

## **The transliterate scribe: the role of technical communicators in a post-literate, wired society**

By JA Knighton

*“You don't have to burn books to destroy a culture. Just get people to stop reading them.”*

—Ray Bradbury

*“The fact is that people don't read anymore.”* —Steve Jobs

In this paper, I contend that changing literacy patterns and technologies will require changes in how technical communicators carry out their role. At the same time, I suggest that the basic function of the technical communicator has remained the same through time, and will continue to be important in the future.

### **What do technical communicators do?**

A review of the websites of associations of technical communicators gave me a list of tasks: designing information architecture, researching, plain language editing, choosing the right style and language, creating authoritative summaries, designing instruction, fact-checking, indexing, correcting grammar and spelling, creating mock-ups/story boards, creating technical illustrations, integrating design and content, managing production.<sup>1</sup> Perhaps you do some or all of these in your own job.

But a description of tasks is not an explanation of function. Fundamentally, the function of the technical communicator is to help organisations connect with audiences. Technical communicators are interpreters. They select information. They interpret that information choosing content (especially, but not exclusively, words) appropriate for the audience and structuring content in a way that conveys the desired meaning. Often, they manage the delivery of that content using a channel or medium that works for the audience.

As we all know, badly written material undermines the credibility of the organisation, and puts roadblocks in the way of communication. In well-written material, the writer is invisible; we might almost say the content is invisible. Nothing prevents the messages from reaching the audience's mind.

### **We write for readers...**

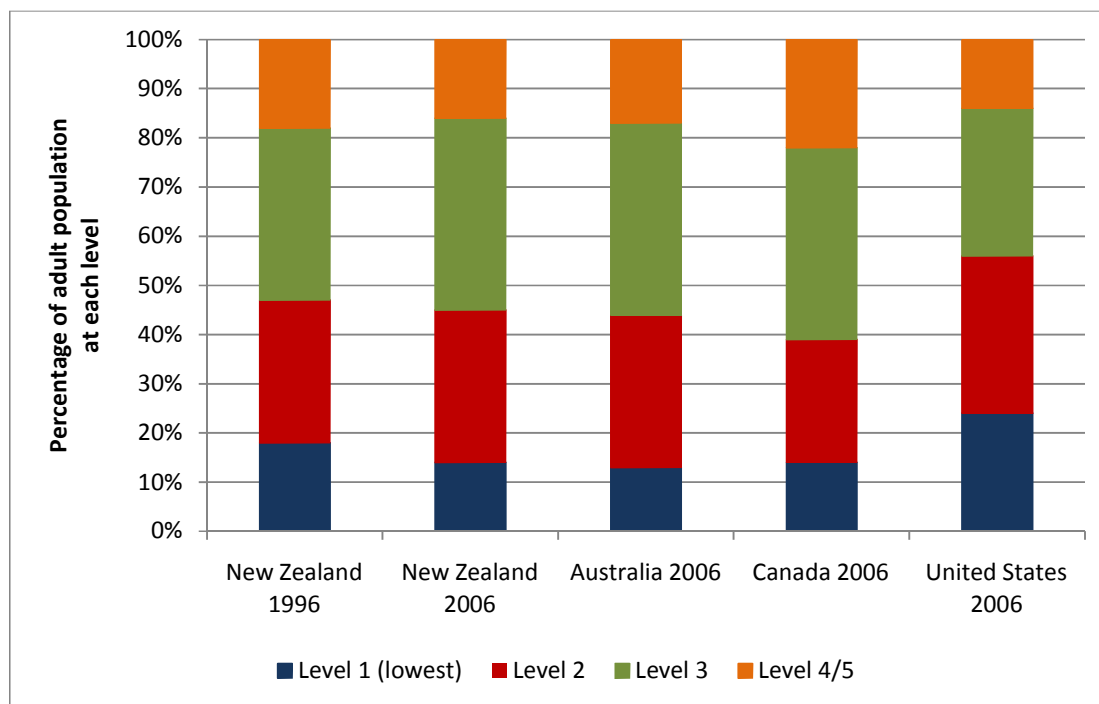
The words that are our stock in trade are mostly published to be read—whether in print or on some kind of screen. Some, it is true, have been delivered using some form of sound. But for the most part the tasks I listed above assume a society with widespread prose literacy.

Prose literacy refers to the knowledge and skills needed to understand and use information from text, such as news stories, editorials, poems and fiction. It is the most-commonly understood definition of literacy. Adult literacy is often measured on a prose literacy scale of 1 to 5. Level 3 is widely considered to be the minimum threshold for coping with the demands of the global knowledge-based economy.<sup>2</sup>

However, prose literacy above the minimum threshold—even in a Western democracy with universal education, like Australia and New Zealand—is not as widespread as you might think.

### ...but more than 40% of the adult population don't read

In the graph below, based on OECD research, each bar shows the total adult population of the sample country/year, divided into literacy levels. In New Zealand, Australia, and Canada, more than 40 per cent of the population is at level 1 or level 2; that is, unable to use and understand anything more than the simplest of prose. In the US, this proportion is over 50 percent.



### New technologies aim to remove the need to read

This enormous potential market—for product, for services, for government policies—has not gone unnoticed. Among the explosion of new technologies in recent years have been a number that aim directly at people for whom reading is not easy. And technology gurus promise more to come, in a future they specifically define as the Post-Literate Age.

Information technology, cybernetics, and artificial intelligence may render written language “functionally obsolete” by 2050.<sup>3</sup>

Such technologies as image, voice, touch, and even thought-based input and output devices may be a great boon to those who are currently excluded because they cannot read.

While advancement in cybernetics and the decline in literary culture appear, at first glance, completely unrelated, research into cyber-telepathy has direct ramifications for the written word and its survivability. Electronic circuits mapped out in the same pattern as human neurons could, in decades ahead, reproduce the electrical activity that occurs when our natural transmitters activate. Theoretically, such circuits could allow parts of our brain to communicate

with one another at greater levels of efficiency, possibly allowing humans to access data from the Web without looking it up or reading it.<sup>4</sup>

Well used, such technologies could open the benefits of the knowledge economy to all in our Western societies, and to those in developing nations with far lower rates of prose literacy (such as South Sudan, where 95 percent of the population cannot read).

### **Fluent reading is hard to learn**

Yet the very success of these technologies could spell the end of widespread prose literacy—and change the face of our profession. We see some signs of this already. As shown for New Zealand in the graph above, between 1996 and 2006 the Level 3 group has expanded in both directions. More people can read at a level of basic competence; fewer people can make the higher-level inferences and connections needed for Level 4 reading.

Every three years, the OECD Programme for International Student Assessment (PISA) surveys 15-year-olds in the principal industrialised countries. PISA confirms that more people can read simple prose, but fewer are achieving high levels of competence. Both New Zealand and Australia have slipped in rankings and scores since 2000.<sup>5</sup> The proportion of readers in the bottom group has reduced slightly—but the proportion of readers in the top group has reduced more.

There is a direct relationship between time spent reading and competence in reading. Those who read more, learn to read more easily. Those who read more easily choose to read more.

The amount of free reading done outside of school has consistently been found to relate to growth in vocabulary, reading comprehension, verbal fluency, and general information.<sup>6</sup>

### **Reading is (so far) still needed for text and social media conversations**

In today's busy world, with multiple information sources competing for our attention, young people in formal education are choosing to spend less time in reading print-based prose. At the moment, reading is still important to use electronic media, which still depend largely on text that must be read.

Take text messaging. A Kaiser Foundation study of 8 to 18 year olds found that they average one and a half hours a day on text messages.<sup>7</sup> In a recent school research project, students at an Auckland school reported that year 10 students average 107 texts per day; one sent an average of 650 texts per day!<sup>8</sup> And in Japan, cellphone novels—written on mobile phones and texted in instalments to readers—are the latest literary genre.<sup>9</sup>

Social networking is also largely text-based. In the Kaiser study, around 40 per cent of 8 to 18 year olds, and a higher percentage of those over 11, visited social networking sites. Those who used social media spent around an hour a day on it.

So even though the reported use of print media is down, young people are still practising text-reading skills, even if some of the text they read is impoverished. However, as we've seen above, technology companies are working to change this prose dependence in the near future. What will happen to reading competence when the current average two and a half hours a day spent on text and social media, plus other reading practice, is instead spent interpreting images, listening to prose, or directly absorbing messages in the neural cortex?

## **Schools are focusing on skills other than reading**

Meanwhile, schools are focusing not just on literacy in the printed word, but on competence in other media. This broader competency is called ‘transliteracy’. Transliteracy is “The ability to read, write and interact across a range of platforms, tools and media from signing and orality through handwriting, print, TV, radio and film, to digital social networks”<sup>10</sup>. The educational strategy of increasing exposure to these other types of literacy reduces time spent in school gain reading fluency.

## **What did writers do when most people didn’t read?**

For technical communicators, this is either a crisis or an opportunity, depending on how we define our profession. For an insight into the role we might have in the future, let’s take a brief look at our predecessors in the centuries before wide-spread prose literacy—scribes, stewards, and travelling storytellers in ancient and medieval times.

For tens of thousands of years, all communication was by word of mouth. Legislation, instruction, business reports, social messages—all were transmitted by word of mouth. If someone wanted to tell you something, they needed to come in person, or send a messenger who had memorised the message. As for communication from one place to another, so for communication from one time to another. Histories and genealogies were committed to memory and passed on, by word of mouth. All learning was oral, received straight from the mouth of the teacher.

## **Technical communicators mediate the message**

Then someone had the bright idea of using marks on the outside of storage jars to tell future inventory takers what was inside the jar: one mark for a measure of wheat; another for a measure of barley, two marks for two measures.<sup>11</sup> And the rest, as they say, is history. Wherever the concept arose, within a couple of generations a distinct class called scribes arose. They recorded the deeds of kings and gods. They helped keep the wheels of commerce turning. They sat in the marketplace and wrote letters and contracts for ordinary householders. The scribe’s role was to mediate the message; to help the people who wanted to communicate—kings, generals, teachers, merchants, lovers and all—to reach their audiences.

In many places in the world, things haven’t changed much. A core group of prose-literate people select, interpret, and deliver words for the remainder of the population. And the remainder of the population uses other forms of communication—in this sense, today’s transliteracy can be compared to yesterday’s stained glass windows or orthodox icons.<sup>12</sup>

## **Technical communicators turn data into information and information into knowledge**

This model of the scribe—yesterday’s writers and technical communicators—can be our guide in a future where prose literacy is again the preserve of the minority, and where information is available to people in a dizzying range of formats including, but not limited, to words.

What modern and proposed technologies offer is wider access to data, not—as some commenters would have you believe—wider access to knowledge. For data to be useful, it must be organised, for it is organisation that turns data into information. Organisation alone is still not enough; information is not knowledge. To become knowledge, information must be understood.

## **Technical communicators select, interpret, and structure—whatever the technology**

Let's look at how a technical communicator might contribute to projects delivered using each of the non-prose output technologies I've mentioned.

First, sound. Smart systems that can talk to users and take spoken directions are already in use in GPS systems, voting and immigration booths, and telephone answering systems. At the moment, such technologies require speech input to be clear, concise, and well structured. Software can't yet deal with all the false starts, hesitations, filled pauses, repairs, and sentence fragments that are part of spontaneous speech. Performance continues to improve, however. Speech input is in the hands of the technology experts. Speech output, though, requires communications skills to be effective. Speech output consists of two pieces: most obvious is the speech synthesiser that creates speech by putting together pieces of recorded speech from a database. However, having a voice is not as important as having something to say. The second and most important piece is the information the user is looking for. This information is created in the same way as any other information—to be coherent, it needs to be selected, interpreted, and structured for the user. In short, this means information that will be spoken needs first to be scripted; in other words, it needs a technical communicator.

Second, sight. Many information channels already have viewers rather than readers (videos, television, comic books), and—even when prose is the primary information source—graphics can be important for conveying information that does not translate easily into words. Visual information—static or moving pictures—is particularly useful when showing someone how to do something with their hands. Technical communicators are already actively involved in this field, because visual information usually needs to be scripted to be coherent. Visuals need to be selected, interpreted, and delivered, and in almost all cases they will need words to make them meaningful. Words become even more important when there are fewer of them. The viewer needs not just words, but—more than ever before—the right words.

Third, the most futuristic of the set, direct neural interface. Devices that capture brain signals and translate them into commands are already working in rehabilitation<sup>13</sup> and gaming<sup>14</sup> environments. Possible future uses include smart homes, that respond to your wish for a television channel change, dimmer lighting or more heat; word processing programmes that record your thoughts; and input devices that directly stimulate the parts of the brain associated with hearing so that you hear voices without audible noise – very useful for holding a private conversation on the train.

In a future society, some people may adopt more drastic types of implants for themselves. Being able to access information from the web and have it beamed directly into your head could be a tremendous boon for learning. The rate at which people acquire and manipulate data would increase at a tremendous rate.<sup>15</sup>

What the futurist often fails to take into account is that even information that will be delivered directly into the audience's neural cortex needs first to be selected, interpreted, and structured.

## **In a world with few readers, technical communicators will need to learn new technologies**

Selection, interpretation and structuring are tasks for technical communicators. Our key attribute is the ability to sort through information, make selections with precision and discretion, and interpret the selected information for the intended audience. We specialise in creating a space—a document or online environment—that is circumscribed so that it provides sufficient information and context for

good decision-making, but doesn't provide more information than is needed, and that is structured so that it communicates effectively.

To function in this putative future, though, we will need to learn new technologies. We will communicate in new ways with our sponsors and technical experts; use new ways to collaborate on documents. There will be different media, different channels, different audiences. To be effective in our role as interpreters, we must be literate in variety of communication formats. In the post-literate world that is forming around us as I speak, technical communicators will need to be transliterate.

### **Technical communicators have a future in the post-literate, wired world**

I began this paper with two quotes. Steve Jobs said that people don't read anymore. I don't think he's right yet. But I do think that his vision of the future is highly possible. Ray Bradbury warned that stopping people from reading books could destroy our culture. As technical communicators—as transliterate scribes—we can play our part in preventing the loss of reading from destroying our culture. We can continue to select, interpret, structure and deliver to audiences who choose not to, or who cannot, read words. We can deliver to the audiences of the future the art, philosophy, science—the knowledge—that makes us who we are.

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<sup>1</sup> <http://www.stc.org>, [www.tcanz.org.nz](http://www.tcanz.org.nz), [www.astcnsw.org.au](http://www.astcnsw.org.au)

<sup>2</sup> Canadian Council of Learning: [www.newswire.ca/en/releases/archive/September2010/08/c7537.html](http://www.newswire.ca/en/releases/archive/September2010/08/c7537.html) Downloaded 3 August 2011.

<sup>3</sup> Patrick Tucker, *The Futurist Magazine*, November/December 2009, [www.wfs.org/node/1000](http://www.wfs.org/node/1000)

<sup>4</sup> *ibid*

<sup>5</sup> [www.educationcounts.govt.nz/topics/research/pisa\\_research](http://www.educationcounts.govt.nz/topics/research/pisa_research), [www.acer.edu.au/ozpisa](http://www.acer.edu.au/ozpisa)

<sup>6</sup> Cullinan, Bernice E. *Independent Reading Achievement*. New York University. This paper was a review of research literature on independent reading commissioned as part of a national study. Downloaded on 4 August 2011 from [www.ala.org/ala/mgrps/divs/aasl/aaslpubsandjournals/slmrb/slmrcontents/volume32000/independent.cfm](http://www.ala.org/ala/mgrps/divs/aasl/aaslpubsandjournals/slmrb/slmrcontents/volume32000/independent.cfm)

<sup>7</sup> Kaiser Family Foundation, *Generation M2: Media in the lives of 8 to 18 year olds*, January 2010. Downloaded on 4 August 2011 from [www.kff.org/entmedia/upload/8010.pdf](http://www.kff.org/entmedia/upload/8010.pdf)

<sup>8</sup> Otto, Michael. "Students flood airwaves with texts, young students find", *NZ Catholic*, No. 371, 2011

<sup>9</sup> [www.nytimes.com/2008/01/20/world/asia/20japan.html](http://www.nytimes.com/2008/01/20/world/asia/20japan.html)

<sup>10</sup> Thomas, Sue. Transliteracy Research Group, De Montfort University, Leicester, UK, [nlabnetworks.typepad.com/transliteracy/](http://nlabnetworks.typepad.com/transliteracy/)

<sup>11</sup> Knighton, Judy. "How accountants invented writing," *Chartered Accountants Journal*. Feb2008, Vol. 87 Issue 1, p11

<sup>12</sup> Icons explained. [www.iconsexplained.com/](http://www.iconsexplained.com/)

<sup>13</sup> <http://www.braincommunication.org/>, <http://cacm.acm.org/magazines/2011/5/107704-brain-computer-interfaces-for-communication-and-control/fulltext>

<sup>14</sup> [http://en.wikipedia.org/wiki/Emotiv\\_Systems](http://en.wikipedia.org/wiki/Emotiv_Systems)

<sup>15</sup> <http://brainstimulant.blogspot.com/2009/10/brain-computer-interface-and-wireless.html>