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USING ICT TO SUPPORT STUDENTS WITH DYSLEXIA

Original scientific paper

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ABSTRACT

Dyslexic students often have the excellent joint capability, yet many fail to get the mastery of reading. The signs of dyslexia may affect many fields of learning and activities. They may be characterized as a combination of difficulties that influence the learning process in reading, spelling, or writing. It is mainly connected with mastering written language, although spoken language may also be affected. The application of information and communications technology (ICT) is a vital tool to rectify gaps and weaknesses for students who have difficulties spelling and writing and can be highly favorable to dyslexic students. Developing word processing skills allows people with dyslexia, particularly those with scanty motor skills, to better present their work and frees them from the process of writing. Mastering typing and word processing skills are life skills, and the struggle taken up in learning to type will be well recompensed (Beveridge, 1999). In this paper, We will examine the characteristics of dyslexic children and how ICT can facilitate some of their weaknesses and enable them to succeed in taking more control over their learning. We also consider what the advantage and disadvantages to children with dyslexia of using a computer are.

Keywords: *Dyslexia, Using ICT, Special Education, learning difficulties*

INTRODUCTION

Dyslexia is one of several distinct learning disabilities. A specific language-based disorder of constitutionalorigin is characterized by difficulties in single-word decoding, usually reflecting insufficient phonological processing (Beveridge, 1999). People with dyslexia are liable—more than others—to mispronounce words. The following mispronunciations are typical for people with dyslexia. Arbitration for reiteration, more straightforward for similar, relief for belief, and up the ball' instead of up the wall. Unless one is primarily on the lookout for them, errors of this kind are not always noticed in ordinary conversation. However, they may have repercussions on spelling and, in some cases, may give rise to confusion. Planning and structuring essays is often a problem. Indeed, because the dyslexic student has too little to say—usually quite the opposite is the case—but because of a limitation of the amount of material that he can 'hold in mind' without writing it down. Even though he is fully capable of logical reasoning, he may fail to appreciate that what has found its way to the paper does not adequately represent what he wanted to say. Essays are written by dyslexic students, even though they may be full of good ideas, sometimes give the impression of a lack of planning and structure.

It is now almost certain that the dyslexic's unusual balance of skills has a physiological basis. Difficulties are related to mastering phonics (the ability to sound out words fluently), sound blending, and to analyzing sounds in words. Problems frequently occur at the word level rather than text level and interfere with the progress of accurate and fluent word reading abilities.

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The word identification problems lead to slower read rates and mistakes that hurt comprehension.

Researchers investigated the phonological deficits of children with dyslexia. Reid (1998) states that dyslexic children usually perform poorly on a wide range of measures of phonological awareness, verbal short-term memory, and quick naming and speech appreciation tasks. Reid (1998) presents the following as the areas where dyslexic children have difficulty: Speed of processing, short-term memory, Long-term memory, Auditory and visual discrimination, Spoken language, Motor skills, Right and left, Organization, Pronunciation, especially of words of three or more syllables, Orthography, Logicality.

However, this list does not mean that all children showing these problems have dyslexia. There are a variety of tools available for individuals with reading difficulties to use to access print. These tools are called "reading machines." As disability service providers become familiar with "reading machines," some devices initially designed to meet the needs of a specific disability are being used with dyslexia. It helps children with low speed of processing and visual discrimination (Abbott, 2002). Integral controls are available for image size, focus, and various black/white and color video monitors. Also, users can change print contrast. Peculiar skills work, such as spelling models and Tactile Image Enhancer presents a hand-drawn or printed picture from a computer and raises the lines to create a tactile image.

Such programs benefit people with dyslexia with short-term memory (Dyslexia Teacher, 2005). Voice Recognition Software helps children with pronunciation, especially of words of three or more syllables. Words are correctly spelled. The user's flow does not interrupt to stop and worry about spelling (Dyslexia Teacher, 2005). The need to type or handwrite is removed. Some dyslexic users with poor organization skills will benefit from organizing and planning their "writing" before dictating, so planning tools may be helpful. With software and hardware help, learners can organize their thoughts, develop their memory skills, and improve their creative writing and produce work, reflecting their ability (Dyslexia Teacher, 2005). Standard word processors can offer much of the support needed to help dyslexic children with orthography difficulties. Spell checkers are a feature of most standard word processors. For some, word prediction can be helpful. Packages now exist for all computer systems - a trial with known words may help. With both spell checkers and predictors, attention to the setup and dictionary used may help individual users (Nelson, 2003).

Children with dyslexia find verbal explanations confusing as they may have logical memory difficulties and motor skills. ICT can assist in this area with such products as Numbershark (available from White Space Ltd), which has 30 games designed for learners with poor logicality, attention span, and sequencing skills (Bearne, 2002). Children with this condition often have difficulties with right and left reversing letters within words when reading or writing (b/d; bird/bird; left/felt). Starspell can help with a wide range of spelling difficulties. It is includes learning activities based on the well-tried Look-Cover-Write-Check approach to spelling (Bearne, 2002). Word-processors can help children write by offering help with finding and spelling words and checking the completed text. When not available as standard, speech output can be added to programs to help by reading words back to the user (Nelson, 2003).

ACCESSIBILITY GUIDELINES FOR WEB-BASED AND E-LEARNING MATERIALS FOR CHILDREN WITH DYSLEXIA

In the UK, the Special Education Needs and Disability Act (SENDA) 2001 has brought education under the regulation of the Disability Discrimination Act 1995. It describes dyslexia under the term "disability." Shortly, an institution has to treat a student with dyslexia not less favorably than one who does not have disabilities. Institutions must also make "reasonable adjustments" to enable children with disabilities to carry out all aspects of their academic and personal lives while at school or university.

In order to review teaching and learning methods and see in what way the needs of the student and children with special needs are addressed, we should include general aspects, such as the accessible provision of e-resources and programming.

The UK Learning and Teaching Support Network have created a guide to working with children with disabilities, which outlines the implications of act 2 (UK Education Raising Standards, 2005). Institutions are required to take reasonable steps to make their education and other connected services accessible to disabled children. Especially there is a requirement to be "anticipatory" with attention to the needs of disabled children. It means that a school or institution should be continually reviewing its policies, methods, and practices to ensure that the needs of a disabled person can be satisfied if and when they apply. Instances of this would be to ensure that course materials are in the electronic form to be quickly transcribed should this be required and ensure that web-based materials are accessible to students and children who use screen readers. Default to anticipate the needs of a disabled student may harm a defense against any allegations of discrimination. A school is required to both anticipated the needs of a disabled student and to "sensible regulations" to ensure that disabled children do not meet discrimination. Seeking to protect the equity in the treatment of all students with disabilities, departments must ensure that changes in practice and supply are applied uniformly to all children, including those already registered.

The following three leading standard providers in the area of web accessibility that the headteachers and SENCO need to aware of it, IMS Global Learning Consortium has developed guidelines for accessible learning system software.

The Web Accessibility Initiative (WAI) has developed Web Content Accessibility Guidelines. United States accessibility law provides standards for accessibility for electronic products, comprising software and Web resources.

These allow the user to control the background and text's font sizes, styles, and colors. It is significant since, for example, Serif fonts can be difficult for dyslexic users, whereas some combinations of contrasting colors can help read the text. Such preferences are personal and hence cannot easily be catered for by the author of the material. However, it may be possible to cater for them within some scopes, at least by allowing the end-user to configure the default interface. In a Web context, the use of Cascading Style Sheets may be used to assist. The user customization of the Webpage's appearance Guidelines that particularly beneficial to children with dyslexia was selected from the generic accessibility guidelines, which made against known problems connected with dyslexia and those that the guideline provider specifically recommended for dyslexia or particular learning difficulties. Eleven germane, recurrent themes that arose from the standards and guidelines described above are (Beveridge, 1999): Avoid heavily colored or figured backgrounds, as these can instead outshine the text. The precise structure of the text into left-justified paragraphs. Use plain and compact language and easy to understand graphical cues.

Plan pages so that they can be read by helping technology, including text readers and screen readers. A student with dyslexia may use a screen reader to hear elements or significant parts of the text. It circumvents the requirement of reading and provides the same information in a more plaint circuit. Allow the user to turn off any timed elements. Blinking or scrolling text could be hard to read. Any assumed timing in a text could be inexact for someone having difficulty reading the text or taking longer than anticipated by the planner to digest the information. These elements that are not textual may simply be diverting, making reading any text difficult. Use steadfast layouts and formats. It lessens cognitive overload and allows the content to be the center of attention. Suggest context and orientation information. Front-load the information to give as much orientation and content information as possible at the beginning of any section. It enables the user to realize what they are reading and why without committing themselves to read a lengthy text and the danger of losing the thread. Use sensible white space, so the text was not cluttered. Place backlinks at the end of a piece of text rather than defuse. Use front-loaded hyperlink sentences, which produce a short description of where a link will lead and why it is there. These guidelines will help create movable and accessible Web pages with improved clearness, allowing the user to focus on the content.

METHODS

Systematic Reviews of Observational Studies have carried out this review. Eligibility criteria for inclusion were original articles based on observational studies regarding genetic causes of dyslexia and early identification. Articles excluded if they did not meet all the criteria for inclusion. Three different electronic databases were searched. The initial search was performed on September 26th, 2020, and encompassed all original articles published in English. In order to minimize the risk of missing potentially relevant articles, only "dyslexia" terms were used in the initial search. The screening process was carried out in October 2020. Initially, all articles were screened by heading and abstract, followed by a full-text screening of the remaining articles. A final hand search through the reference list of the included articles done on October 28th, 2020, in order to locate additional articles missed by the initial search.

ICT HELP TO IDENTIFY AND ASSESS CHILDREN WITH DYSLEXIA

A formal evaluation is needed to identify dyslexia. The evaluation assesses mental ability, information processing, psych-linguistic processing, and academic skills. It determines if a student is reading at the expected level and considers the individual's family background and general school performance. Trained schools or outside specialists can conduct the testing.

The use of information and communications technology (ICT) can help the learning of dyslexic children. It can be employed in diagnosing children with dyslexia, and it can help them in mastering particular skills for reading, spelling, and writing.

Many people have some doubts if they might have dyslexia. There are some ways of acquiring an assessment: we can contact the British Dyslexia Association (BDA), Dyslexia Institute, or Adult Dyslexia Organisation for Information on local opportunities (The British Dyslexia Association, 2005). Schools can now profile children's strengths and weaknesses to find the best ways to teach them and try and discontinue failure before it begins.

One computer system for cognitive assessment is called "CoPS" (Cognitive Profiling System) (Abbott, 2002). Cognitive Profiling Systems Baseline Assessment is a piece of software intended to assess children when they first enter a school that creates reports showing a child's strengths and learning needs. The cognitive capabilities of a child even before they learn to read, make it probable to foretell those who will have reading problems in the future. The CoPS (4-8 years) results are shown as a graphic profile for speedy interpretation, but a detailed analysis of all results is also provided. The graphical profile gives the teacher essential insights into children's learning styles, essential pointers for curriculum development, differentiation within the classroom, and more appropriate teaching techniques.

It is valuable for early identification of potential difficulties, its appeal to children, and its ease of use. CoPS is increasingly recognized as a diagnostic and assessment tool with broad applicability for children who have various difficulties, including dyslexia (The Dyslexia Centre 2005). It tests working memory. Visual memory. Short-term recall of particular and temporal positions. Moreover, visual sequential memory—two tests of phonological abilities. one that assesses phonological awareness.

Moreover, the other that assess phoneme differentiation are also used. Speech is included in these tests so that children could readily engage with them. In these tests, each object is named aurally as well as introduced by pictures. These tests are swift and easy to administer, making the assessment more exact. Early identification can be implemented much earlier than currently, and a child's interest will not be harmed by disappointment and failure.

SNAP is another computer-aided diagnostic assessment (5-14 years) that helps map each child's mix of problems onto an overall matrix of learning, social and personal difficulties (Nelson, 2003). From this, clusters and patterns of weaknesses and strengths help identify the child's difficulties' central features. SNAP involves four steps (Nelson, 2003): Structured questionnaire checklists for conclusion by class teachers and parents give an initial "outline" map of the child's difficulties. The Learning Support teacher collates the parent and teacher responses onto the CD-ROM, pinpointing any diagnostic follow-up assessments, which may be needed as step 3. Complete assessments from a photocopiable resource bank of quick diagnostic "probes" yield a detailed and textured understanding of the child's difficulties. The computer-generated profile yields individual guidance on support (including personalized information sheets for parents) and practical follow-up. The computer is a crucial tool to rectify gaps and weaknesses for students with spelling and writing problems. Poor writers may be restrained in their constructive writing efforts and have low self-esteem, influencing their performances in other curriculum fields (Abbott, 2002).

Many dyslexic children have a powerful visual strength and can benefit from the multisensory approach of spelling software. One such package is Superspell, which produces good learning, enlarges the student's concentration, affords a chance for permanent strengthening of spelling patterns, and increases over study. The computer has immense patience and can be used to practice tasks, which would thwart the teacher. Programs that are directed to intensify spelling by games and exercises have the potential to bring pleasure to the task. Cooke claimed that children working with a computer often concentrated better and used more time to exercise than in a habitual setting.

Dyslexia can now be assessed by classroom teachers using Dyslexia Screener from NFER-Nelson (The British Dyslexia Association, 2005). It is computer-based and takes about an hour to administer. Dyslexia Screener helps the teacher guide children through and make sure they are seriously working and not just clicking the mouse by guesswork. It is a modern, computer-based assessment created to help the teacher to recognize children with dyslexia. With the help of this diagnostic tool, the teacher can distinguish between poor reading ability and dyslexia and have advice on the next steps.

Identification is a crucial area and one that needs to be a priority in the early years. Nationally there has been considerable interest in early identification. Several specific dyslexia-focussed assessment procedures have been commercially available for some time now, particularly the Dyslexia Screener from NFER-Nelson and the CoPs computerized assessment procedures. Some authorities indicated that they were currently looking at the recently published Special Needs Assessment Profile (SNAP) as it involves parents and incorporates a broader range of SpLD's.

CAN ICT SUPPORT DYSLEXIC LEARNERS?

Information and communications technology (ICT) can motivate learners with specific learning problems. ICT assists pupils to muster reading, spelling, writing, and mathematics and provides more effectual support across the curriculum. ICT offers a whole toolkit of methods from simple word processors to speech recognition, CD-ROMs, and the Internet (Abbott, 2002).

A line of software and hardware now exists to help learners organize their thoughts, unfold their memory skills, expand their imaginative writing, and produce work, reflecting their ability. However, as with other strategies, software needs to be chosen with care.

The artifact called Working with Words is a CD-ROM, which contains various activities to support the current needs and learning of a group of dyslexic children. It allows them to succeed at their rate and enables them to control some of their learning.

The children participating in the study are at different stages of development in learning to read; therefore, the activities selected have been tailored to meet their individual needs and enable them to progress at their speed. As the children are currently following an organized phonics program, the material selected for the artifact shows their current needs. A multisensory approach is used to enable the child to hear, see and manipulate the words.

According to Alessi and Trollip (Macdonald & Wisdom, 2002), Constructivism sees learners as active others of knowledge who learn by noticing, handling, and interpreting the world around them. The cognitive approach places expressiveness on active learning because it assumes people learn by observing and making.

Many technologies can help, but there is no magic solution. Teachers must keep trying various approaches and listening to the children to find out what works for them. Above all, it is significant to keep things in perspective for dyslexic learners. It is too easy to fall into the deficit trap and see their work as a sequence of defects.

Computers can minimize the problems of spelling and handwriting, and they can improve planning and composition. Once dyslexic children have conquered these obstacles, we will be free to appreciate the rich vocabulary, line of ideas, and vivacity of their writing. We need to inquire from the learner. What can he/she do well? In what way did he/she learn to do that? Can the methods he/she used to learn that be used to a new topic or range of skills? We need to talk to our students and work jointly to intend a learning program – they are the dyslexia specialists. Progress may become slower, but together we can overcome many of the difficulties. For those who are still slowly deciphering every word and whose progress is slow, the computer proposes personal reading help. We can buy many specialist programs, but many schools and colleges are mainly using programs from TextHelp! There is also a spellchecker intended to cope with the line of mistakes dyslexic learners make. Nowadays, learners can transcribe text from the web or a CD-ROM into Word and have the program to read it aloud. Few children will require the whole text to read aloud, but many will need to find unique words. All they have to do is choose the word and click on the reproducer icon to hear its pronunciation.

ADVANTAGES AND DISADVANTAGES TO CHILDREN WITH DYSLEXIA FOR USING A COMPUTER

A computer with a word processing application appears to be very helpful for a person with dyslexia. The possibility of editing and spellchecking can make a massive difference to the capabilities of writing.

Many children with dyslexia say that the word processor with Spell and grammar check has cardinally changed their lives (The Dyslexia Centre, 2005). It takes the worry out of writing letters, reports, or homework and permits even poor spellers to be independent. It is easy for them to run a spellcheck on material and so much quicker than checking with a dictionary or asking for assistance. Scanners, which allow material to be put straight onto a computer, and screen reading software that reads this material aloud, are very helpful to people who find reading tiresome or difficult. Voice-operated software allows the person with dyslexia to pronounce directly onto the computer without worrying about spelling, making producing written work much easier and quicker.

Learners with dyslexia can benefit significantly from computer-based learning programs. While there is no substitute for individual teaching from a trained teacher, computer programs provide valuable reinforcement, variety and take the boredom out of repetitious drills.

The computer industry has also opened up a whole new area of using a computer for children with dyslexia. In the developing fields of visualization technology, computer graphics, calculating science, web design, Etc., some people with dyslexia have a particular advantage. These new developments in computer technology mark a significant move toward increased visual approaches to information analysis. Children with dyslexia who are inventive, visual thinkers are very well suited to these work areas (Abbott, 2002).

The main advantage of using computers for dyslexic children is that it presents reinforcement and practice, instruction for individuals, and immediate feedback, which are essential in teaching these children (The Dyslexia Centre, 2005). Due to its organization, frame, and pleasant interface, the computer-based methodology is a valuable procedure for motivating and strengthening practice to help reach auto immunization of basic subskills such as recognizing and writing words.

However, the skills required in analysis, breaking down the problem or system into its component sections, and viewing them in a systematic, logical succession are processes that people with dyslexia may tend to find more difficult (Bearne, 2002). In addition, remember the minute details included in the program, such as the name and purpose of variables declared. What changes have been fulfilled to the code? What has yet to be implemented places a considerable load on the short-term memory and could prove to be additionally taxing to a learner with dyslexia? Similarly, keeping track of the developing structure of the program and what stage in the implementation has been achieved, also ensuring items are carried out at an appropriate time; all seem to require organizational skills that may put a learner with dyslexia at a disadvantage.

DISCUSSION

Some resources are of particular use when working with children with dyslexia or specific learning difficulties: Sometimes people can also suffer from the 'Meares-Irlen Syndrome.' In the early 1980s, Helen Irlen found light sensitivity where the complete spectrum of light effects distortions with print and the environment. She discovered that this could be alleviated with the application of colored filters used as glasses. It is possible to change the color combinations on a computer and, via Asfedic tuning (as prepared by expert companies such as Tintavision), to identify and assess the most effective use of the best color background.

Dyslexic people may be unable to process fast-incoming sensory information adequately. It could explain visual distinction such as unstable binocular vision and unsteady fixation when reading, hence visual confusion of letter order, leading to poor memory of the visual form of words.

Bearne (2002) has indicated that black print on white paper is hard to focus on for a long time, and some learners tell that the words "jump" on the page. With many packages, children can experiment with the background and colors of text or exchange the type and character size to suit their wishes. Using double spacing can also make the text more definite.

It is difficult for dyslexic children to plan essays, particularly with many headings or paragraphs. The effective use of such planning tools helps pupils to organize their ideas. Dyslexic students will benefit

from organizing and planning their work before starting to write. The child has problems with identifying words that instead block his work. In this case, a plan can be produced by using Outline in Word (available from Microsoft), Inspiration or Draft: Builder, a planning tool with spoken language support, and switch access (available from Don Johnston Special Needs Ltd). The learner begins in "Outline," where he writes the headings and then expands these in the "Notes" area. The teacher can also use this to create a writing plan. These planning packages are a perfect way of conquering the "blank page" syndrome (Abbott, 2002). Practical problem solving depends on recruiting and organizing one's resources for attacking problems. Planning tools help students in the process of ranging from goal analysis to strategy identification. Appropriately designed computer systems could provide much help by supplying various organizing devices for people and hints and coaching systems that individuals can call on as needed. These programs function as planning tools for students at many levels of their work.

Spellcheckers check words phonetically. Text-to-speech spellcheckers can speak the text that has been written and spell check orally. For some children, spelling is even more difficult than reading (Macdonald & Wisdom, 2002). Many people are critical of spellcheckers and consider they encourage idleness. However, children learn to spell by having their work highlight "indicated" by the machine and see the possible alternatives (The Dyslexia Centre, 2005). It makes them cognizant of their errors and helps them concentrate on general words that they are getting wrong. They learn their mistakes while they are composing, or as soon as they have completed a part of work, it makes it more significant than red pen corrections some days later.

While it is unnecessary to use a word processor or other software package, increased pace and fluency can motivate and make composition a less arduous task. Learners can look and prefer creating letter sequences and words rather than bothering about the orientation of letters. In such a way, they are developing and applying skills while composing.

There is substantial evidence that children learn finger models on the computer, strengthening accurate spellings (The Dyslexia Centre, 2005). instance, the letters w, a, and s are situated in a triangle on the left-hand side of the keyboard. After some time, children automatically achieve those keys without thinking about which three letters they are typing.

Type to Learn (available from TAG Learning Ltd) instructs children to type while strengthening spelling, grammar, and composition and punctuation skills. Touch-type, Read and Spell (from Philip Alexandre) is a computer program based on the Hornsby "Alpha to Omega" mechanism, which has prepared a breakthrough for many children with specific learning problems. First, children are learning all the vowels so that they are typing actual words from the beginning. The screen can be altered to suit personal needs. There is no negative response, and nothing wrong appears on the screen. Touch-type, Read, and Spell has over 600 short modules, and some children can control ten modules in a session timeout (Macdonald & Wisdom, 2002).

The majority of dyslexic students nowadays use a computer or word processor of some kind. Some students, however, particularly mature students, still feel frightened of word processing. The position of word processors has changed considerably in the interim. Spell-checks on word processors are, of course, useful, but they have their difficulties, which can sometimes contribute to extra stress. For example, they are of value only if they know the approximate spelling; they may throw up a bewildering list of alternatives. Also, they cannot detect a correctly spelled word used in the wrong situation, such as 'there' in place of 'their' or 'they're.' Word processing machines offer several technical advantages over handwritten and typewritten methods of communication for people with dyslexia.

Unlike standard typewritten text, mistakes can be corrected immediately and will never be seen by the outside world. In regular typing, the paper becomes messy with correcting fluid. Allows the WP revision of ideas via an 'editing' mode. Whole pages can be seen and revised. It includes not just retyping words but moving sentences and paragraphs about the document. It is handy to a person with dyslexia who may initially put down ideas out of order, and upon re-reading, may wish to change the sequence. The student does not have to 'print out' until he is satisfied with his 'input.' Some microcomputer WP software packages contain a spelling checker that corrects spelling mistakes. Some programs have a glossary of words that computer users commonly use. It is activated by using a code; for example, instead of typing the word 'statistical' during input, the operator would use a code such as Control key plus the letters STA. The computer will always print the word 'statistical' when it encounters that code.

Learners with disabilities are also often more able and willing to edit work using voice recognition and speech technology (Abbott 2002). When children use a word processor, they are inclined to write more because it is less of an exertion. They can change a part of text time and again without having to type the correct parts. The word processor decreases spelling and handwriting troubles, helping children focus on ideas and how they want to express them. It emboldens them to be more daring in their application of language and syntax (Abbott, 2002).

There are more sophisticated predictive word processors: Co: Writer (from Don Johnson Special Needs Ltd), Predict IT (Granada Learning), our Prophet (ACE Centre, Oxford) (Dyslexia Centre, 2005). Initially developed for physically disabled children who can type only ten letters a minute, they have become greatly popular with many dyslexic writers (Macdonald & Wisdom, 2002). The learner must know the first letter or sound, and then the computer suggests a list of the most probable words.

We can choose a word with one keypress or go on to write from the keyboard. These packages are especially appropriate for children who have reading skills far more successful than their writing or spelling.
Voice Recognition Software is consistently suggested as a perfect tool to help those with dyslexia to get the most from their computers. With dyslexia, significant issues are coming to light with attention to the use of speech input tools. Teachers consider this software is helpful for children working at home. A microphone bears the spoken word into written text on the screen and can read it back to a child and fulfill different instructions. A spellchecker is very helpful for people with dyslexia, where they can find help in correcting spelling errors. According to Nelson (2003), more research needs to be done in this area alone to recognize why some dyslexic children produce such good results with voice dictation, while others, with the same reading age, produce such scanty results. In his research, Nelson (2003) reported that only 20% of the 220 respondents had used Voice Recognition Software. Nelson also states that the most modern versions help the user to speak naturally and quickly. For a child with dyslexia, though, their reading can be rapid and their tone uneven. Therefore this could arise in a substantial amount of errors, leading to de-motivation, and subsequently, the child is giving up.
Children can get information through listening to digitized or synthesized speech in exchange for trying to make meaning of the printed text. They can create, plan, change and edit without the disgrace of illegible handwriting. Their work will carry the examination of the most critical spectator because, one time, it will be assessed on meaning instead of appearance.
With dyslexia, significant issues are coming to light with attention to the use of speech input tools. From one view of point, teachers consider these packages are helpful for adults working in noiseless settings such as the office or home. From another view, however, some learners have main difficulties working with the software. Sometimes they cannot read the sentences fluently because of the high reading level. In order to better exactness, specifically in the early stages, users need good proofreading skills, which can be one of the fields that dyslexic learners find hard. Voice identification software is improbably to be a panacea for all the difficulties experienced by dyslexic children. Software should be able to offer the dyslexic learner a practical learning input. Interactive teaching programs are being developed by the National Numeracy Strategy to support mathematics teaching in the daily mathematics lesson. National Numeracy Strategy presents sample lessons using ICT to support mathematics for children with dyslexia (The British Dyslexia Association, 2005). Voice output, graphics, symbols, and text can all be included to provide a multisensory experience to the learner, and, where appropriate, a diagnostic element can be incorporated. A calculator can encourage the estimation of answers, and a product such as the Interactive Calculator (available from Inclusive Technology Ltd), which has ear feedback, physical manipulation, can be beneficial. Spreadsheets can help children to record their work and provide good examples of layouts.
All dyslexic children should have the right to experience the use of ICT in the field of mathematics. Teachers of mathematics must ensure that they gain such experience. The use of ICT in mathematics teaching can allow children to work at much higher levels. Using ICT can enhance the teaching of mathematics; Recognizing opportunities to use ICT in mathematics is a part of ICT capability; ICT can remove drudgery and scaffold pupils to higher levels of attainment; ICT can provide an effective tool for thinking.

CONCLUSION

It is almost certain that there will be dyslexic children in every teaching group. Dyslexic children have some learning difficulties but are generally of average or above-average intellect. It is evident from their conversation. However, they will have difficulty with reading big text, with essay-writing and spelling. A common finding among relevant studies is that computer use has positive effects on pupils with dyslexia.
Today, technology is incorporated into everyday life, and computers could be seen as a valuable educational tool in school settings to help pupils with attention deficits—the development of software applications that will meet the needs of pupils with various kinds of disabilities. Computers can positively affect “non-traditional” pupils, meaning all those labeled as learning disabled, low achieving, educationally disadvantaged, and forth.
Many aspects of technology appear to assist pupils with dyslexia in overcoming their academic problems. In particular, it was found that computers allow pupils to learn at their own pace. have infinite patience, and provide privacy. Promote discovery learning and help them develop problem-solving skills. Can excite and motivate pupils, provide instant reinforcement, corrective feedback, and immediate praise. Furthermore, the way information is presented on the computer (graphic objects, colors, sound, animation) can be highly stimulating for individuals with reading problems.
Developing word processing skills allows dyslexic children, particularly those with lousy motor skills, to make their work better and exempt them from the depressing mechanics of writing. Software that includes multiple Media of text, graphics, animation, video, and sound can strengthen learning. Providing suitable software for dyslexic children allows them to work at their rate on material made to their needs. We believe that specific characteristics of the educational software used by the pupils with dyslexia stimulate their attention more than others did. Pupils with dyslexia appear to prefer reading short texts, watching short videos, and listening to short narration items when they work on the computer.

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