline facility (AbilityNet, 2002). The Outline View is a tool that displays document headings that are indented to represent their level in the document's structure. Users who operate this tool can also use the outline view tool to work with master documents (Microsoft Corporation (f), 2010).

Certain applications contain a facility to develop an outline before a dyslexic student writes in detail. This tool means the student can "talk through" what is to be written or make brief notes that will be further expanded at a later stage (AbilityNet, 2002). As a result, Microsoft Word simplifies the formatting of text so that users can focus on the structure of the document (Microsoft Corporation (f), 2010). Users can make a variety of formatting changes in outline view: each heading level is formatted with the appropriate built-in heading style (Microsoft Word 2003 has nine different built-in styles); the indentation of each heading according to its level that only appear in Outline View; paragraph formatting that controls the appearance of a paragraph (indentation, alignment, line spacing and pagination); and displaying the outline as plain text (Microsoft Corporation (f), 2010). To access the Outline View tool in Microsoft Word 2003, click View ➔ Outline View.

LETTERS, FONT SIZE AND FONT SPACING

Larger letters and words can prove to be quite helpful and beneficial for those with a learning disability, like dyslexia and for those whose vision is not a problem. Letter size can be adjusted in the Font Size facility, the Font Style facility and the Zoom text facility.

The Font Size: The Font Size can be set to single, 1.5 or even double spacing, with the added facility of left, right, centre or default justification of text for the purpose

of reading, writing and editing. The text on the screen can be readjusted to single spacing for the purpose of printing and editing (AbilityNet, 2002).

Font Styles: The user also has an endless selection of font styles and types to choose. Certain font styles and types are easier to read than others, e.g. a non serifed style "Arial Text" versus a serifed style "Times New Roman." Even a tool like a "non proportional" font, such as "Courier Style," can make the printed style look bigger and easier to read rather than a proportional font (AbilityNet, 2002). To access the Font tools in Microsoft Word 2003, simply click Format ➔ Font or press CTRL + D.

To access the Font facility in Microsoft Word 2007, click the Home tab and choose the appropriate letter size/type/style and alignment.

COLOR SCREENS

AbilityNet (2002) claims that many students with dyslexia who have a color computer screen can really benefit from using a word processing package by being able to choose and adjust the colors that suit them best. The user has an endless selection of font and background colors to choose from that can greatly enhance the quality of life for a person with dyslexia (AbilityNet, 2002).

SEARCH AND REPLACE FACILITY

The Search and Replace facility is a simple but highly effective tool in Microsoft Word. Its role is to identify and locate repeated errors for correction. The user only needs to type the error and corrected version once and the other corrections will be performed automatically and can be located from the Edit ➔ Find and Replace menu (B.D.A., 2007). In addition, the Search and Replace facility is also used to find and replace text, formatting, paragraph marks, page breaks and other items (Microsoft Corporation (g), 2010). To access the Find tool only, click Edit ➔ Find or by pressing (CTRL + F). To access the Find and Replace tool, click Edit ➔ Replace (press CTRL + H).

Type the word that the user wishes to search for in the "Find What" field and in the "Replace With", type the word that you wish to replace it with, followed by clicking Replace/Replace All.

To access the Find or Replace facility in Microsoft Word 2007, click the Home Tab, followed by clicking on the Find or Replace facility.

MICROSOFT WORD VOICE RECOGNITION PLUG-IN

The speech recognition facility is only available in Microsoft Word 2000 or Microsoft 2003 and is offered in Simplified Chinese, Traditional Chinese, English (US/Ireland) and Japanese language versions of Microsoft Office (Microsoft Corporation (h), 2008: 1). Users can use this facility to dictate text into any Office 2003 program by using a selection of menu, toolbar, dialog box and task pane instructions. Even though speech recognition is not specifically tailored for completely hands-free operation, users will achieve significant results if they use a combination of voice with mouse and/or keyboard interactions (Microsoft Corporation (h), 2008: 1). The Microsoft Word speech recognition facility is located by clicking the "Tools" facility ➔ Speech at the top of the main menu.

Once this has been activated, the speech recognition toolbar is positioned or "floats" above Microsoft Word and appears as a "language bar" facility with hidden text labels (Microsoft Corporation (h), 2008: 2). First time users must participate in a speech training task so that the computer can recognize how the individual speaks, in addition to increasing speech recognition accuracy (Microsoft Corporation (i), 2008: 2). Once this has been completed, the users are offered a variety of tools to use when dictating.

THE ROLE OF A WORD PROCESSOR

Raskind (1993: 187) remarks that researchers have claimed word processing software to be a valuable tool for assisting students with learning disabilities, especially when compensating for written language problems. Sun Associates (2001: 5) state that word processors are used by teachers to create many types of documents, such as lesson plans, student/parent communication and personal correspondence. Students with dyslexia often use a word processor in similar ways to write up research papers, carry out projects, doing assignments and other written documentation, all of which can be accomplished by using this program (Sun Associates (2001: 5)

BENEFITS OF USING A WORD PROCESSOR

Although many facilities are freely available in Microsoft Word for dyslexic students to use with reading and writing, it is important to remember that these applications contribute a variety of personal, academic and physical achievements for them.

MOTIVATION

Word processing applications allow a learning disabled student to produce clear, legible typed information on the screen that offers encouragement and motivation for the individual to write extra information. These programs provide the dyslexic student with an endless collection of formats in which to publish their material (MacArthur, 1996; Lewis et al (in press) cited in Lerner, 2000: 454).

Word processors allow students with dyslexia to concentrate on the meaning of their typed information rather than being preoccupied with the mechanical aspects of writing (Raskind, 1993: 187). This is a highly important feature for them since they can often develop a fear of translating their thoughts into written language due to their writing problems. Raskind (1993: 187) explains that the satisfaction of these students knowing that they can produce language at ease and correct errors at a later stage is often found to unshackle their writing abilities. For example, omitted text can be added; unsuitable words or blocks of text can be deleted; sentences and paragraphs can be moved with ease; and text can be easily bolded, centred or underlined (Raskind, 1993: 187).

COLLABORATION

Word processing applications teach students to collaborate in the writing process with their tutors and colleagues because of screen visibility and anonymity of printed text (MacArthur, 1996, Lewis et al (in press) cited in Lerner, 2000: 454). Lerner (2000: 452) stresses the importance of using this application by stating that it acts as an excellent medium for teaching, writing and integrating with language systems. Word processors produce a one-to-one interactive environment where students can practice recently acquired reading skills on a constant basis (Lerner, 2000: 56).

EASE OF REVISION

The editing tool can be regarded as being an important facility for any student with dyslexia to use in any word processing program. It can ease the physical burden of revising, making it more manageable to correct, revise and rewrite material. Secondly, the learning disabled student can insert, delete, edit and change the content on the screen until the correct information has been displayed, all by the click of a button. Thirdly, after the necessary changes have been made, an individual can print off the draft, make additional changes on the page and then make the necessary corrections on the computer screen (MacArthur,

1996, Lewis et al (in press) cited in Lerner, 2000: 454). Quite importantly, word processors also allow students with learning disabilities to express themselves at a point that is equal to their intelligence level. Since a word processor detects errors on the computer screen before the document is printed, the student will end up with a neat and organized document that helps them develop a sense of pride in their written work, as well as enhancing their image as writers. Consequently, this can result in a more positive approach to writing (Raskind, 1993: 187).

HELP WITH FINE MOTOR PROBLEMS

Since the role of writing can be a difficult and arduous task, the process of typing is inherently easier, neater and more rewarding for a student with fine motor problems (MacArthur, 1996, Lewis et al (in press) cited in Lerner, 2000: 454). The word processor can eliminate the need for retyping and makes the learning disabled student apply more time and energy to the most important aspect of the writing process, i.e. thinking about the content, editing and revising (MacArthur, 1996, Lewis et al (in press) cited in Lerner, 2000: 454). Word processors help in the writing process for these students by providing a technique to allow them to write down their thoughts and ideas without worrying about making mistakes (Fintushel, 2001: 3). For a person with a learning disability, writing becomes a less arduous task (Lerner, 2000: 452). By using a word processor, the individual with dyslexia can write without worrying about handwriting, spelling and grammar problems.

CONCLUSION

The main aim of this article was to explore and describe a selection of highly important word processing components in both Microsoft 2003 and Microsoft 2007 that are readily available for students with dyslexia to use for the purpose of reading, writing and spelling. A description was provided about each facility that also explained the importance of using these features, followed by explaining how to access each individual facility. The final part of the article concentrated on describing the benefits of using word processor applications, in general, for both personal and academic use for students with dyslexia. Since these students can have many difficulties with reading, writing and spelling, it is imperative that developers of these types of applications tailor the program's design in providing additional tools to support these student needs wherever possible. Meanwhile, academics, teachers and educational professionals should constantly explore how other features of word processing programs that were not described in this article can be specifically tailored to the individual needs of the student with dyslexia. Further research could concentrate on examining this theme in more depth.

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