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To say that "new technology is challenging our view of literacy" (Tompkins, Bright, Pollard & Winsor, 2008, p.41) and brings "into question traditional ways of teaching and learning" (Tompkins, Bright, Pollard & Winsor, 2008, p.14) is to bring to the forefront a major consideration and issue that both current and future teachers will have to wrestle with. It is quite true that we are making technological advances far beyond what we thought would be possible even a few years ago. It is our job, as educators, to stay informed and current to the changing culture.

In his 1968 article *Educational Change: What are the Roadblocks?*, Joseph Blaney makes an observation that still holds relevant to today's society: "Schools are a mirror of a society which no longer exists." (Blaney in Lusty, 1969, p.54) He is referring to the difficulties schools and educators face in coming to grips with the fact that the students are in a different technological world from those who are teaching them. Because of the incredibly deep and complex structure of education in North America "change" does not happen instantaneously. Although there are noble intentions of those people who are passing policies, they do so in a "reactionary" way – they wait for an issue to come about, **then** deal with it, (ie. Technology, Racism, Homophobia, etc.) Because of the time lapse that often occurs between the crisis point of the issue at hand and the time that it takes for a policy to be handed down, schools will always be "a mirror of society which no longer exists" (Blaney in Lusty, 1969, p.54). For this reason, it is essential that the people "on the frontline" – the teachers – decide to take initiative to engage their students in the technological language they know rather than wait for an outdated mandate to be passed.

I. Face-to-face Relationships are Essential to Literacy

Although many of the "future" teachers would argue that it is indeed important to stay 'technologically relevant' to the students of today, there are some important issues to take into consideration from the other side of the discussion. When thinking about the current role of technology in *literacy* education, (as this is the direction taken here) it is difficult to find anything definitely "factual." Instead, what is found is lot of theories, judgements, and personal opinions, and although valid and real, unfortunately they must be taken with a grain-of-salt and not believed without careful contemplation.

Upon searching for well-thought out and written articles on the subject, Heidi Spruck Wrigley's article *Technology and the Language Classroom* seemed to be the epitome of careful writing and observation. Keeping in mind that this article was written in 1993, Wrigley observes that the use of games and computer software has the potential to be very good. However, in the realm of using it to teach English to ESL students and young children with a weak grasp of the language, poorly designed computer programs are in danger of reducing the language to its simplest form (Wrigley, 1993, p.319). Granted there have been major advances over the past 15 years in educational software, but this is something important to consider.

When forced to reflect upon those computer games that children are actively involved in, (Pokemon, Superhero, Grand Theft Auto, etc.) we are tough-pressed to think of concrete examples of uses of the English language that move beyond single words and simple phrases. Quite often the games that children play – regardless of whether it is at home or at school – are competitive in nature. Children are required to "shoot the math equation asteroid," "jump over the rolling barrels of science," or "race their car through the spell-word street." Although arguably "educational" programs do exist, because of the nature of the games is competitive there is a certain vocabulary and focus which is conveyed by the medium itself: win, loose,

competition, etc. This focus of competition to promote literacy is dangerous. It often fosters a harsh sense of right-or-wrong, when quite often there are valid exceptions. This competitive language is the most primitive form of human communication. Is this the direction we want to take our children?

Another valid point against the use of technology to teach literacy is that although skill-based language and technicalities can be learned on a computer, the social element and being able to read situations cannot. Meaningful, personal interactions with other people are the only way to learn interpersonal communication (Wrigley, 1993, p.321). When taken to its furthest extreme, technology can potentially hinder an individual's ability to interact in a meaningful way with another. This is a situation that is quite often shown as a cultural stereotype on movies, (ie. The "geeky" computer nerd who does not have a girlfriend and is made fun of). Although this is television stereotyping and not necessarily an accurate example of reality, there is some truth to it. Most people can think of such an individual – someone who spends most of their time encased in their "walls of electronics" and has not had time to practice socializing with others. This is not coincidence – it is a direct result of being removed from face-to-face relationships. While the privacy and independent learning factor of computers can be a huge draw to using them, this is very narrow approach that can be equally counterproductive to learning communication (Wrigley, 1993, p.321). This does not mean that all uses of technology in a literary setting will result in such a bleak outcome, but the fact that this outcome is a potential when certain technologies are introduced means that it is worth a second look.

Trying to think critically about using technology in the classroom must also take into consideration not just the social effects, but also some of the ramifications that present themselves by the use of such mediums. Developing on this, it is important to note that there is often a misconception held among some educators that the use of technology is *the end*, rather

than the *means to an end* (Lusty, 1969, p.56). What this means is that quite often "technology education" is reduced to "using technology *is* education." Although this can be true, and many students will be able to recall a teacher who treated "computer time" as such, it is not a desired outcome of the use of technology in literacy. This is more a mindset issue than an issue of practicality – it is something that is fostered by the teacher, or the individual who is implementing the use of the technology. There is a risk that some teachers will simply allow their time in the computer lab to be game time or a time for a free-for-all. This lack of instruction is not indicative of a poor teacher, and is sometimes the result of a misconception held by the teacher that by simply allowing a free-time interaction with the computers children will learn themselves. This is no less true than putting a math text in front of child and expecting them to teach themselves. Although possible, no teacher would believe that this would be the best way to approach the situation. Unfortunately, many teachers believe this to be the case when it comes to computers. So although this section is a statement against the use of technology it is based upon the current mindset of some teachers. This, however, is something that could easily be overcome with proper instruction and could be removed from the title of "reasons against technology."

One final consideration on the note of "reasons against technology" is that by using a non-human interface to teach a subject – in this case "literacy" – the teachers are in danger of relinquishing their view of literacy to the designers of the software (Wrigley, 1993, p.321). In brief, this means that by giving control and authority of teaching to an inanimate object designed by someone who is trained in computer programming and *not* education, educators run the risk of spending much of their time doing "damage control." This issue, combined with the previous issue of un-trained teachers expecting children to teach themselves can be very dangerous. Such a combination does not seem very promising nor helpful to the children who would normally

have been receiving direct, filtered, and provincially approved information from a human authority figure with the mandate to educate.

II. Being Culturally Relevant

When people make a decision to engage in activities that will change their natural environment to better satisfy their wants and needs they engage in technological activities (Brusic, 1992, p.45). Translated to an educational standpoint, a movement towards the use of technology demonstrates a desire for teachers to better both their in-class experience as well as the experience of their children. When properly used, technology betters the experience of everyone involved by allowing the teacher to teach less and the students to learn more (Lusty, 1969, p.54). Using things like video and PowerPoint presentations takes far less time than creating flip charts, writing things out by hand, and trying to scour magazines instead of the internet for relevant images. The internet itself can be an incredible resource to teachers – providing instant information, examples, and lessons – it has become the new resource center to any culturally relevant teacher. Not only does this cut down on the amount of time it would take a teacher to prepare for the daily lessons, but it allows them to be able to focus their time on other aspects of teaching (such as curriculum development, assessment and rubrics, and actually spending more time with the students individually). Technology gives the teacher the ability to instruct more to the individual, thus creating the ability to meet needs on a one-on-one basis (Lusty, 1969, p.54).

Technology, specifically computers, can also be used by students to help them in the activities they need to complete by having instant access to clip-art for stories, the ability to create and design posters and flyers, as well as the ability to reproduce – in quantity – the efforts of what they are creating (Wrigley, 1993, p.320). When taught how to properly type on keyboard

a student will find that they might be capable of writing at speeds much greater than they would be able to by hand. This, however, should not be seen as being lazy or taking a shortcut – it should be seen as making the wiser decision – maximizing their efforts and time.

In literacy there is lots of trial and error – especially in spelling and prose. Being equipped with the proper word processing software can prove to greatly increase a student's ability at finding and correcting their own mistakes, as well as encourage them to pull together a "good copy" of an assignment in a timely fashion. In the current age there is no longer a need for a dedicated "rough draft" – because electronic word documents can be manipulated in-place, it is possible to make corrections and revisions while writing, without fear of needing to retype everything at a later date. On the topic of self-correction and learning proper presentation of work, there are more than just mere word processors available to students to help them. Students can use video and voice recording devices to record themselves, (acting, speaking, manners, etc.) to allow them to see and hear how they actually present themselves to others. Recording devices are able to engage students in more accurate self-reflection, and provide them with concrete samples of certain mannerisms, vocabulary, and presentation techniques (Wrigley, 1993, p.320). What this means is that when given the proper tools, students and educators will be able to hopefully simplify the process of public speaking, and hopefully help students to become who it is that they want to be, (ie. be able to present themselves to others in a way that they desire).

What is being found is that a defining characteristic of technological education is that it is very hands-on and based on experiential learning (Brusic, 1992, p.45). When educators are given the proper tools and show initiative and desire, the classroom can become a very dynamic and exciting place. More and more we are starting to value the ideal of using "discovery learning" to teach our children, and there is no better way for our students to engage in this than by utilizing the technologies that we have available. If the use of such things as Bunson Burners, electronic

weigh scales, and graphing calculators can prove to be indispensible for the learning of the sciences, then it should be assumed that there is the possibility of finding other devices to match the use and importance of these educational staples. For such a subject as literacy, it is quite possible that the eventual language of instruction will be quite different than it is today, which is something that can be embraced and used for the growth of our students the same way that changes in the sciences and how they are taught has brought abstract concepts to life for those students. Students learn best when they are learning in the language and medium of instruction they are most familiar with, and in the 21st century, that is technology-based (Lusty, 1969, p.54).

As time moves on, current teachers will find that the face of teaching will continue to move forward in uses of technology because the future teachers, the ones of the next 10 years, are being brought up in a much more "advanced" society, and they are going to carry that with them into their careers (Roberts, 2000, p.184). As they learn how to navigate a computer or the internet, and learn how to prepare PowerPoint and video presentations at home, they will become more inclined to take those skills to their jobs as teachers. So, as current teachers, if this is the future of our students, should there not be an emphasis on helping them not only increase their technological skill set but also prepare them for the 21st century? (Roberts, 2000, p.181) It would seem logical to say "yes," – after all, no teacher would argue against preparation for life and teaching students how to survive after school.

III. Technology in the Classroom: Implementation

Having never formally decided on a specific grade that I would like to teach I have not thoroughly thought through this matter in such a way as might be required if I was to specialize. However, being someone who considers himself to be technologically inclined, I have come up with a few strategies that I believe would work regardless of the situation or grade I was placed

in, (providing that I would be located in a school district with First World expectations and access to technology).

Since most schools have a limited number of computers within a single classroom, I would have to rely on the computers within the school lab for any kind of introduction and utilization of them within the school context. I realize that most of the children in my class will be coming from a home with at least one computer, and many of them will have had a few years of "experience" on them, (albeit that experience being games and internet-related entertainment). My class's use of the computer lab will be for educational purposes only, although this might include such basic things as how to use a physically use a computer, how to use a search engine, and how to test and observe the reliability and credibility of web pages. I believe there to be value in allowing children to have free-time to experiment with the computer, drawing programs, and searching for topics of personal interest, but I do not believe that there is much educational value in the use of dedicated "games" sites.

Beyond the use of computers in the classroom, I plan on utilizing technology also through such things as PowerPoint and video presentations. I believe that teachers should not have to "entertain" students; however, being in a culture that promotes entertainment" as a value to no end, we do have to speak in the vernacular of our students. I would like to use such mediums as the exception to my normal teaching methods, relying on experiments and peer learning and conversation before using these mediums. That being said, as a visual learner, I value PowerPoint and video presentations and want to make sure those students in my class who learn the same as I do have the opportunity to. I think subjects like history and geography – subjects which are primarily learned through books – can be brought to life through video and PowerPoint. I believe that with careful construction PowerPoint could also be a *fantastic* tool for teaching language arts and literacy, in particular, spelling and word/picture associations, (in

younger grades). With the use of scanners and cameras it would also makes story writing and illustrating much easier, and would help my students develop practical skills that they could take outside of the class into their own realities.

Recently it has been brought to my attention that some schools throughout Canada are starting to use "clickers" for class poles, as were made popular by the TV show "So You Want to be a Millionaire?" (Tibbetts, 2008, na). The cost of such devices is not small; however, if used regularly the purchase of such a thing could be readily justified. I believe using these "clickers" would be a great point of entry into class participation among more reserved students or students who wouldn't otherwise be engaged. I would love to use such devices to conduct class polls: trivia questions based upon class learnings, result predictions of class experiments, and anything of the like. In an instance like this, the goal is to make learning fun and to connect with those students who wouldn't otherwise be connected.

The largest reservations I have about using any kind of technology is that it can be easy to become "distracted" from the purpose of the lesson. Too many teachers use technology to play music, watch movies, or play computer games. Although there may occasionally be a place for this, quite often there is no intentional learning outcome. Another consideration I would think about would be the way in which I would present these ideas to the parents of my students. Many of them might not be opposed to technology *fundamentally*, but might have difficulties in seeing how it can be used in the classroom to educate their children. This means that as a teacher I would need to have a firm grounding in the PLO's, have the consent of my principal, and have a clear rationale for every activity I try to engage my class in.

IV. Assessment

Because the realm of "technology" is so large and there is no specific way to use it or implement it, assessment is very subjective to the individual tasks. The technology that I use in my literacy lessons will be used primarily as the "medium" – so, in this case, my assessment of the students will be based upon the same criteria I would use if books and overhead projectors were used. It would be based upon progress and participation.

If I was to look at two specific ideas I have and how I would do the assessment I would pick the use of the "clickers" to predict story endings. I would love to read a book to the students, stop near the end, and ask them to predict, from a list, the ending they believe will occur. My assessment would be based upon their participation, (as the clickers keep track of who enters an answer). I could then from here ask them to write out and justify their answer, (ie. tell me *why* they picked what they did). For me, I believe it is not the answer that matters so much as the intellectual process the children go through – this is why I would not assess their *use* of the technology so much as their thoughtful interaction with it.

Another way I would assess the use of technology in literacy would be through the use of audio CD's or movie DVD's to tell a story to the children, (as in *La Diablesse and the Baby*) and have them verbally, communally, and in writing interact with the stories, (ie. "What was your favourite part and why?" "How would you change the story to make it better?") Again, in this situation I am only *using* technology to help in the lesson – the technology is *not* the lesson. In conclusion, this is why I believe there is a strong case for allowing technology into the classroom, and specifically into literacy: there is room to engage the students in ways that they would otherwise never have been engaged.

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