Truth, Lies and the Internet

By Jamie Bartlett and Carl Miller

The Challenge of Digital Fluency

G.K Chesterton famously said that education is the soul of a society as it passes from one generation to another. There are many things important for education to pass on: to endow young people with what they need to be active citizens; to encourage independent thinking, originality, and intellectual flourishing; to possess them with the knowledge and craft they need to find a vocation and master it. In sum, to give young people the resources – emotional, social, intellectual and moral – they need to make their way in the world.

But our education system is not only charged with passing things on to a younger generation; it must also keep up with what young people need to thrive in the society they will grow up in. Occasionally a disruptive innovation takes place and transforms society so dramatically and suddenly that a gap opens up between what young people are taught and what they need to know.

The Internet, or more precisely the revolution in information creation and consumption, is just such a disruptive innovation. The debate continues to rage between digital optimists and digital pessimists about whether the disruption is a positive or negative one. The optimists stress the role the Internet has played in widening access to knowledge and ideas, in bringing people together in new and exciting ways, in helping to overthrow corrupt and repressive regimes. The pessimists point to darker vicissitudes: the ubiquity of pornography, on-line radicalisation, cyberbullying, privacy, even possible long-term detrimental health effects of online stimulation such as 'techno-stress' (Powers, 2011), 'data asphyxiation', 'information fatigue syndrome', 'cognitive overload', and 'time famine' (these terms respectively attributable to William van Winkle, David Lewis, Eric Schmidt and Leslie Perlow in Schumpeter, 2011).

There is some truth in both accounts of course. The urgent challenge for those with a stake in information literacy is that in less than a decade the Internet has redrawn the way in which people find, consume, understand, share and produce information, and, as a consequence, has caused an explosion in available information of vastly differing quality. The amount of material at our fingertips today is unfathomable. When we fire up a browser, we can choose from more than 250 million websites and 150 million blogs, and the numbers are growing. The online content created last year alone was several million times more than is contained in every single book ever written. Much of this content consists of trustworthy journalism, niche expertise, and accurate information. But this information is amply companioned with lazy mistakes, selective half-truths, deliberate propaganda, misinformation, disinformation and general nonsense. Importantly, it is often difficult to distinguish between good information and bad information artfully packaged to look plausible.

The ability to judge the merits of different pieces of information is the basis of one of the oldest philosophical disciplines in the Western tradition: epistemology. This will all be familiar with readers of this magazine. School librarians have long concerned themselves with how we make good decisions about what information to trust and what to discard, and stand at the vanguard of delivering critical thinking as a central component of the national curriculum.

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But critical thinking alone is not enough anymore. In a recent report written for the think tank Demos, *Truth Lies and the Internet,* we argue that the future of the Internet as a socially and personally beneficial resource is really staked on meeting a central challenge: to equip each person, and especially young people, with the savvy and knowledge they need to distinguish good information online from its many

imposters. This skill – what we call digital fluency – is a blend of old literacy skills with new skills and knowledge required to understand the specifics of a digital ecology. Aside from the sheer volume – in itself important – the architecture, structure, even animating principle, of the Internet presents very significant and novel difficulties in relating and applying critical thinking. There are at least six distinct difficulties and pitfalls in this new information environment that require at least some ration of technical savvy:

- *Anonymity and the pedigree problem:* In a complex and specialised world, we must trust in experts. Often without the first-hand knowledge ourselves, we trust information because of who provides it. However, much of the discussion on the Internet occurs under the cloak of anonymity, or where identity (and therefore authority) can be easily faked.

- *Absence of gate-keepers:* One of the oldest functions of human cooperation is to create structures and processes to order and categorise information according to its value and 'truth'. The peer-reviewed academic journal and the edited school textbook act as gatekeepers, at least in theory expertly posing certain tests of veracity before content is permitted into the public sphere. Especially since the explosion of 'Web 2.0' and user-generated content, these helpful mediators are absent, to a much greater extent, online.

- *Generational divide*: Parents are typically the main guardians of information for their children. With the internet, this supervision is often absent: Forty-eight per cent of parents think their child knows more than them about the internet, rising to 70 per cent of parents of 12-15 year olds (OfCom, 2011, p 59).

- *Pseudo-sites and propaganda*: Many websites are not what they seem and some are created for nefarious purposes and are specifically designed to appear trustworthy. For example, the website www.martinlutherking.org purports to present "a true historical examination" and a "resource for students and teachers" of Martin Luther King, Jr. The website, however, is a veiled attack on King's reputation and is hosted by the White supremacist group StormFront.

- *Use of Imagery:* Image manipulation techniques are increasingly allowing misinformation to be powerfully and attractively packaged. Decisions about information quality are often based on site design, rather than more accurate checks: 15 per cent of 12-15 year olds don't consider the veracity of search term results and just visit the sites they "like the look of" (Bartlett & Miller, 2011).

- *Echo Chambers:* With our consumption of Internet content increasingly mediated by 'filter bubbles' that grade and order what we see according to what we want to see, we each inhabit our own unique universes of essentially agreeable information (Pariser, (2011) *The Filter Bubble;* Pariser, TED talk; Pariser, 2011, Invisible Sieve). Experts, including US academic Cass Sunstein, argue that the Internet, through making it much easier to only encounter information that corroborates a particular viewpoint, promotes polarisation and extreme views (Sunstein, 2009).

How young people are dealing with this is clearly important. In *Truth, Lies and the Internet*, we aimed to find out. Between May and July 2011 we conducted an on-line survey of primary and secondary school teachers in England and Wales. We surveyed over 500 teachers to gauge general attitudes within the teaching profession toward the importance of the critical thinking and the Internet and the extent to which their students were applying such skills. (We did not, to our regret, include librarians in the poll. Much of the work we have done since the publication of the report has been to address this imbalance, and we continue to warmly invite the views of librarians in this area.)

The results probably will not surprise the professionally interested readers of *The School Librarian* (or *Synergy* readers – editor). First*,* Internet teaching and learning is fundamental to pupils' school and personal lives: 75 per cent of teachers surveyed believe that Internet-based content is important in the formation and validation of their pupils' beliefs, and 95 per cent reported that their pupils have brought information into the classroom that they have found on-line. Correspondingly, 99 per cent of teachers think the ability to assess and evaluate information online is an important skill.

Second*,* respondents rated their pupils' abilities on the whole poorly. With 1 being excellent and 5 very poor:

Internet Skill	Average Rating
Understand how search engines operate	2.57
Understand the difference in quality of information, for example between statistics and anecdotes	3.35
Recognise bias or propaganda	3.45
Visit a wide variety of websites with different perspectives	3.53
Apply fact-checks or other source verification on the online information they consume	3.77

This supports other research on the subject. Although there is some evidence to show that some young people are discerning, careful Internet users, much else indicates that the skills of the 'digital natives' do not match their own self-reportage: around one in four 12-15 year olds makes no checks at all when visiting a new website, and less than one in ten ask who made a site and why. (OfCom, 2011, p. 59) Decisions about information quality is often based on site design rather than more accurate checks, and around one third of 12-15 year olds believe if a search engine lists information then it must be truthful (OfCom, 2011, p. 47).

Thirdly and directly related to the results above, our survey found that too many young people believe and use information they should probably discard. Forty seven per cent of teachers surveyed reported having encountered arguments within lesson or submitted schoolwork that contains inaccurate Internet-based content they regard as deliberately packaged by the producers to be misleading or deceitful (for example, holocaust denial packaged as radical historical revisionism), and 18 per cent report this happens on at least a monthly basis. Forty eight per cent report having had arguments in class with pupils about conspiracy theories, with more than one in five reporting this happening on a monthly basis.

What this means

At least some of the buck stops with the education system. Only one third of 9-19 year olds have been taught how to judge the reliability of online information (Livingstone & Bober, 2005, p. 14). That probably explains why, in our survey, 88 per cent of teachers overwhelmingly felt that the subject of digital fluency needs to be given more prominence in the classroom.

It is our contention that the era of mass, unmediated information needs to be attended by a new educational paradigm based on a renewal of critical, sceptical, savvy thought, fit for the online age. Doubtless, today's teachers and librarians deserve sympathy because the speed of change has been dizzying and education curricula have as little free time as education and literacy professionals do. Be that as it may, education must keep pace with society's turbulence, not vice versa.

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Although there are some promising initiatives in some schools, coverage is patchy and sometimes non-existent, depending on the proclivity of the head teacher and the availability of funds and time. It is too important for that. It is thisinformation landscape – not the Dewey Decimal one – that young people navigate, and that most meaningfully impacts upon their lives. Throughout their lives, young people will make important,

even momentous decisions – on health, life, love and politics – based on what they encounter and believe online.

We believe the most effective remedy is both to defend core critical thinking such as recognising authorship bias, spotting logical fallacies and verifying sources and add to it the knowledge and skills needed to make critical thinking applicable and relevant for the digital age. This blend of the old and new needs to include, at a minimum, the following themes:

Theme 1: finding information. Given the single importance of the way the searches we make determine the information we receive, students need to be taught about framing searches, how search algorithms work, on-line information retrieval systems, different search engine results, and search engine optimization.

Theme 2: verifying information. Given the availability of source material, students need to be taught methods of verification, including: verifying by collaborating with others; Wikipedia; using social networks; footnoting and linking online; source acknowledgment; triangulating sources; seeking alternative opinions.

Theme 3: avoiding the Sophists. The potential to be misled by on-line content is considerable. Students need to be taught about the use of logical fallacies, techniques of on-line propaganda, and how to spot faked websites and faked images and video.

Delivering Digital Fluency

Precisely how this is taught is still up for grabs. Whatever form it takes, digital fluency teaching will act in competition with pieces of disinformation that are catchy, viral, and coolly anti-Establishment. An A4 handout delivered in a classroom cannot compete with a trendy *YouTube* conspiracy theory with explosive graphics and a good soundtrack. The materials that promote the principles of digital fluency should leverage social media, be presented in viral, transmissible formats, use powerful presentational techniques and offer, through the use of independent critical thinking, the opportunity to critique the actions and decisions of the Establishment.

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This is not the property of any one subject. Indeed, in our survey, when asked in what subject digital fluency might be taught, there was a remarkable array of different subjects proposed: IT, English, History, Citizenship, RE, Politics. This suggests that teachers felt that digital fluency is a core competency, one that should be taught across several subjects.

This is why school librarians are so important to the future of digital fluency: they sit atop any specific subject area, and can see opportunities in each. In today's world, digital fluency must be put at the heart of education, and toward this end school librarians will play a key, perhaps decisive, role.

The full 59-page report 'Truth, Lies and the Internet' is available to download free at www.demos.co.uk/publications

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