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## Technology and its impact on language arts

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## Technology and its impact on language arts

### Abstract

Language arts is a field where technology can be worked into the writing and reading fields with word processors, CD-ROMs, and other multimedia materials that focus on communication. Learning to effectively communicate is one goal of language arts education. This encompasses speaking, listening, writing, and presentation – utilizing all the available technologies and incorporating them into highly motivating and innovative units or activities.

TECHNOLOGY AND ITS IMPACT  
ON LANGUAGE ARTS

A Research Paper  
Submitted  
In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts

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This research paper by: Tresa Ann Dietrich

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has been approved as meeting the research requirements for the degree of Master of Arts.

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## CHAPTER ONE

### Introduction

There are many different types of technology and many ways that these technologies touch our daily lives. From the time we wake up in the morning until we go to bed at night, we may encounter hundreds of simple machines that make our lives easier. The alarm clock wakes us up in the morning. The television tells us the daily news and weather. The automated teller machine gives us cash when we need it. Computers provide help with our work tasks. Some people even have home computers that provide help with record keeping and entertainment for the whole family. So many of these simple machines we take for granted. Whether we consider these machines, gadgets or computers, they have made a profound impact on many aspects of our daily lives.

One area that technology has made a tremendous impact on is in the many different arenas of education. Education is a part of all of our lives. Everyone goes to school for at least 13 years, and some people choose to go on for additional education. In the past fifteen years computers and other innovative technologies have invaded the nation's educational system and have provided additional tools to include in the many different teaching and learning styles. The computer,

as a new tool in the realm of education, along with all the additional forms of technology, have sparked much interest and many questions. Each curriculum area of education has been working on developing ways of introducing and utilizing these technologies. The amount of use and how the technologies are incorporated into the classroom depend on the individual educators and their school districts.

Language arts is a curriculum area that could be viewed as a good place to utilize and integrate a lot of the up-and-coming technologies. These technologies might include computers, video cameras, laser discs, and digital cameras. Language arts is the area where the writing skills are taught. According to Rose and Meyer (1994) what better way to utilize the computer than to teach typing and word processing skills. These are skills that a lot of jobs require. Is this the only thing computers are good for? There is a lot of documentation on ways that computers can be used in the classroom to increase reading and writing skills, vocabulary, and problem solving skills. Each level of language arts education has a variety of ways to integrate technology into the curriculum. There are many different computer programs available that provide adequate drill and practice, tutorials, and simulations for problem solving. Learning language arts skills is a progressive task that a student follows through the many

years of school. Every skill that a student learns builds on the next level of that skill. The focus for this paper is the K-12 language arts curriculum and the impact that technology has had on this curriculum.

#### Research Questions

There are many questions that arise when we consider the impact that technology has had on the area of language arts. How has this technology changed the language arts curriculum? What does the the future hold for using technology in the language arts classroom? An attempt will be made to present some current issues and ideas concerning the importance that technology has had on the area of language arts.

#### Terms

Technology - any complex or simple machine that helps make teaching a skill easier and provides a way to create digital text, images or sound.

Language arts - the curriculum area that encompasses reading, English, writing, vocabulary, and spelling. Learning how to communicate effectively.

Cooperative learning - the learning style where a group of students work together to accomplish a given goal.



## CHAPTER TWO

## Literature Review

Background

There are many current articles and other literature available on the topic of language arts and technology. Many good presentations on how to create effective uses of technology are also available. One article starts at the beginning of education, Plato's time, and presents a good argument concerning the changes that have happened and that continue to happen in our society. (Rose and Meyer, 1994) The focus of early teaching was to be able to speak correctly, and it was eventually threatened by the technology of writing. One concern is "...in the digital world of television, computers, and video games, no one will learn to learn and write" (Rose & Meyer, 1994, p. 290). We have computers that can do it for us, so is writing an important skill to teach?

The one thing for schools to understand is the importance of changing the direction that the curriculum is going. We can integrate the technologies without losing the importance of learning the basic skills. It is also important for the schools to understand that there are many ways to update our curriculum and integrate modern technologies without abandoning our basics. People involved in education need to realize that change is inevitable. Education can't keep doing

things the same way. Educators must learn to change their methods and curriculum to meet the needs of the students and all the new technologies that are and will be available.

There are many ways for educators to learn how to do this. One thing that every educator should remember is that teaching and learning is a lifelong skill, and that people involved in education should always strive to learn more and keep up with new methods and technologies in their field of expertise. One way educators can do this is by attending appropriate workshops that are available, continue working toward an advanced degree, communicate with fellow teachers, or read the many books and journals that are related to the subject area of choice.

### Research

The National Reading Research Center (NRRRC) has begun to research the area of technology and integrating it into the body of education. A major emphasis of the research is to look at how to effectively integrate technology into the reading and language arts areas. Some previous data showed that one in four elementary students and one in ten high school students had ever used a computer in their reading or English classes (Reinking, 1993). To increase these numbers recently there has been a lot of interest focused towards CD-ROMs as ways to interest students in reading and writing.

There has also been evidence of using technology-based activities as a way to create innovative and interesting instruction in the area of reading and writing. Reading and writing digital text and images is very different than on paper. How does this affect the learner? The NCCR has developed methods of tracking and researching these ideas. There are students with special needs that have difficulty writing or even holding a pencil. Why should we force them to write? Why not let them utilize the word processor more often. It is obvious that we will need to make some changes in the way that the language arts curriculum is taught, and hopefully this data will help us take a step in the right direction. The world is becoming more and more electronically based, and the area of education needs to continue to change right along with it.

There has been much research that has tried to address the problem of poor written and communication skills among the citizens of our nation. Some early researchers thought the answer to this problem was to integrate the microcomputer into the school setting, and the problem would be solved. The problem was that many school districts couldn't afford the computers needed, and there were teachers, parents and community members that had a negative attitude toward such a change. Let's face the fact that education in general was moving very slow in trying to change (Zoni, 1992). It has taken

many years to even get close to having computers in every classroom. Has it happened yet? Our president has even made it a goal to have all of the nation's schools hooked to the information superhighway by the year 2000. That is a commitment that should not be taken lightly.

In the late 1980's using computers in the reading classrooms was a relatively new idea. There was an abundance of software programs available to help implement computers into the curriculum. It was a lot easier to create all the wonderful software than to provide ways to incorporate it into the classroom. Therefore, the integration ideas came after all the software. Some teachers jumped right in and started utilizing the software and developed ways to incorporate it into their classroom all on their own. Other teachers hesitated and waited for someone to show them how to use all the software and where it fits into their curriculum. The use of the word processor was one of the greatest tools in the beginning. Using synthesized speech helped in the development of reading instruction. Remember that the computer is a tool, not a replacement for an effective teacher that is the coordinator of instruction and facilitates the learning process. As the teacher is developing ways to integrate technology into the curriculum he or she should utilize numerous

strategies along with the instructional objectives that are being taught.

There are many simple learner-based software programs available for purchase (Stuhlman & Taylor, 1996). These programs focus on the process not the product. The students are put into a risk free environment and are allowed to use creativity. The final products are student created and show growth working in collaborative groups or individually.

"...instruction is based on individual students' strengths and weaknesses. Students are encouraged to think and act on their own." (Stuhlman & Taylor, 1996, p. 3) This provides a good way to focus on the the school's technology and student achievement goals.

All the software that is available is not perfect. It will not meet the needs of each and every teacher and student. Depending on the individual goals different software will work in different situations. The researchers do believe that integrating the various software and other technologies does have distinct advantages. Some of the more common advantages are providing infinite "teacher patience", motivation power to get students excited, preparation for the future, and ability to organize and store performance scores (Marcus, 1998).

Teachers are given the flexibility to choose software that fits into the curriculum. Using the

computer as a tool in the writing process rather than just as a printing device has increased interest in writing among the learners. The change has begun, but we have a long way to go to get all people involved on the road toward successful technology integration. Several programs have been started across the country that have begun to work on implementing technology into the classroom. There has been a push to provide the schools with more funding from the national and state levels. These dollars are being used to fund Phase III workshops or inservices so the teachers can learn to use all the new technologies. At one school, though, it was emphasized that the inservices were geared more toward the hardware and software that is available rather than showing the teachers ways to integrate them (Russell, 1996).

The emphasis has been put on the training of the educators in using the technology and trying to make them feel comfortable in using the technology. Training is important because without preparing the teachers to use the new technologies in the classroom there would be very little integration. But, once the teachers have been trained on how to use the technologies themselves, they need to learn to integrate it into their curriculum. This will take time; time with professionals, time with colleagues, and time to plan an effective unit that could use the technology. This must

be a commitment by the administration of the district. It should be included in the school's technology plans.

Willis, Stephens and Matthews (1996) have written a book about the integration of technology into reading and language arts. They stress the fact that we can't move forward without looking at where we have been. All the research and studies of the different theories of education help us see how the process of education works. There are many different theories that have been presented and studied over time. They share the two theories of Skinner and Vygotsky, behaviorism and constructivism. Behaviorism is where teachers transmit information to students and then they reinforce it through repetition, rewards and feedback. The students will hopefully master the information then take an objective test to successfully measure their learning. In constructivism the teachers see the students as independent learners building or creating knowledge for themselves in an environment designed to encourage and facilitate learning. The instruction means providing exploratory and problem solving situations that allow the student to experiment and work collaboratively with peers to find solutions to the problems (Willis et al., 1996). They are also permitted to make mistakes along the way.

### Examples

Willis et al. (1996) state that computer based technology supports a constructivist discourse community because it provides ways to access and process information. In the book there is a good practical example of this using a story by Mark Twain. The eighth grade students' ultimate goal is to determine whether the book, Huck Finn, should be banned from the school library. This unit would include the reading of the text, doing research in different areas such as prejudice, racial equality, censorship, and abandonment. The students could use many different resources to find out the information, one being the Internet. After researching their ideas they could develop a presentation using a form of software that could do slideshows using color, sound, or animation. The culminating activity could be a newsletter made on a desktop publishing program that presents both sides of the issue (Willis et al., 1996). This whole process involves a lot of tasks that teachers would want any eighth grade student to learn in a language arts classroom.

Willis et al., (1996) share many good ideas and examples of ways to integrate technology into the reading and language arts classrooms. They take into consideration the fact the all educators are different in their teaching styles. It is important to remember



that the learners also have many different needs and can learn best when there is a variety of methods used in a classroom.

The Internet is a wealth of information educators should become familiar with and use as a resource in the classroom. "...the Internet can 'turn students on' to research" (Monahan, 1994). This article provides a number of good ways to get started using the Internet as a source to do research for kids. One drawback that may effect the use of this wonderful tool is the fact that some schools don't have the means to connect. The schools may also be short on computers that can handle the Internet. There are some ways to get connected that don't cost as much as for the home customers. A lot of the Internet providers will do special deals with schools and even individual educators.

An example of technology use in language arts at the early childhood level is provided by Sittig (1992). One of her ideas was to look at common fairy tales, discuss the problem presented and come up with a solution. Group discussions follow and final products could be pictures of the tale and how they would solve the problem. The pictures could be produced on any available draw program or by hand. The other example was on the subject of recycling. The children were read a book and then they took an ordinary egg carton and come up with other ways to recycle this carton. They

then worked with the art program and created their new egg carton and then put it on display or presented it to the class (Sittig, 1992).

The Internet has a vast supply of information for any classroom level. There are also many books and other resources to help organize Internet use in the classroom. "You're going to love the way this book helps you teach language arts, using the incredible resources available on the Internet." (Housley, 1997, p. 2). A good resource for middle and secondary language arts classrooms is a book printed by the magazine Classroom Connect (Housley, 1997). They have a collection of lesson plans using different forms of literature and provided web sites that are related to that topic. There are also activity sheets to work with and adapt as necessary. Some of the topics covered are folklore, vocabulary, persuasive writing, speeches, parts of speech and a variety of authors and poets.

The importance of learning to use the Internet and many of the new technologies that have been introduced into the world is having a big impact on our educational system. "Tomorrow's world needs citizens who are able to handle information and communicate using these new technologies (Downes & Fatouros, 1996, p. 11). It is not only important that the students learn how to use the technologies, but to become familiar with change and what can happen because of it. The fact that our world

is changing everyday is nothing new. Our future is becoming more and more technologically oriented with every passing minute. The fact that the rate at which these changes are occurring is increasing at an alarming rate. Educating our students to be able to handle this rapid growth and change is the challenge that faces the field of education. The definition of the word literacy is changing with all the growth that is occurring. Teachers need to include this thought into the many aspects of language learning. The use of small group work at the computer, using the word processor for construction of text, the value of text retrieval software to make reading strategies effective, and the potential of the many desktop publishing software programs to increase the quality of written text are all examples of ways to integrate technologies into the language arts curriculum. Our students need to become effective users of all these technologies. The confidence level of the users needs to be built up so that they can handle the mass communication and information media that will make up the future.

Software for the computer has gone from simple, low functioning drill and practice to programs that are highly associative, student-controlled hypermedia programs (Reed & Wells, 1997). When we throw in the Internet we have an endless supply of information to add to our presentations. Students may spend long hours

online "surfing the web" trying to find the right stuff. The difficulty lies in deciding which pieces of information to use and which to throw out. It has also become important to provide methods of citing sources that the students find on the Internet. Other sources that are used in research should also be documented. Documenting sources should be part of the standard language arts curriculum. It has become an important subject right along with copyrighting.

A great example of technology integration at the high school level is the story of Hirtle (1996a), a language arts teacher at high school near Houston, Texas. She has developed a technology oriented classroom that utilizes self discipline, cooperative learning, computer knowledge, and cross curriculum interaction between students. With the help of other teachers Hirtle was able to develop a curriculum that changed the teacher-centered classroom to a classroom where students do a lot of the decision making and self-motivated learning. Hirtle states, "I give students content and technical guidance, observe and encourage the organization and management of the process, and teach and encourage the social skills that support these processes. (Hirtle, 1996b, p. 27) What better way to integrate the technology into the classroom than by letting the students do the learning and the teaching. Hirtle and her students also discovered some downfalls

to technology. Sometimes technology has no place in the activity. It is important to keep the human aspect of learning in the classroom. Class discussion is still important and collaboration takes communication between the different parties involved.

Technology does have multiple uses in the language arts classroom. It takes practice and dedication to make it work at any level of education. From kindergartners to high school seniors there are many innovative ways to integrate technology into language arts education.

## CHAPTER THREE

### Summary

The field of education is an ever changing organization that has an awesome responsibility. Education has a responsibility to every child that attends school to give them opportunities to succeed and become the best educated person they can be. The schools can't achieve this alone. There needs to be cooperation between schools, parents and the community. The older generations and the business world must give something to education in order to make this work. The schools' responsibility is to keep up with the new methods, techniques and technologies that may affect our students during their time in school and even after they enter the working world. Schools need to incorporate all these new things into the curriculum in ways that achieve the best and most positive result.

Language arts is a field where technology can be worked into the writing and reading fields with word processors, CD ROMs, and other multimedia materials that focus on communication. Learning to effectively communicate is one goal of language arts education. This encompasses speaking, listening, writing, and presentation. Utilizing all the available technologies and incorporating them into highly motivating and innovative units or activities.

As we have seen there is plenty of research out on the topic of technology usage in the language arts area. While there are opponents to technology use in the curriculum, the evidence points to the improved learning for students when technology is integrated into the curriculum.

Technology has made an impact on many aspects of our lives. People live with technology everyday and encounter new technology every time they turn around. The ultimate goal of education is to prepare the children, our future, to handle all that comes at them as effectively and as efficiently as possible. They will then be prepared to face their future.

## REFERENCES

Downes, T., & Fatouros, C. (1996). Learning in an electronic world: Computers and the language arts classroom. Portsmouth, NH: Heinemann.

Hirtle, J.S. (1996a, April). Constructing a collaborative classroom. Learning and leading with technology, 23, (7), 27-30.

Hirtle, J.S. (1996b, May). Constructing a collaborative classroom. Learning and leading with technology, 23, (8), 27-30.

Housley, K. (ed.) (1997). Teaching language arts with the Internet: Internet lesson plans and classroom activities. Lancaster, PA: Classroom Connect Inc.

Marcus, S. (1998, January). A friend for the language arts. Electronic school [On-line serial], Available: <http://www.electronic-school.com/0198f4.html>

Monahan, B. (1994, November). The Internet in English language arts. A paper presented at the annual meeting of the National Council of Teachers of English, Orlando, FL.

Reed, W.M., & Wells, J.G. (1997). Merging the Internet and hypermedia in the English language arts. Computers in the schools, 13, (3-4), 75-102.

Reinking, D. (1993, March). A new focus for the national reading research center. Computing teacher, 20, (6), 29-31.



Rose, D.H., & Meyer, A. (1994). The role of technology in language arts instruction (Focus on research). Language arts, 71, (4), 290-294.

Russell, S.M. (1996). Helping teachers to actively choose to integrate technology in the required language arts curriculum through staff development and mentoring. Unpublished specialist's degree paper, Nova Southeastern University.

Sittig, L.H. (1992, April). Kinder-Tech. Technology teacher, 51, (7), 7-8.

Stuhlman, J., & Taylor, H. (1996, June). Whole language strategies for integrating technology into language arts. Proceedings of the Annual National Educational Computing Conference, Minneapolis, MN.

Whitaker, B.T., Schwartz, E., & Vockell, E.L. (1989). The computer in the reading curriculum. Watsonville, CA: McGraw-Hill Publishing Co.

Willis, J.W., Stephens, E.C., & Matthew, K.I. (1996). Technology, reading, and language arts. Boston: Allyn and Bacon.

Zoni, S.J. (1992). Improving process writing skills of seventh grade at-risk students by increasing interest through the use of the microcomputer, word processing software, and telecommunications technology. Educational specialist practicum, Nova University. (ERIC Document Reproduction Services No. ED 350 624)