

Writing and Writing Instruction in the Digital Age

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Abstract

This paper will begin by presenting a case that was widely discussed as an example of one of the “problems” created by digital technology and revealed the difference between one group more accustomed to older analog technology and one that is not. The discussion will also serve to highlight that, the state, use, and development of digital technology is different from country to country. This will be followed by a discussion of the advent of digital technology and its implications for first (L1) and second (L2) language writing and writing instruction. Finally it will conclude that throughout history technology has had an influence on communication; yet the essence of the written word and the fundamental nature of writing has not changed, nor should writing instruction necessarily change.

Key Words

Digital Native, Digital Immigrant, Tetrad of Media Effects, Flipped Learning

Introduction

In 2003, part of a text-messaged essay that was leaked by an anonymous teacher and allegedly attributed to an anonymous thirteen-

year-old Scottish schoolgirl caused a storm of “controversy” in the mainstream media. For the purposes of this paper it will begin a discussion of the implications for writing and writing instruction in the Digital Age. It will present (with the benefit of hindsight) a more measured response to the issue than the popular press provided at the time. It will also argue that late Twentieth Century approaches to writing and writing instruction are still valid the Twenty-first -- perhaps even more so as an element of digital citizenship. Finally, it will outline a possible framework for approaching digital technology based on the author’s own university classes, program and action research.

Background

The subject of the essay that was handed in was what the schoolgirl did on her summer vacation, a typical topic, but what made it (in) famous was not the content, but the style, dictated by the limitations small cellphone screens, keypads, and the number of characters allowed per message. The essay in question was written entirely in SMS (Short Message Service) language (also known as txt-speak, texting language, txt lingo, SMSish, txtslang, txtese, chatspeak. or txt talk.) SMS was a relatively new invention at the time, although such abbreviated, new-media, language occurred earlier on message board systems and internet chatrooms. Today it is used extensively, but not exclusively, on social media such as LINE and Twitter.

Here is the essay with a translation as reported by the UK’s *Guardian* newspaper under the headline, “Texting is ‘No Bar to Literacy’”(2004):

My smmr hols wr CWOT. B4, we usd 2go2 NY 2C my bro, his GF & thr 3 :-kds FTF. ILNY, it’s a gr8 Bt my Ps wr so| :- / BC o 9/11 tht thay dcdd 2 stay in SCO & spnd 2 wks up N. Up N. WUCIWUG -- O. I was vvv brd in MONO bt baas & ^^^^.”

My summer holidays were a complete waste of time. Before, we used to go to New York to see my brother, his girlfriend and their three screaming kids face to face. I love New York, it's a great place. But my parents were so worried because of the terrorism attack on September 11 that they decided we should stay in Scotland and spend two weeks up north. Up north. What you see is what you get – nothing. I was extremely bored in the middle of nowhere. Nothing but sheep and mountains. (p.29)

If you could understand the above, without translation, there is a good chance you are a *digital native*. The term refers to people born after 1980 (Generation Y and Millennials), who grew up before during and after the digital revolution and/or subsequent Digital Age which saw the decline of analog technology. For example, the typewriter was replaced by word processors and later computers. Digital technology is like a first language to digital natives. They are in contrast to *digital immigrants*, born in an earlier age, and more accustomed to analog technology.

The essay was an uproar in many UK media outlets such as *The Telegraph* (2003) and the BBC (2003). It was also covered internationally on CNN (2003). Furthermore, over 1,600 websites also discussed it according to Thurlow (2007). It was even selected as a topic in at least one English as a Second/Foreign Language (EFL/ESL) textbook (Malarcher, 2003), suggesting that SMS texting was/is considered important for EFL/ESL learners. Texting and other digital innovations may in themselves be foreign in more analog technology dependent countries due to the digital divide.

It must be stated here that the chasm that was predicted to exist between the digital haves and have nots has been shrinking as of late. Mobile technologies have allowed developing countries to leapfrog

over the divide as the need for expensive telephony and fiber optic infrastructures has been greatly reduced. The cost of computers has likewise plummeted to the point where having an internet ready computer has been within the average citizen's reach in many up and coming countries. There is also One Laptop per Child (OLPC), now, as of this writing, in its tenth year of existence. It is a non-profit initiative produces and distributes OLPC XO low cost, low power, connected laptop computers to children in underprivileged nations.

It should be mentioned that the OLPC is not without its critics. The most notable are probably Warschauer and Ames (2010). They claim the goals of OLPC are utopian and don't entirely meet the needs of the young people they are targeted towards and would be better if they had been augmented with sound pedagogy. Test scores have also not yielded impressive gains. Moreover technologically-speaking, the OLPC laptops are also primitive compared to more expensive, faster models on the market. And is a one laptop per child as important a need as adequate immunizations, clean water, and proper nutrition? The answer is probably not, but if implemented judiciously in the right situation they could be beneficial, teaching a farmer to better manage his or her land, for example, through YouTube videos.

Despite the best intentions of some, the digital divide persists. The quality of hardware, reliability and speed of internet access are still lacking when compared to developed countries and even in the United States there is the on-going controversy over net neutrality. It is the idea that governments and internet service providers should treat a data on the internet equally regardless of site, content or platform.

The concept of digital nativism may also be an oversimplification. For one thing, plenty of digital immigrants are highly "tech savvy." The fact

that many immigrants have seen technology develop and evolve from more simple to more complex systems makes many immigrants even more sophisticated in tech terms. Many people from the X Generation remember towers as they were much cheaper than laptops at the time. They remember assembling them themselves. That would not be such an easy task to accomplish for a smartphone. Many are more familiar with what is going on inside a computer as they had bigger, modular parts to work with. Now, considering the rise of Smartphone usage, it may be not so much that Japanese students are lacking in technological skill, but have simply skipped one generation of digital technology development in favor of a more recent one.

Furthermore, it should be noted that, in other countries, digital nativism may have different implications and levels. For example, in Japan (where the authors live and teach university-level EFL classes) students almost universally own and have mastered Smartphones, yet seem to struggle with the qwerty keyboard, personal computers, and the internet. In the case of the former, the Japanese mix of a logographic and syllabic writing system is at odds with a keyboard designed for the alphabet.

Japanese digital immigrants, however, have adapted and can type well using a qwerty keyboard. This may have taken some getting used to. They can choose from typing using the Roman alphabet (*Romaji*) and choose *Kanji* from a drop down menu. They can also use the native *Hiragana* syllables that are visible next to the qwerty letters. For example, on the letter “a” key one can see the syllable “ち” (chi). Once again, a choice of *Kanji* characters shows up.

For digital native Japanese speakers, this is dated. Before the Smartphone, all users had to do was type a succession of numbers

to write letters. To write the word “hello” required one to punch in 44335555556666. For an English speaker, this is extremely tedious. For a Japanese speaker, it fits nicely with their syllabary as there are ten sets of syllables (moras in linguistic terms).

If you are not familiar with the Japanese alphabet, we will explain in what follows. Most (eight) of the sets start with the same consonants one starts with no consonants. The first set is the one that starts with no consonants so let’s start with the second as it provides clearer example. The second set of symbols in the Japanese alphabet is かきくけこ (ka,ki,ku,ke,ko). This is how Japanese school children memorize their alphabet. All the writer has to do is remember which key starts off all the syllables that start with a “k” . To make the sound “ko” , one needs only to type the “2” on the number pad 5 times. Like the ABCs for English speakers, a Japanese speaker can rattle off ka,ki,ku,ke,ko pretty quickly. This may sound tedious itself but remember that for English one would have to type in two letters. As a thought experiment, without looking, try to identify where the “k” is on the number pad. When Smartphones with keyboards arrived on the market, younger people opted to keep the number pad in spite of the fact the qwerty keyboard was available. This often leaves digital natives stupefied. Why someone would prefer a 10 cm screen to a 50 cm tactile keyboard?

Issues and Controversies

We can see now, more than decade later that the essay did not signal a huge change in English as we know it. Although history has shown languages do evolve over time despite, or perhaps, in some cases, because of, best efforts of some purists, educators and grammarians. According to Thurlow, the essay was merely a poor choice of register, rather than a true example of digital native writing ability. Furthermore

-- with the exception, it seems, of *The Guardian* -- newspapers which ran this story, shifted the focus from an isolated incident, to a statement about an entire generation. In Thurlow's words, they condemned it "as an indictment of young people's new-media language." He concludes that "to suggest that this young person's essay represents a 'textbook case' of new-media language is clearly to misconstrue the realities of young people's actual, every day, usual practices" (p.232). This opinion is backed up by the findings of his 2003 study which found the popular press reporting to be greatly exaggerated. Crystal (2008) also concluded that pupils do not typically use textese for homework and other assignments, sending messages actually improves literacy and textese abbreviations are not a cause of bad spelling and only account for about 10% of the content of texts. Furthermore, abbreviations have long existed in the English language -- military-speak is a good example -- not to mention English teachers' marking codes. When you think about it, textese is a creative way around the old limitations of sms texts. These limitations still exist within Twitter which would not work practically without them.

Nevertheless, there is a difference between digital natives and digital immigrants. Some digital immigrants may feel intimidated, threatened, disenfranchised, and bewildered by the digital revolution after perhaps initially dismissing new technologies such as the personal computer as a mere toy. They may now even feel disempowered, marginalized and trivialized with their "outdated" skills, grumbling about resisting the use of LMS (Learning Management Systems), for example. Natives may lack skills but do not feel threatened by technology.

Consider Moore's Law (Moore, 2006), which holds that the number of transistors in a circuit will double every two years. This rate of progress has held for decades and has resulted in staggeringly fast

changes in technology that digital immigrants may struggle to keep up with. In spite of, or perhaps *because of*, these changes they may also be unimpressed, having possibly seen past innovations and ideas fail or become rapidly replaced by a competing format and going the way of the flip phone.

The latest version of *Windows (Windows 8)* is a good example. It has taken weeks for some users to get used to the new interface. Thus, digital immigrants may be unwilling to invest the time, effort and/or money necessary to explore a new medium of instruction, for fear it may become rapidly obsolete. Still, educators may wonder if pedagogy and approaches to writing need to change. There is also the very real job threat for digital immigrants of being replaced by digital natives with skill sets better suited for the Twenty-first Century.

At any rate, digital technology is hardly new. It has been problematic for many teachers for years. As early as 1991, Kantrov maintained that despite some advantages, “hopes that word processing would do more, especially in helping students improve the quality of their writing, were disappointed” (p.63). Yet others were optimistic. Sullivan (1988) wrote that desktop publishing, “... can inspire students to ambitious, creative projects; it can give teachers a means for teaching how visual and verbal elements of a page work together to man meaning; it can give writing classes a new and intensely social application; and it can give students useful skills.” (346-347).

Solutions and Recommendations

Inverting a popular expression, McLuhan and Fiore (1957) wrote that, “invention is the mother of necessity.” (p.12). Digital technology is here to stay, and will evolve and continue to be more significant in people’s lives and as the Twenty-First Century progresses digital immigrants will

find themselves increasingly in the minority. “So what should happen?” Prensky asks. “Should the Digital Native students learn the old ways or should their Digital Immigrant educators learn the new? Unfortunately, no matter how much the Immigrants may wish it, it is highly unlikely the Digital Natives will go backwards” (p.3).

Before specifically answering these questions, it may be useful to apply McLuhan and McLuhan’s *Tetrad of Media Effects* (1988). This pedagogical tool for evaluating the impact of a technology may give educators a better perspective than popular media hyperbole, or a simple benefit/hazard dichotomy. The four questions of the Tetrad are: What does the medium enhance? What does the medium retrieve that had been obsolesced earlier? What does the medium flip into when pushed to extremes? What does the medium make obsolete?

The last question is perhaps an exaggeration, “make old-fashioned” and/or “make outdated” might be better phrases. Nevertheless, *The Tetrad* can be applied to any technology, past or present from the Renaissance to the Electronic Age. Here are examples with the Gutenberg press, the typewriter and the copy machine:

Table 1
The Gutenberg Press

<p>Enhance:</p> <ul style="list-style-type: none"> • the written word • the alphabet • the democratization of knowledge • linear thinking • he vulgate • authorship as intellectual property 	<p>Reverse into:</p> <ul style="list-style-type: none"> • propaganda • misinformation • counterfeiting • forgery
<p>Retrieve:</p> <ul style="list-style-type: none"> • preserved rare texts • literacy • froze idiosyncratic spelling in English before standard spelling was adopted 	<p>Obsolesce:</p> <ul style="list-style-type: none"> • the oral tradition • Latin as the lingua franca • hand copying • logographic and/or logogramic writing systems

Table 2

The Typewriter

Enhance: <ul style="list-style-type: none"> • manual printing 	Reverse into: <ul style="list-style-type: none"> • Corrections and changes difficult, if not impossible, to make • poor writing is “frozen.”
Retrieve: <ul style="list-style-type: none"> • Composing in “real time” 	Obsolesce: <ul style="list-style-type: none"> • handwritten manuscripts and texts

Table 3

The Copy Machine

Enhance: <ul style="list-style-type: none"> • printing • photography 	Reverse into: <ul style="list-style-type: none"> • counterfeiting • forgery
Retrieve: <ul style="list-style-type: none"> • the production of multiple manuscripts • the reproduction of the realistic image 	Obsolesce: <ul style="list-style-type: none"> • hand copying • carbon copies

It is evident that *The Tetrad* allows us to see that any innovation has its advantages and disadvantages. Here is *The Tetrad* applied to digital technology, including word processing, the internet and text-messaging, because these technologies in the Web 2.0 era are increasingly being merged into one device.

Table 4

Digital Technology

<p>Enhance:</p> <ul style="list-style-type: none"> • the written word into further prominence • communication • socialization • democratization 	<p>Reverse into:</p> <ul style="list-style-type: none"> • “textese” may degenerate in “gibberish” non-language • gossip, rumors, cyberbullying • propaganda and misinformation
<p>Retrieve:</p> <ul style="list-style-type: none"> • our sense of community • the scroll, and the erase-ability of the blackboard. 	<p>Obsolesce:</p> <ul style="list-style-type: none"> • the typewriter • telephone • letter writing • good penmanship

The student’s essay under discussion is an example of what digital technology may flip into when pushed to extremes; but it is just that – an extreme. Now, more than a decade later we can see it did not, as suggested, signal the end of writing as we know it. Furthermore, recent innovations in text-messaging itself, such as the qwerty keyboard on Smartphones and autocomplete have improved text-messaging. This is an example of how innovations in a new technology can rectify the very problem it created, similar to how improved versions personal computers crashed less often than earlier versions.

Although it may have made the typewriter obsolete, digital technology, more than any innovation since the Gutenberg press, enhanced the status and importance of the written word. Word processing retrieved the scroll and also has the erase-ability of the blackboard. It is also interesting to note that even the word *scroll* has been brought back into usage -- as a verb. Today, users of digital technology *scroll* text, rather than flipping through printed pages.

Crystal (2003) has outlined five features of “the Web as the most evolved graphitic domain” (p.430):

- A. Language is displayed within the physical limitations of a screen and user controlled movement.
- B. Handwriting is not usually seen, nor the print style of typewriting. Typefaces may be limited, but there are more communicative options.
- C. Text can be read in a non-linear, multidimensional way.
- D. Dynamic written language. Text may move, morph, appear or disappear.
- E. New conventions of signaling: e.g.: colors and underlinings signal email addresses and hypertext links.

McLuhan wrote in 1972 that “Gutenberg had, in effect made every man a reader. Today, Xerox and other forms of reprography tend to make every man a publisher” (p.179). Now, in the Information Age, thanks to innovations like blogs, everyone can, and to some to degree, must, be a writer. As an example, in the past, a business person may have been accustomed to making deals largely in person or on the telephone, but now must communicate via email and risk exposing poor writing and/or typing skills. This is especially problematic for non-native English writers. Also, in addition to television and radio advertising, a company must now have a well-designed website with well-written text. The internet, for example, is certainly far more interactive than television, motion pictures or radio and is becoming even more interactive with the new generation of internet-based technology, known as *Web 2.0*. The internet has, in effect, retrieved our sense of community, enhancing what McLuhan called a *global village*. This sense of community had been in decline in the Twentieth Century Putnam argued in his well-known book *Bowling Alone: The Collapse and Revival of American Community* (2000), but only ten years later he and Sander argued it had returned to thanks,

at least in part, to the internet and it has the potential to be even more effective (Putnam and Sander, 2010).

Graduates reconnect with lost classmates on Facebook. Stay-at-home moms befriend each other through Meetup. Americans can locate proximate friends through Beaconbuddy. Brief posts on Twitter (known as “tweets” convey people’s meal or sock choices, instant movie reactions, rush-hour rants, and occasionally even their profound reflections. Measured against the arc of history, such technological civic intervention is in its infancy. In a world where Facebook “friendship” can encompass people who have never actually met, we remain agnostic about whether Internet social entrepreneurs have found the right mix of virtual and real strands to replace traditional social ties. But technological innovators may yet master the elusive social alchemy that will enable online behavior to produce real and enduring civil effects. (p.15)

Brandt (2001) uses the term *self-sponsored writing*. That is a writing that belongs to the author and not any organization. According to Yancey (2009) “with digital technology and, especially Web 2.0, it seems, writers are *everywhere* - on bulletin boards and in chat rooms and in emails and in text-messages and blogs responding to news reports and, indeed, reporting the news as I-reporters” (p.4). She suggests the Twenty-First Century “marks a beginning of new era in literacy, a period we might call the *Age of Composition*, a period where composers become composers not through direct and formal instruction alone (if at all), but rather through what we might call an extracurricular social co-apprenticeship” (p.5).

Despite Yancey’s arguably overly optimistic notion of “co-apprenticeship,” direct and formal instruction is likely to persist and still

be needed, especially for second language learners. It may however augment instruction and vice-versa. A wise teacher should not overlook self-sponsored writing; it may be what students are more accustomed to. To put another way, if teacher is put off by the quality of writing he sees on chats sites, for example, he or she should work to make his students better self-sponsored writers rather than merely rail against modern technology. Writing has always had an empowering effect and the internet can be a democratizing force. A teacher does not need just to correct grammar, punctuation, capitalization and spelling, but encourage students to better articulate their opinions in order to create better “Netizenship,” or possibly, at the very least, better digital etiquette also known “Netiquette” one of the Nine Themes of Digital Citizenship. The other eight according to digitalcitizenship.net are: Digital Access, Digital Commerce, Digital Communication, Digital Literacy, Digital Law, Digital Rights and Responsibilities, Digital Health and Wellness and Digital Security.

So then, if good writing matters even in the Digital/Communication/Composition Age, how should it be taught? According to Prensky, “Today’s teachers have to learn to communicate in the language and style of their students” (p.4). He claims there are now two kinds of content, *legacy* and *future*. Writing is legacy content, along with all the traditional curriculum, such as reading, mathematics, logical thinking, and understanding the writings of the past. Future content is technological and digital, it includes hardware, software, robotics, nanotechnology, genomics, etc.

Prensky argues educators need to think about how to teach *both* legacy and future content in the language of the digital natives. “The first,” according to Prensky, “involves a major translation and change

of methodology; the second involves all that PLUS new content and thinking” (p.4). Prensky speculates that learning new content and thinking is more difficult. This echoes Warshauer and Whittaker (2002) who argue integration is essential. This integration of Legacy and Future content may be referred to *as blended* or “hybrid” learning.

To be clear, the authors of this paper go with official definition of “blended learning”: classes where a portion of the traditional face-to-face instruction is replaced by web-based online learning (Blended learning toolkit). In the above Prensky’s definition, the traditional face-to-face portion can be considered “legacy” whereas the online (or other nontraditional form) portion can be considered “future”. Selfe (in Kantrov) stated, “We can’t continue to present our students with composing strategies designed for paper and pencil when we want them to experiment with the real power of the electric pen” (p.63). Yet, 20th century writing pedagogy still matters.

The *process approach* and the *genre approach* both came into prominence in the closing decades of the last millennium. The former holds that writing is a process of discovering and developing meaning through stages of pre-writing, drafting, revising, editing, responding, evaluating and post-writing (Silva, 1990; Seow, 2002). According to Silva & Matsuda (2002) from the perspective of the process, “writing is a complex, recursive and creative process, that is very similar in its general outlines for first and second language writers; learning to write requires the development of an efficient and effective composition process” (p.261).

A negative point of the process approach is that it often disregards form and thus disempowers learners, particularly L2 learners. As Reppen states, “for the L2 student, many writing conventions will remain

a mystery unless teachers are able to bring these forms and patterns of language use to conscious awareness” (p.321). This is especially true considering cultural and linguistic differences in rhetorical structure and thought patterns as highlighted in a dated, yet still significant, paper by Kaplan (1966) which was a pioneering work in the field, and more recently by Connor (1996). Silva faults process writing for ignoring contrastive rhetoric and inadequately preparing students for academic work. Also, process writing is typically about the writer’s life experiences and Kroll (1990) states:

Proponents of the ‘discovery approach’ claim that the writing skills learned in practicing personal writing transfer to the skills required to produce academic papers. However, there is no hard evidence to support this claim. Furthermore, many students from a range of cultural backgrounds do not believe it appropriate to share their personal thoughts with strangers (i.e. the teacher and fellow classmates), and therefore find personal writing far more challenging than academic, impersonal topics. (p.226)

Moreover, product versus process is a false dichotomy. As Miller (1999) puts it “there is no process without product, and no product which has not arisen out of a process” (p. 347). So, there also needs to be a focus on both the process and the *product*. This is something that an integration of both legacy and future instruction may help reconcile.

Prior to the Digital Age writing was more of a process. The typewriter enabled a writer to print a text in real time as he or she was writing, and if he or she was a fast typist, almost at the same time they were *thinking*. It was not as elegant or personal as handwritten texts, but it was potential more legible, cheaper and less time consuming than having a text printed in a press.

The drawback was the permanence of it. Changes and corrections were difficult, if not impossible. Furthermore, before to the invention of the copy machine, copies were not easy to make. Students had no choice but to plan and write drafts, typically in long-hand before they typed, or had someone type, a final draft. It was arduous, but digital immigrants may remember the writing process as more disciplined. Today, as Seow points out, “students can freely make any number of changes to their texts by deleting words or moving them without having to retype large chunks of text all over again. Any work can be saved on the computer for revision later” (p.320). Nunan (1999) on the other hand, has argued that the development of word processing really made process writing possible and prior to its advent, “it was unrealistic to expect writings to produce more than one or two drafts of their work” (p.272)

Furthermore, although good typing skills are relatively common in the United States and other countries, not every culture has mastered the qwerty keyboard. As stated above, the cellular phone has allowed our students to sidestep the qwerty keyboard. Typing a text may be very time-consuming a difficult for learners from other cultures and thus better suited for a final draft.

Speech to text technology may help with this issue. It is emerging technology that has yet to be deeply studied but shouldn't be overlooked. It is proving to be a viable form of “writing” Speech to text technology was once laughable, rare, and more work than typing. One reason for this is the fact that all the processing was done natively on a personal computer. These days, it can be done on a tablet, Smartphone, laptop or desktop and the processing is done on server somewhere in the cloud.

With a native speaker, the accuracy for speech to text is astonishing. In one paragraph, there are only one or two mistakes if any. It is

necessary to Say the word “period” and “question mark” at the end of each sentence. This is awkward at first but we soon get over it. The implications for first as well as second language writing instruction are many. This new technology may lead to improved pronunciation. It may also help students and their instructors catch mistakes more easily as what is spoken will now come with a “hard copy” that can be edited and analyzed.

Cochrane and Key (2014) warn however that “speech recognition is usually NOT the only writing strategy in a student’s toolbelt. Consider it along with other tools that match specific writing tasks and environments” (p.3). They suggest educators should consider the writing task, the environment, and the students’ skills.

Spell check, grammar check and autocorrect are also important considerations. Some students may rely too much on them and teachers may want to disable these features and for some assignments and assessments, or require students to submit handwritten work. That said students should be made aware of these features and instructed not to overlook them, but they should know that they are not always helpful.

Nunan’s opinion notwithstanding, the easy deletion and correction word processing has enabled students to write with little or no planning or drafting. As Takayoshi (1996) points out revision takes place *within* drafts. The above mentioned erase-ability, has seemingly eliminated the need to write drafts. Still, pre-writing and a process continue to be essential to good writing.

However, before discussing ideologies and approaches to writing it is perhaps better to focus on the needs, aims, goals, objectives and institutional constraints of the particular learning situation. This is the first step in planning a course as recommended by Warshauer

and Whittaker, Kroll and a number of other specialists (Raimes, 2002; Richards, 2001; Brown, 1995).

As an example, from 2010 to 2012, one of the authors taught four semesters of a course focusing on academic writing in English at a Japanese university in preparation for possible study abroad. Students were also helped to achieve a score of 80 on the TOEFL iBT (Test of English as Foreign Language – Internet-Based Test or 550 TOEFL PBT (Test of English as Foreign Language Paper Based Test). After these goals and objectives of the course were outlined, the author, in a previous paper (Dutch, 2012), explained the approach:

To prepare students for the writing section of the TOEFL test where they must complete highly organized essays in 30 minutes, a product-oriented, genre-based approach might be ideal, that is an approach which focuses on expected outcomes. However to address the other objective of the course, academic writing in general, a process approach focusing on the discovery and development of meaning, might be more appropriate. (p.20)

Thus, for this particularly class, he chose an integrated approach close to the notion of English for Academic Purposes (EAP). Students were introduced to several types of essays, but also process writing and its basic concepts. It should be noted however that the essay may not be the only genre of writing students should learn. Depending on the class, business letter writing, blogging and emailing may be desirable to teach. EAP sometimes overlooks “real world” writing.

In the classes students were introduced to *Criterion*, which is described by Educational Testing Service (ETS) (2010) as “a web-based, instructor-driven, comprehensive instructional system that helps students plan, write and revise essays” (p.4). Such writing systems have

existed for some time. The Writer's Workbench (MacDonald et al. 1982) was one of the earliest.

Future and legacy content can be implemented in every stage of process writing. For example, students in the author's class completed outlines and did a variety of pre-writing activities. They included such heuristics as group brainstorming, clustering, rapid free writing and WH Questions, both on *Criterion* and as pen and paper, or marker and whiteboard exercises. It also offers vast array of essay topics and types from a wide range of levels. For the needs of this particular class, the author selected TOEFL-level essay topics from the *Criterion* topic library and assigned them to students. In under 20 seconds, upon completion of the essays, it provided a holistic score and annotated diagnostic feedback to both students and instructors.

Although there was something of a learning curve for students and the author, the instructional system was relatively user-friendly. Students did well and seemed satisfied with the course. Most completed all (or nearly all) and most attended all (or nearly all) of the classes. To what degree *Criterion* is responsible for this success is unclear and debatable, but the majority of students improved over the course of the term. Essays on *Criterion* are evaluated on a holistic six point Likert Scale (a scale of one to six, six being the highest). The majority of students saw improvement by at least one or two points on post-tests. Others have also reported significant jumps in their TOEFL scores.

It did not, however, replace the teacher, or legacy content, a point also made by Burstein, Chodorow, and Leacock (2004). Both a TOEFL and writing text were used to supplement the course. Furthermore, *Criterion's* feedback and scores needed to be heavily monitored. In many cases it did not detect certain errors, and/or was overly critical. It

did, however, categorize errors and help students see patterns in their mistakes and thus enable them to focus on their weak points. Another drawback of *Criterion* was its cost. It would be prohibitive for many programs. In fact, the author's university no longer uses it due to the high price. Cost/benefit analysis should be a part of the selection process for any materials or medium of instruction.

Although *Criterion* is no longer adopted into the curriculum, the course did highlight how future and legacy content can be combined in a writing course using current writing instruction approaches. It also can be a benefit to educators who must provide feedback on numerous papers, a time-consuming task that digital technology can make easier; for example, many teachers provide feedback on papers submitted electronically as inserted comments on Microsoft Word documents. Peer review is also possible with comments from multiple reviewers. One drawback though is that the comments must be read on a computer and not on a Smartphone. One way around this are wikis. Wikis allow for the same features mentioned above. Many of them are very accessible through tablets or Smartphones.

It is also no secret digital technology and Web 2.0 has enhanced distance learning and as a result it has flourished in recent years and is likely to continue to flourish in the future. Lectures and instruction can be posted online. Furthermore, thanks to webcams and Skype, individual online writing conferences between teachers and students are possible.

The experience of one the authors raised a number of issues, including the need for a possible basic style and format guide. He has since created such a guide and has recently updated it as educational institutions in the past decade, or so, have become increasingly paperless. The guide now acknowledges that written work may be submitted electronically, or

as more traditional paper copies. He also shows students how to write in the correct format through an overhead projector connected to a laptop computer, a technique recommended by Seow. An overhead projector connected to a computer can also be a useful medium for in-class collaborative writing tasks. This is an updated version of an activity discussed by Reppen.

The author would like to make a screencast of their formatting instruction available to his students as a link on Moodle, an online learning management system his program has partially adopted. It is also possible to comment on student's papers as a screencast, a technique recommended by Thompson and Lee (2012). He also intends to direct students to helpful websites for writing, including Purdue University's well-established web pages.

At the evaluation stage plagiarism is a concern. It has always been an issue for educators, but unfortunately the internet has made it easier for students to cut and paste someone else's work and pass it off as their own. There are even websites where whole essays are available. However the internet has also made it easier for teachers to spot plagiarized papers. For example suspicious passages can be merely entered into a search engine. There are also a number of free and commercial online services that can help educators and students detect plagiarized papers including, turnit.com, the plagiarism checker at dustball.com, and SPlat which checks for self-plagiarized, or "recycled" papers.

There many ways teachers can avoid the opportunity for students to plagiarize final drafts. One way is creative assignments which are not likely to be easily found on the internet. For example, having students compare their own life experience to that of the main character in a

novel. Another is to check rough drafts and/or have students compose some of their work in class with the instructor monitoring. This is another benefit of the process approach. One could say that all a student needs to do is reverse engineer a paper. Find a paper already written and pretend to go through the process writing motions but you could also argue that that would be more difficult than doing the work themselves. Seeing the drafts as a teacher would also clue the teacher in as to whether that student could write such a paper.

Students should also be discouraged from using translation software. It is a form of plagiarism as they are not using their own words. Also, it has been the authors' experience that the writing it produces is worse than what they could compose without assistance. At least from Japanese to English translation software at best produces only barely intelligible writing.

The final stage, post-writing is, according to Seow, “a platform for recognizing students' work as important and worthwhile. It may be used as motivation for writing as well as to hedge against students finding excuses for not writing. Students must be made to feel that they are writing for a very real purpose (319).” As mentioned in a previous paper (Dutch, 2013), long time ambition of the author is to create a database of well-written student papers, particularly book reports which may serve as reviews to help students with their book selections. This would be an excellent example of post-writing, a stage of the writing process not yet implemented in the program. The author knows of one blog for English language learners and teachers, *The Daily Sekaijin*, which features student's compositions. Unlike the many the many speech contests for students, there should be more opportunities for publishing student writing, especially ESL/EFL writing, or at the very least, more self-

sponsorship.

Future Research Direction

McCluhan (1969) famously said, “We look at the present through a rearview mirror. We march backward into the future.” This is to say the only clear view is of the past. Yet we can predict what technology is *trending* towards, to borrow a term from social media. It will be interesting to see what Tetrads of Media Effects scholars can create for future technologies. What *will* the medium retrieve that had been obsolesced earlier? What *will* the medium flip into when pushed to extremes? What *will* the medium make obsolete?

Looking more clearly at what digital technology’s influence on pedagogy is trending towards right now, we can see that the advent of Moodle, YouTube and other Web 2.0 innovations are a force behind *flipped learning*, which we might think of as a the next generation of blended learning. Although the concept of flipped learning is gaining currency as of late, let us define it more clearly:

Flipped Learning is an instructional strategy and a type of blended learning that reverses the traditional educational arrangement by delivering instructional content, often online, outside of the classroom. It moves activities, including those that may have traditionally been considered homework, into the classroom. In a flipped classroom, students watch online lectures, collaborate in online discussions, or carry out research at home and engage in concepts in the classroom with the guidance of the instructor.(Abeysekera et al)

The recent pedagogical concept has the potential to be far more learner-centered, active and self-paced than past approaches. Flipped learning will soon be adopted into the authors’ program and should present many opportunities for action research by possibly attempting

to answer such questions as:

- A. How successful has flipped learning been in the program?
- B. How can the success (or failure) be measured?
- C. Have there been any drawbacks?
- D. How can the Tetrad of Media Effects be applied to flipped learning?
- E. What are the roles and status of the educator and student in a flipped learning environment?

Conclusion

An unfortunate aspect of the print medium is that it will never be as current as electronic and online media, however it can survive as record for future scholars highlighting some of the issues and controversies of a particularly aspect of our current technological era. Still, it is the hope of the authors that the ambitions of this paper will at least remain relevant for some amount of time regardless of changes in technology. They are that it may be difficult for digital immigrants to keep pace with technological changes, but “tech savviness” is important in terms of professional development. More importantly, despite its noted threats, drawbacks and shortcomings, having a neo-luddite view towards digital technology in writing and writing instruction is not a viable option in the Twenty-First Century.

Imagine this scene: you go into the hospital suffering severe headaches. Your attending doctor, after you undergo an MRI, says “I would interpret your MRI but I’m not really into tech”. After your initial angered reaction to his incompetence, you would go to another hospital. Teachers are not exempt from finding and using the most effective technology to serve their students.

Furthermore, this view does a great disservice to students who must live in the digital world. It may deny them the voice and freedom and

that digital citizenship provides. The technologies described in this paper should be seen as tools that can empower both teachers and learners and can enhance and benefit writing and writing instruction, even if older educators are a step or two behind their students. That said, like any innovation, they must be used judiciously. This paper has attempted to present an approach and design that is pedagogically sound and valid while taking advantage of the opportunities digital technology presents.

Acknowledgements

The authors would like to thank their colleague William Penny and the program's supervisor, Dr. Carl McGary for their advice and support during the research and revision phases of writing this paper. Jeremiah Dutch would also like to thank Dr. Robin Scarcella of University of California at Irvine for her initial inspiration for this project as a visiting distinguished lecturer at the Temple University Japan's Tokyo Campus in the summer of 2003. He would also like to thank all the teachers who helped him learn how to write and then later become a better writer.

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