

# Chapter 10

## Digital Devices, Online Learning and All That: How They Are Shaping Education



Mobile devices can arguably deliver for and deliver from (worthwhile) learning. This discursive chapter examines current literature regarding the problems and prospects with regard to the use of mobile devices in classrooms, and arguments for and against their use at school, and the kinds of uses they are being, and might be, put to. The chapter also discusses the contribution of digital technologies to conforming and potentially constraining teachers. The chapter will also reprise in brief a discussion of student behaviour more generally, and the respect accorded, or not, to teachers, from students and parents. The chapter explores this in light of recent home-schooling, necessitated by covid-19, and the newfound respect this has garnered for teachers from parents.

Declaim *vb* 3 to protest (against) loudly and publicly

HarperCollins (1999), p. 408

### Admission

There's an interesting world out there, beyond me<sup>1</sup>.

Snapshot 1: I've sometimes mused about writing an updated Gulliver's Travels narrative (Swift, 1726). In this tale, Gulliver chances upon an island where everyone is a town crier. For younger readers, a town crier was someone who wandered around town (towns were smaller back in the day), and yelled out information, just using her or his voice.<sup>2</sup> On Gulliver's host island, *everyone* wanders around with a megaphone,

---

<sup>1</sup>Beyond oneself. I'm not suggesting that I'm the only boring thing in the universe. Just that the internet doesn't have to be all about me.

<sup>2</sup>Not only were there no electronic devices, but many people couldn't read. (Think back to the Devanagari script in Chap. 6, or any script you haven't been able to make sense of). They had to rely on the town crier's "truths"; fact-checking was difficult. The town crier, in turn, relied,

just yelling things they've heard or imagined. I'd call this land "Mega-phony-a". Welcome to the world of social media.

Snapshot 2: It's a rich, bountiful time to be a teacher, and a learner, with much to be embraced in the new, digital world. Bagchi, Narula, and Sengupta (2019) refer to earlier times as the "dark days of disconnect". The scope for connecting with other learners, with experts in the field, and with audiences for our learning, would have been unimaginable even in recent times, just as recollections of the world just a couple of decades ago seem dim, with letter-writing, putting hard copies of photos in an album and the like.

Young people can't conceive that a world without the internet could possibly have any virtues to it. That, I believe, is part of the problem. They are unable to unimagine the internet, which is likely to make them less sensible to its influences—on them and from them.

I concede that I am a techno-sceptic. That sounds more respectable than techno-imbecile. Accordingly, my views on the digital world may tend towards the reactionary. At times when I see four school students in the same uniform (just to clarify, they're each wearing a separate-but-identical uniform, not sharing the one uniform<sup>3</sup>), on the train sitting next to one another, ignoring each other and staring into their phones, I wonder if we are less connected (to those "closest" to us) and more tethered than ever. Are we just staring at, or looking for, Narcissus-like, our own image in those shiny devices<sup>4</sup>? I will devote some of this chapter to interrogating my misgivings about the potential contributions and influences of the online world, within (or encircling and besieging?) the learning world. In particular, I will explore implications for teaching and learning, teachers and learners. I also have to concede that I like to feel in control—which is perhaps what led me into teaching. The online world removes that structure, support and security from my life, and from my teaching. As such, it can be a great servant to the cause of education and educators; it can also be a wilful and restive tyrant, over teaching and beyond.

## The Online World, Learning and the School

I opened Chap. 6 with some information—perhaps more than you required—about Devanagari script and the Sanskrit language. I accessed all that information without

---

probably, on one single source, possibly government-controlled or -influenced. Town criers weren't necessarily government employees, though. They might be paid by the community, with food, after harvest (Wikipedia, 2019a). Accordingly, there may have been competing vested interests in what s/he announced or didn't. Also, apparently there were many female town criers. I didn't know.

<sup>3</sup>That would be weird. I'm just illustrating that they're not mutual strangers.

<sup>4</sup>It's possible, of course, that the students are doing their homework, or other reading. But if they're texting others, only to text each other when they're with those others, that strikes me as counterintuitive.

leaving my desk. Hardly remarkable these days, but apart from the possible weight-gain and cardiovascular implications, this is a marvellous global, technological development in my lifetime. As with access to literacy and education, I hope I never take for granted the freedom I have to access, and to share, information and opinion, as well as the attendant responsibilities. I also wish to remain vigilant and insistent with regard to safeguarding those rights, freedoms and responsibilities. The information in the second footnote on the previous page reminds me of the value of access to information, and the verification of information. However, as it is with literacy, so it is with digital information; in the absence of (UN Declaration 1's) reason and conscience, information is, at best, worthless, and at worst, highly dangerous. This applies, too, to people. Think Pol Pot.

Darvin (2018) adopts a British Columbia Ministry of Education definition of digital literacy: “the interest, attitude and ability of individuals to appropriately use digital technology and communication tools to access, manage, integrate, analyze and evaluate information, construct new knowledge, create and communicate with others” (p. 181). Darvin notes the threefold personal attributes: interest, attitude and ability (central to most learning), and the multifaceted skills involved in negotiating with digital technologies and their content. In one sense, though, the skills involved, apart from the technical navigational know-how, are not vastly different from those regarding interacting with any text: accessing, managing, integrating, analysing and evaluating information, constructing new knowledge, creating and communicating with others (see definition above, and, perhaps, Bloom's Taxonomy (Anderson, Krathwohl, & Bloom 2001)). One main difference is the highly public nature of online misjudgement, with attendant consequences. There is at least one slippery term in the British Columbia Ministry of Education definition above: appropriate. Another major difference is the absence of a filtering process for much online information, requiring greater vigilance and scepticism of us as “consumers”, particularly given the overwhelming volume of alleged information available. In coming to terms with understanding the dynamics of digital literacy in schools, Spiteri and Rundgren (p. 1) identify four contributors: knowledge, attitudes and skills, knowledge and attitudes on the part of the teacher, and a school's culture.

Of course, there are some truly innovative, “opening-up” practices occurring in schools. Burden, Kearney, Schuck, and Hall (2019) devised a continuum of digital technologies, from “sustaining” which embody minor changes, to “innovative”, disruptive technology use. Their systematic literature review drew upon four criteria: convincing evidence based on rigorous methodology; evidence-based learner benefits; identification of pedagogical strategies and interventions; and evidence of innovation. Of the 57 papers reviewed, however, they identified only three that met the criteria for radical, disruptive practice.

Digital and other assistive technologies have also opened opportunities for learners with disabilities (Maher & Young, 2017; Ravneberg & Söderström, 2017), although there appears to be a disconnect between optimal use of assistive technologies and actual classroom use, where such technologies remain underused (Bouck, 2016; Bouck & Flanagan, 2016), and a lack of wider consultation to ascertain the needs and capacities of learners with disabilities (Young, 2018). In another development,

the ubiquity of digital devices and online access has occurred rapidly, overtaking the extension of other, physically reliant, services to disadvantaged communities, such as clean water and sewerage/septic toilets, no doubt helping learners elsewhere—if they can outlive the ambient health challenges, and presuming they have sufficient literacy capacities to access content—it’s a tangled web.

But the accessibility and affordability of information raise two problems: what to focus on or ignore, and how to drive and navigate clearly, with blizzards of information constantly bombarding the windscreen; what Purcell et al. (2012) refer to our “information-saturated digital lives”. In the classroom, mobile devices are making teaching so much easier, but just as they’re fattening up my arteries and me, as I confessed above, are they at the same time rendering us cognitively fat and clogged? With those potential biases and blind spots in mind, I’d like to explore briefly the online world as a platform for sharing ideas, ideologies, knowledge, opinions, propaganda and the like, and how we might respond. Along the way, I will also look at some ways of decoding texts.

In preparing myself for coping with the vast amounts of information I’m faced with, I find Freebody and Luke’s (1990) four resources model for reading and viewing a useful guide for online (and other) text interactions. Their four ways of interacting with text are

Code breaker. ‘How do I crack this code?’

Meaning maker. ‘What does this text mean to me?’

Text pragmatist. ‘What do I do with this text?’

Critical analyst. ‘What does this text do to me?’

It might oversimplify to offer associated examples with regard to a particular model, but I’ll offer an illustrative example with regard to Roman numerals:

- Code-breaking might entail learning that *i* in Roman numerals equates to one (of something—“how many what”? as my maths teachers used to say), and that *v* equates to five somethings.
- Meaning-making might involve learning the “grammar” of Roman numerals, i.e. that *vi* does not equate to *iv*, and it is not simply a matter of aggregating clusters of numerals.
- The text pragmatist might use the grammatical knowledge to “calculate”/translate into Hindu-Arabic numerals, or to read and/or infer higher, more complex Roman numerals.
- Critical analysis might be more elusive here. It might include speculating that *v* derives from an upheld hand with four fingers together and the thumb apart from them in a *v* shape, to help buyers and sellers with no common language to communicate numbers for prices, weights, lengths, numbers of items and the like. You “double” (or mirror image) the *v* symbol to make *x* for 10. The letters *l* (*L*) and *c* are also easily formed by hand gestures (*x*, *d* and *m* are the only Roman

numerals that would probably require both hands), suggesting why those letters may have been chosen<sup>5</sup>;

considering the absence of zero in Roman numerals and the limiting implications of this; contemplating why we adopted a different system;  
 asking why we still use Roman numerals in some instances;  
 experimenting with some arithmetic operations using Roman numerals, and comparing its in/efficiencies with the Hindu-Arabic system we use;  
 asking “what’s Hindu-Arabic, anyway”?

Code-breaking and meaning-making are prerequisites for Freebody and Luke’s other two processes. Text pragmatist and critical analyst roles come into play in more interesting ways with more complex knowledge encounters, such as what I do in response to knowledge of genocide or gender fluidity, or what those knowledges do to me, my being and doing (in a way that knowledge of Roman numerals per se is less inclined to do). I also mention this partly to differentiate between basic and more advanced skills, and fields of knowledge.

Another possibly fruitful measure for engaging with texts is one that colleagues of mine saw handwritten on the wall of a Bhutanese university. (I’m paraphrasing here from the accounts I received.) The ACID test: what do I agree with?; what confuses, confronts or challenges me, or needs clarifying?; what is interesting?; what do I disagree with? Naturally, each of these questions implicates asking why.

The above two frameworks will serve as backdrops to my thinking as I critically examine (my reactions to) online contributions to (school) learning.

## Online Accessibility and the Complexity of Teaching

This section is, I believe, uncontroversial. Technological advances have added to the complexity of teachers’ work. Kelentrić, Helland and Arstorp (2018) have developed a Professional Digital Competence Framework for teachers, with seven components (p. 3):

subjects and basic skills, which concerns itself with the expansion of subject areas through digital content and access;  
 school in society, which deals with broader societal uses of technologies, and overcoming the “digital divide”;  
 ethics, focusing on school values, legal matters and students’ digital discernment;

---

<sup>5</sup>For those interested in such things, in Arabic numerals, five looks like our zero, another easy hand gesture involving, implicitly, all five fingers on one hand. From there if you raise three of your fingers in an arc, leaving your index finger and thumb touching (do this with your left hand), you might see where our symbol for 6 arose. I’m aware there’s a race-hate gesture similar to this, so perhaps don’t try the gesture on the bus. If you look at the Arabic numbers for 1, 2 and 3, (١, ٢ and ٣) and rotate them anti-clockwise, you might also see where our numbers 1–3 come from. (Arabic Word a Day, n.d.).

pedagogy and didactics, which broadly corresponds to Koehler and Mishra's technological, pedagogical and content knowledge;  
 leadership of learning processes—understanding and managing the changing digital world, with a view to increasing student inclusivity;  
 interaction and communication, maximising the communication capacities of digital technologies and;  
 change and development, which cultivates digital competence with regard to context and with a view to lifelong, adaptable learning (pp. 4–10).

Kelentrić et al. explain how each, in context, might be appropriated in one's teaching. Each is outlined in terms of associated knowledge, skills and competence. They are linked to Norway's Directorate for Education and Training's (2013) "five skills" of learning, namely reading, writing, oral skills, numeracy and digital skills.

The European Framework for the Digital Competence of Educators (Redecker, 2017, p. 8) comprises a total of 22 digital competencies within six areas in digital literacy education: professional engagement (organisational communication; professional collaboration; reflective practice and digital continuous professional development (van Valkenberg, 2017)); digital resources (selecting, creating and modifying, and managing, protecting and sharing such resources); teaching and learning (teaching, guidance, collaborative learning and self-regulated learning); assessment (strategies, analysing evidence, and feedback and planning); empowering learners (accessibility and inclusion, differentiation and personalisation, and actively engaging learners) and facilitating learners' digital competence (information and media literacy; digital content creation; digital problem solving; digital collaboration and communication; and responsible use).

The UK's Education and Training Foundation (2019) outlines 20 elements of digital technology use for teachers, under seven headings: planning; approaches; supporting learners' employability skills; subject and industry-specific teaching; assessment and feedback; accessibility and inclusion; and self-development. These operate at three levels, for the beginning, developing and leading teacher.

While each of the above frameworks' embodied strategies also constitutes appropriate responses to any text, the dynamic, volatile nature of digital technologies makes this a complex burden for teachers. And the "wisdom of the elders" sometimes fails us in such instances.

Having questioned the wisdom of the elders, I'm going to refer to another framework, arguably an example of global eldership, which, I believe, may also have some resonances with digital learning, or any interactive, collaborative, student-centred learning approaches. I'm not proposing it as an alternative to the frameworks outlined above, or others that have been tailored to the digital world, but mention it here for your consideration and organisation of (digital) learning; the eight Aboriginal ways of learning. These comprise (Queensland Curriculum and Assessment Authority, 2019) with some interpretations of my own:

narrative (learning supported by story);

learning maps (learning supported through goal/destination-setting, navigating and making learning processes visible);  
 non-verbal (learning supported by the visual and the hands-on, the practical);  
 symbols and images (learning supported through metaphor and the like);  
 land links (learning supported through observation in a practical, local context);  
 non-linear (a learning approach supported by transdisciplinarity, and lateral thinking); deconstruction/reconstruction (learning supported through critical and conceptual analysis, synthesis, and scaffolding) and;  
 community links (learning supported by the resources of the (online) community, and communicated to community). As I stated above, these were not designed with the digital world in mind, and have almost certainly been influenced by educational practices imposed on Australia from the west. Some are a neater fit than others. Nevertheless, they may serve as another means of de/constructing (digital) teaching and learning.

Child protection is another element that assumes greater proportions<sup>6</sup> with online access and content. As with all education, it should be autonomy-oriented. There is little to be gained<sup>7</sup> in micro-managing and micro-chipping our young. In response to sexual content in advertising, (advertising executive) Todd Sampson warned that it is impractical for parents (and those who act *in loco parentis*) to child-proof the world; better to world-proof the child (Lill, 2013). I don't entirely accept that line. It absolves the (advertising and online) world of responsibility—the village raises the child, that sort of thing. In any case, it should be a matter of gradual release and exposure, depending on age of the child and other factors.

Digital devices have also increased the intensity of teachers' work, from relentless emails—which I concede are common to most jobs—to flipped learning, colonising students' and teachers' erstwhile free time, to a phone call from a displeased student to a parent, who then parachutes in to the school to complain about a teacher (Fyfe & Cook, 2019). A teaching colleague, who preferred to remain unidentified, confided, "a parent named and shamed me on Facebook...The police eventually became involved".

Our efforts to protect young people from the internet might not be welcomed by them, but self-protective behaviours are nonetheless needed. Credibility is of the essence here. Numbers of young people appear to be rejecting their elders' advice on illicit drugs, and the same may be true with regard to online media education. Breakstone, McGrew, Smith, Ortega and Wineburg (2018) contend that providing checklists for students on website appropriacy may have little value. They suggest, rather, to encourage uses of the web's own resources to analyse sites, by searching elsewhere online about the website's authorship and purpose. Of course, these evaluative websites are, themselves, prone to the same biases as the original website under investigation. Checking and checklists in combination may be of some use

---

<sup>6</sup>I'm not talking weight-gain here.

<sup>7</sup>Or here.

here—with checklists serving as a scaffold until students internalise the best ways of putting a website to the test, as part of their repertoire of critical literacy skills.

## The Importance of the Medium

Koehler and Mishra's (e.g. 2009) work on TPACK (the amalgam of technological, pedagogical and content knowledge) has become widely known. Its evolution from Pedagogical Content Knowledge (PCK) with the inclusion of "technological" is interesting. For some time we have spoken of audience and purpose with regard to the production and consumption of texts—I'll treat "pedagogy" as a text here. PCK corresponds to audience and purpose, and TPACK could be seen as addressing the issues of audience, purpose and medium—medium being the means of delivery, and/or perhaps the text type—both of which have associated conventions that might be adhered to, or broken, inadvertently—or deliberately, particularly by those more adept at the genre and medium.<sup>8</sup> The online world, part of the T part of TPACK—has not really changed purposes of texts, but it has vastly changed—broadened<sup>9</sup>—potential audiences.

"Technology-enhanced education" is at times viewed as axiomatic or tautological, and, therefore, under-problematised. Bayne (2015, p. 5) argues that technology-enhanced learning "has been adopted as an apparently useful, inoffensive and descriptive shorthand for what is in fact a complex and often problematic constellation of social, technological and educational change". Similarly, Selwyn (2011) makes a case for pessimism, and (2008), calls for educational research to deal with classroom realities, "the state of the actual" (p. 83), rather than with idealised possibilities. It is possible that it is academically culturally unfashionable to express any doubts or misgivings with regard to advances in educational technology. We tend to rejoice in and celebrate the delightful digital disruption, including, implicitly, (highly) disruptive unemployment and underemployment, perhaps from the relative safety of our ivory crenellations; I sometimes think that "academic culture" programmes us not to appear reactionary. To what extent and in what ways are digital technologies disruptive to (what kinds of) learning, and what might we do in response to that?

One might expect that the proliferation of information availability would have inexorably led to an explosion of deep thinking. But so far, that has not been the case.<sup>10</sup> In one sense, why should that surprise? Prior to the internet, some people bought and read encyclopaedias, newspapers or magazines. The newspapers were/are variably reputable. Some bought porn. Discussing the potential harm (or benefits) from pornography for viewers and participants is beyond the scope of this chapter.

---

<sup>8</sup>Like my wildishly clever use of "admission" as the first sub-heading for this chapter, to convey both "confession" and "entry/introduction". Wouldn't want you to have missed it.

<sup>9</sup>Still not talking weight-gain.

<sup>10</sup>I heard that once, but can't now seem to find a reference for it. Apologies and acknowledgements to whoever said it.



Suffice it to say, though, that porn (or, for that matter, cats) are unlikely to precipitate an upwelling of deep thought. Is it possible that the proliferation of knowledge has devalued the currency—have information and knowledge become affordable, or just cheap?

I'm not advocating a return to inaccessibility to information, either through limited technology, or censorship. But we need to retain sight of the worth of intelligence (in both senses of the word). We might even care to commit some more important bits to memory, rather than keeping it all in our pocket? Patmanthara and Hidayat (2018, p. 1) refer to “accelerated development” with regard to the advancement of information and communication technologies. In some ways, though, might the affective, ethical, and even in some cases, intellectual components of online access bear more resemblance to “arrested development”?

More broadly, have we entered a period of the Second Great Forgettery? The First Forgettery arguably arose from the invention of writing. Commitment to memory assumed a certain redundancy. Of course, almost all would agree that the benefits of writing far outweigh<sup>11</sup> and overcompensate for any associated lapses of memory. So it might be with the digital world-in-our-pockets. But there *are* losses. Like the car, the digital world has offered much, and demanded much.

The above raises the question of what do we pursue online. And, for that matter, what do we pursue and hold dear in our learning? If the online world is a vehicle (“carriage service”), where does it take us? Darvin (2018, p. 187) discerned six different uses for online devices:

1. Identity representation: e.g. taking selfies, constructing a Facebook profile
2. Artistic expression: e.g. posting pictures on Instagram, publishing fan fiction stories online
3. Facilitation of social relations: e.g. chatting with friends on Snapchat
4. Consumption and production of knowledge: e.g. reading news online, preparing PowerPoint for science class
5. Exchange of goods and services: e.g. ordering books on Amazon
6. Entertainment: e.g. playing Minecraft, watching a movie on Netflix.

I found it interesting to rank the above list in terms of decreasing apparent scholarlyness. Scan back over and order them if you like before looking at my list. And if you want, ignore my ranking and skip to the next section.

For me, the only one that is convincingly scholarly is item 4. Next in line for me would be 5, depending on the goods or services exchanged. Then, slightly less convincingly again, might, be 2, again, depending on the nature of the “art”. Similarly, 3 depends on the quality of the exchange. In second-last place for me would be 6—but I concede that entertainment can be educative. In the last place is 1.

You can always search the terms that are “trending” with Twitter, Snapchat, Instagram, YouTube or Facebook, and contemplate the worth of the topics that trend at any given moment. I find that the imaged nature of Instagram offers a particularly good,

---

<sup>11</sup> Still not talking waistlines.

quick overview. In one recent Twitter trending search, I was momentarily heartened to discover we were discussing wolves, until I realised... I accept, though, that the “trending search” exercise can leave me with a feeling of superiority, which is as unhealthy as it is self-deceptive—it can reinforce my assumptions that the topics I’m interested in are somehow more scholarly than the topics that interest the masses. Who is to say that discussions of Wolverhampton Wanderers Football Club somehow have less merit than discussions of *canis lupis* (Wikipedia, 2019b—I had to check its Linnaean taxonomy), or, for that matter, cats? That said, the trending nature of such topics is problematic in itself. Topics tend to trend in and out, leaving, it seems, little trace of their former presence, or time for sustained discussion, while we scramble in a peloton to the next trending topic that catches our eye. (Do we tend to be one-eyed in such things? Just thinking aloud here.) Is it possible that many users are “learning virtually nothing” in their online encounters, and who is to say so? The “trending” search might be an interesting in-school exercise in critical media analysis. Some trends may be not suitable for school, however—which perhaps proves a point.

I concede that the battlelines I’ve drawn in response to Darwin’s (2018) six uses, above, are arbitrary if not misplaced. I have to concede, comparing my topmost and bottommost items, 1 and 4, above, (news vs. selfies and Facebook profiles), that I can also produce and help us to consume, new knowledge—Facebook is put to a number of scholarly purposes, and some might reasonably object to my relegating it to the back of the classroom. In any case, my ranking isn’t set in stone, and might change on any reviewing. My main reason for sharing it was to provide you with something (almost certainly) to disagree with. In some ways, Facebook has “gone against the trend” of the internet. There was a time when individuals could only use the internet to access “official” information, from organisations, commercial enterprises and the like. More recently, the masses have stormed the internet, and “virtually anyone” can have their say online. Facebook, however, began more as a platform for individuals, and has now been adopted by many organisations. This perceived gatecrashing by the “heavies<sup>12</sup>” (organisations) and the oldies, has perhaps contributed to making Facebook unattractive for increasing numbers of younger people.

The tidal flows of this new knowledge, to me, though, appear frivolous, ephemeral and insubstantial—inch-deep-mile wide—rather than providing intellectual nourishment, or pushing me towards a better self. One yardstick for me in the ranking exercise was the extent to which the activity offers me the capacity to learn, about the world around, before, and after me, and nurtures my interest in doing so.

The exercise above of ranking Darwin’s online purposes raised a few dilemmas for me:

- I affirm group work and collaboration in the classroom and workplace, but am sceptical of online chatting;
- I affirm student-centred learning, but am cynical about self-centred online footprints;

---

<sup>12</sup>Still not weight gain here.

- I affirm (schools as places of) producing, not just consuming, knowledge, but am suspicious of such processes online, and associated triviality;
- I affirm democratic, open access to information, but am dubious about how this operates online;
- More broadly, I affirm democracy, but savour control if not power. And tidy predictability.

I'm not convinced that my dilemmas above are necessarily hypocritical.

- Collaboration versus chatter: I think this is a distinction I and most teachers have drawn since time immemorial. To the extent that the web encourages the former, (co-labour-ation), over the latter ("chatter"), it is virtuous.
- I see a virtue in tailoring the learning to resonate optimally with my learners, in such a way that begs a response from them, but that is different from giving them each a megaphone.
- Regarding producing, not just consuming, knowledge, I want my students to realise that even when they use the web to produce and disseminate knowledge, they are, nonetheless, internet consumers, with all of the associated necessary precautions. Because of or despite this, they should not lose sight of the potential impact—on themselves and others—of what they produce. As consumers, and consumer/producers, I want them to develop a certain "sense and sensibility", to quote Jane Austen (1811), and to use their numbers to push back against online wrongs. Attending to this will help overcome a "digital divide" (Somekh, 2007) wherein some students not only have less access to the digital world than others, but are less adept than their peers at engaging critically with technology, either as consumers or producers and composers. The current Covid-19 pandemic, with its rapid transition to distance learning, will bring into sharp focus those above and below the high tide mark, or bathtub ring, demarcating the digitally privileged, and digitally-denied or -deprived.

## Non-school and School Online Behaviours

Researchers, including Darvin (2018), are at times disparaging of a mismatch between home and school online use, criticising the latter. Hague and Payton (2010) observe.

The use of technology [that young people] experience in schools often bears little relevance to the ways in which they are communicating and discovering information outside of school... Young people's own knowledge, ideas and values are not reflected in the education system and school learning can have little or no bearing on their lives, concerns, interests and perceived or aspirant futures. (p. 11).

Similarly, Connolly and McGuinness (2018) assert that "meaningful digital literacy education should encompass a broad suite of skills reflecting young people's social

and cultural engagement in a networked society, their self-expression, identity formation and participation in an online world” (p. 77).

I have some misgivings about these emphases. I think students’ leisure and school reading and television viewing might be different, and I believe we might need a similar tolerance with regard to online interaction and consumption. As an education profession, I would like to see, insofar as we’re able, to colonise, harness and “tailor the diet of” the online world to the needs and ends of healthy pedagogy and scholarship, rather than allowing other purposes to (mixed-metaphor alert) hijack or derail these more sound and worthy educational, scholarly purposes. And, of course, we’ll never achieve total agreement on what constitutes the scholarly, worthy and noble, or the frivolous or obscene. This, too, is fodder for enriching thought and conversation.

The online world is all *about* me, but not all about *me*, if that distinction makes sense. Is Connolly and McGuinness’s vision a little like Gulliver’s town criers? I’m not sure if school online use is obliged to reflect young people’s non-scholastic online engagement. I believe it might serve us better if it challenges and shapes existing non-school practices and views, as is the case with most education. Similarly, might (digital) education shape and direct, rather than reflecting, young people’s self-expression, identity formation and their online participation? Might it not also temper this with the capacity for the web to inform, in-form them (“from Latin *informare* ‘to shape, give form to.’”, Online Etymology Dictionary, 2019)? In short, I want students to be discerning, thinking online consumers. Gillen and Kucirkova (2018, p. 834) call for “bidirectional connections between children’s learning with technologies at home and in school”. I would hope to leverage such a practice to help scholarly practices infiltrate and colonise the homes where such use is not already instinctive—a presumptive premise, I concede. Nevertheless, I would welcome a tidal flow in that direction, with domestic internet use becoming increasingly scholarly.

A comparison with the distinction between home and school reading might be drawn. With school-aged extended family members, I sometimes despair at the disparity between the joy they derive from reading (to my mind) quite sophisticated texts, and the drudgery of reading aloud a school reader multiple times (for those families with the wherewithal to undertake this with their child/ren). The propensity to immunise children against reading for life concerns me; I would welcome school mimicking some non-school reading practices. This might not apply to the online world, however. Many children may need to be hooked into reading; few will need enticement into the virtual world.

A free internet, naturally enough, cannot filter the “information” fed into it. As such, it offers an equal platform to those against, as to those in favour of, infant vaccination, and to those who accept or deny the evidentiary science of climate change, or who want to affirm obesity<sup>13</sup>—a rejection of authoritative knowledge, or *destruktion* (Heidegger, 1962). It also offers equal time to those who wish to help or to harm. It has provided a sandpit, perhaps a cesspit, for sexism, racism, homophobia, bullying and other strains of dehumanising. It has led to a deskilling in driving and navigating, and, arguably, human interaction. It may also have led to a

---

<sup>13</sup>There. I’ve said it.

diminution in concentration spans, although the evidence is mixed. Ironically, more longitudinal research might be needed to dis/confirm this. Purcell et al. (2012) lament that undertaking research for “today’s students...has shifted from a relatively slow process of intellectual curiosity and discovery to a fast-paced, short-term exercise aimed at locating just enough information to complete an assignment”. For some students, however, minimalism may always have been the preference, I concede. Purcell et al.’s 2067 teacher respondents only accorded moderate ratings to their students’ research abilities.

We in academia are arguably partly to blame for some of these ills. Postmodernism, with its “incredulity towards metanarratives” (Lyotard, 1933) has, perhaps, thus established its own narrative. Lyotard observes that his definition above comprises “simplifying to the extreme”. I think that most of us would say that some knowledge is more worthy of the pursuit than others, even if we differ as to what this might be, and would educate our children accordingly. I’m not presuming to dismiss postmodernism so summarily here; just exercising my incredulity prerogative.

Here are some of the commonly-cited impacts of the online world that I see as being antithetical to education as a search for truths (with apologies to George Orwell (1949)):

- Fake news (war is peace?). If education is a search for truth/s, then the propensity for the internet, and the camera, to lie, is corrosive to knowledge, and to trust. Through another form of fakery, others, through their social media pages, may appear to be enjoying a grander slice of fun, fame, fortune and fair looks than we do. This may be contributing to increases in depression.
- Compliance and meek submission (freedom is slavery?). Filling in and submitting forms online; suffering price increases *in the time it takes to purchase the product online* (“that fare is no longer available”). You can’t reason with the internet. Or with unseen online trolls; there are now few options to seek asylum from bullying, for students or staff (Fyfe & Cook, 2019).
- Echo chambers (ignorance is strength?). This one compounds the first. We are comforted by the assurance that our truths are truer than others’ truths. Education and educators have a responsibility to confront each of these. The above three are probably all examples of Orwell’s “alternative facts”.

Less drastically, the online world also poses challenges to conventional English (Newspeak?). As a lover of words, I’m sometimes disappointed by what I see as ugly thumb-English online. I note in passing that Orwell’s Newspeak “was designed not to extend but to *diminish* the range of thought” (p. 287, emphasis in original).

These I do not wish to see replicated in schools.

Regarding conventional English, I do accept the dictates of audience, purpose, changing times, and, in this case, medium. Indeed, it may be helpful for young people to become more adept at adjusting registers according to the circumstances.

On the one hand, the online world promises a connected democracy in which all voices can be heard equally—a standpoint for agency, self-efficacy and personal significance—and a platform for us, the little people. The reality for some young

people, however, more closely resembles an anarchic world, a pathogenic Typhoid Mary bearing a contagion of isolation, alienation, depression and powerlessness, thwarting our quest to be interesting; alongside a virus of righteous indignation (Orwell's hate sessions?). An image that comes to mind from reading some online chat groups, is that of dogs snarling and barking at one another through the safety of a fence. An unattractive image. Added to these are privacy concerns with regard to online activity. It seems Big Brother really *is* watching.<sup>14</sup>

Once upon a time the main purpose of the internet was to access “authoritative” or “official” information. Nowadays, @BoredSatdyNight or @NyuShooz gets the same online megaphone as do, say, UNESCO or NASA. Of course, both of these organisations are fallible and open to bias, as are all others, but they are likely to have undertaken more extensive and rigorous research and fact-checking than have BoredSatdyNight or NyuShooz before airing their knowledge. It is probably as unhelpful as it is ill-informed to hark back to a golden era when most information on the internet was reviewed in some way before publication. Purity, too, carries with it concerns. But the implications of the free-for-all for critical digital literacy do raise concerns.

According to Anderson and Jiang (2018), 45% of teenagers report being on their devices “almost constantly”—not something I want school to emulate. McCoy (2016) surveyed 625 students in 26 states in the US. He found that students used digital devices for off-task purposes on average 11.43 times in a school day in 2015, a slight increase from 10.93 since 2013. The students spent 20.1% of their class time—about a day a week—in off-task pursuits on devices such as their phones. Might we need to challenge this proliferation of “phony learning”? As with online child protection issues, we may have relinquished our responsibilities of eldership here.

If it's now the *global* village that is raising the child, I find that a little disquieting.

Pre-service preparation appears to be wanting with regard to the online world and school. Gudmundsdottir and Hatlevik (2018) undertook a nationwide survey of 356 newly qualified teachers in Norway, who reported low levels of satisfaction with regard to the quality and contribution of their pre-service digital education experiences, in terms of their preparation for in-service expectations. Similarly, Ranieri, Bruni, and Kupiainen (2018, p. 152) report that even recently, pre-service teachers have received “inadequate or even no training” in such areas. And we can't rely on the leadership of young people in this regard. Jones, Ramanau, Cross, and Healing (2010), for example, suggest digital natives are not necessarily able to use digital technologies in a knowledgeable or critical way.

At the time of writing, the tide seems to be turning against the use of mobile devices in schools locally. They have recently been banned in New South Wales primary schools, and are soon to be banned in all government schools in the Australian state of Victoria. For some of the reasons I outlined above, I sympathise with the thinking behind this move. But a total ban is unlikely to assist young people growing into independent, responsible mobile device users. Moreover, at the time of writing, covid-19, and associated transfer to online learning, has had a side-effect of garnering

---

<sup>14</sup>I'm all for inclusive language, but “Big Sibling” doesn't do it for me.

new respect for teachers from many parents; recent parental homework has included an investigation into the intricacies of teachers' work. While there is little scholarly literature on the topic to date, and no long-term data, Burgess and Sievertsen (2020) report that "home schooling will surely produce some inspirational moments, some angry moments, some fun moments and some frustrated moments". They continue, "it's hard to help your child learn something that you may not understand yourself". This includes subject matter, use/s of technologies and pedagogy itself. Burgess and Sievertsen make the broader point that home-based learning will unmask differences in education capital, and differentially affect progress in children's learning accordingly. Parents might like, or not like, to be reminded that teachers devote their attention to 25 or so learners at a time.

## Conclusions: Where to from Here?

This is a genie-bottle-battle we will not win. Unseeing the internet is an impossibility, and undesirable in any event. Digital penetration has not sought my consent, informed or otherwise. My consent hasn't been sought. There may be enough of us, though, if we all heave<sup>15</sup> together, to ever so slightly sway the course of the online. This raises a question as to what counts as useful knowledge—online and in the classroom.

In Chap. 6, I referred to the kind of adults we want our young to become, and how we nourish them into that kind of preferred personhood, presuming that we have preferences concerning the kind of adults we produce. In the same way, what kind of internet citizens do we want our young people to become, and how might we apprentice them to autonomy accordingly? And how do we gain their trust and confidence in our leadership, while asking them to be instinctively untrusting? Moreover, how do we prove ourselves worthy of our freedoms? Gillett-Swan and Sergeant (2017) speak of participatory rights. To this, I would want to affirm, even foreground, participatory responsibilities. As teachers we can help children find their critical voice, critical eyes, critical ears. And to subject everything to the smell test.

The power differential between the individual and the state is widening with alarming alacrity. The Chinese Social Credit System (Orgad & Reijers, 2019) offers one example of this. This is not solely, but largely, a product of new technologies, being applied to identify aberrant behaviour and remediate it in numerous jurisdictions worldwide. Terrorists, too, have greatly abetted governments in their endeavours to restrict our freedoms here, as has Covid-19. In Australia and elsewhere we've temporarily surrendered, albeit temporarily, our rights to freedom of assembly, and of movement. There are almost certainly some good outcomes deriving from state-based powers—increased solution of crimes and the sense of security that this delivers for most of us. Lurking in the shadows of this, however, is a requirement for us to trust that the state won't use such powers for their own ends and against citizen autonomy. Scott (1999, p. 273) asserted that.

---

<sup>15</sup>Not weight-loss.



authoritarian high-modernist development schemes replace thick, complex, quasi-autonomous social orders (and natural orders too) with thin, simplified, mechanical orders that function badly, even for the limited purposes for which they are designed. Such thin simplifications, if they survive at all, do so by virtue of their unacknowledged dependence on improvised ‘order’ outside the scheme.

Robbed of its exoskeleton, such a system has little structural (or any) integrity. In response, Scott (p. 276) observed that “forms of civic courage that have their origin in a calculated distrust of authority are valuable democratic resources” (p. 276). Things have deteriorated since then. The terrorists (I can’t be sure—I haven’t spoken with them) probably didn’t have as their main aim to restrict everyone’s freedoms in the ways that this has come about. Similarly, governments may not have intended to restrict our freedoms per se. But these restrictions could serve as convenient unanticipated and opportunistic consequences in each case. For these reasons, too, learners might need to be taught and shown how to develop an instinctive vigilance and provisional mistrust of authorities and their powers. Teachers with little freedom of movement will not serve as good models here. In short, are we going to trust the Government to fix this?

As I asserted at the outset the chapter, there’s an interesting world out there, beyond me (please also refer to attached footnote). That world should prompt me to reflect on my behaviour, rather than on my image, metaphorical or literal. I should work with that world to become more self-aware, not more self-absorbed. To the extent that the online world connects me to the real world, it serves a highly useful, healthy, educative, enabling, connecting, liberating, even entertaining purpose. To the extent that it absorbs and preoccupies me with myself, and shrinks me into myself, it serves to be unhelpful, unhealthy, unlearnful.

At the end of the day, the online world will not be unseen and unknown again, unless or until something “superior” supersedes<sup>16</sup> it. The online world presents an all-you-can-eat buffet whereof we can overindulge, or consume exclusively unhealthy (or illicit) fare. As intimated above, the self-service buffet also gives voice to those whose motives are self-serving. If so, the key—as with most things, you’ll notice I say—lies with education. The best we can hope for is to leverage online content to highlight the best of wisdom, science and humanity our human race has on offer, rather mirroring in human dysfunction. This includes exploring how other (young) people are using online technologies to improve the world, and wondering at how we might support, join or lead such movements, and to loose the philanthropist within; to look at and for evidence of selflessness and generosity; to apply our capacities to critically review all content, digital and other. I will write on some of these aspects in more detail in the final section.

Like so much that is discussed in this book, this internet thingy is good in the hands of a good teacher. As Pinar (2019, p. xiii) points out, despite their affordances, “devices cannot perform for us-or our students-the often intellectually and psychologically demanding labor of academic study”. Critical digital literacy for students usually means evaluating authenticity, audience, purpose and the like. Critical digital

---

<sup>16</sup>Which literally means “sits on”.



literacy for teachers involves evaluating the pedagogical contributions of any devices, platforms, apps and the like in use, and preparing our students to do likewise. Few, other than teachers, might be adept at doing this. While there are digital natives, I'm not sure there are any pedagogical natives. And even digital natives don't appear to be born with digital discernment and critical literacy—it must be learnt.

Hobbs and Coiro (2019, p. 401) aspire to.

advance the digital literacy competencies of educators, create opportunities for them to reflect on their motivations for using digital media, make collaborative inquiry a substantive component of the hands-on learning experience, and create opportunities to put teachers and learners (not machines) at the center of attention.

This chapter has made several references to Orwell's 1984. Ball (2003) describes performativity as "a new mode of state regulation" (p. 215). Darling-Hammond (2010) calls for a reversal of the accountability gaze, with teachers and schools holding politicians and policymakers to accountability. I trust that the final section of this book will offer some hope in this regard.

This final paragraph is as relevant to the basic skills chapter as it is here. I place it here as a section conclusion; I want to draw attention to this important point before looking at hope, in the remaining two chapters. Increasingly, it appears to be emerging that the "typical terrorist" is not your downtrodden ignoramus—if ignoramus is taken to mean an illiterate know-nothing goatherd. Increasingly, it appears that terrorism is the preserve of the "educated" (I use the term cautiously) middle class. How can it be that we have invested so in education—in educating people—with such an outcome? How have we created more Pol Pots? How can it be that they throw their education back in our faces, along with, in some cases, ball bearings, nails and other nasties packed in bombs? Biesta (2009) speaks of education's "ultimate values" (p. ?, emphasis in original)—that is, its fundamental aims and purposes. Those of us who claim to be truly educated, that is, armed with empathic understanding, and the capacity to see contributions from others' perspectives, and consequences of our own, are charged with a heavy burden. In that sense, education is not free.

## References

- Anderson, L., Krathwohl, K., & Bloom, B. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of educational objectives*. New York: Longman.
- Anderson, M., & Jiang, J. (2018). *Teens, social media & technology 2018*. Pew Research Center. Retrieved from <https://www.pewinternet.org/2018/05/31/teens-social-media-technology-2018/>.
- Arabic Word a Day. (n.d.). *Arabic numbers and numerals, 0–10*. Retrieved from <https://wordadayarabic.com/2013/03/04/arabic-numbers-0-10/>.
- Austen, J. (1811). *Sense and sensibility*. London: Thomas Egerton.
- Bagchi, J., Narula, M., & Sengupta, S. (2019). *2010: How is the Internet changing the way you think?* Retrieved from <https://www.edge.org/responses/how-is-the-internet-changing-the-way-you-think>.
- Ball, S. (2003). The teacher's soul and the terrors of performativity. *Journal of Education Policy*, 18(2), 215–228. <https://doi.org/10.1080/0268093022000043065>

- Bayne, S. (2015). What's the matter with 'technology enhanced learning'? *Learning, Media and Technology*, 40(1), 5–20. <https://doi.org/10.1080/17439884.2014.915851>
- Biesta, G. (2009). Good education in an age of measurement: On the need to reconnect with the question of purpose in education. *Educational Assessment, Evaluation and Accountability*, 21(1), 33–46.
- Breakstone, J., McGrew, S., Smith, M., Ortega, T., & Wineburg, S. (2018). Why we need a new approach to teaching digital literacy. *Phi Delta Kappan*, 99(6), 27–32.
- Bouck, E. (2016). A national snapshot of assistive technology for students with disabilities. *Journal of Special Education Technology*, 31(1). <https://doi.org/10.1177/0162643416633330>.
- Bouck, E., & Flanagan, S. (2016). Exploring assistive technology and post-school outcomes for students with severe disabilities. *Disability and Rehabilitation: Assistive Technology*, 11(8), 645–652. <https://doi.org/10.3109/17483107.2015.1029537>
- Burden, K., Kearney, M., Schuck, S., & Hall, T. (2019). Investigating the use of innovative mobile pedagogies for school-aged students: A systematic literature review. *Computers & Education*, 138, 83–100.
- Burgess, S., & Sievertsen, H. (2020). *Schools, skills, and learning: The impact of covid-19 on education*. Vox. Retrieved from <https://voxeu.org/article/impact-covid-19-education>.
- Connolly, N., & McGuinness, C. (2018). Towards digital literacy for the active participation and engagement of young people in a digital world. In M. Magkou, R. Schwalbach, & B. Spruyt. (Eds.), *Perspectives on youth: Young people in a digitalised world* (Vol. 4, p. 77). Council of Europe.
- Darling-Hammond, L. (2010). *The flat world and education: How America's commitment to equity will determine our future*. New York: Teachers College Press.
- Darvin, R. (2018). Digital literacy, language learning, and educational policy in British Columbia. In C. Crandall & M. Bailey (Eds.), *Global perspectives on language education policies*. New York: Routledge.
- Directorate for Education and Training. (2013). *Framework for basic skills*. Retrieved from <https://www.udir.no/in-english/framework-for-basic-skills/>.
- Education and Training Foundation. (2019). Taking learning to the next level: Digital teaching professional framework. Retrieved from <https://www.et-foundation.co.uk/supporting/support-practitioners/edtech-support/digital-skills-competency-framework/>.
- Freebody, P., & Luke, A. (1990) Literacies programs: Debates and demands in cultural context. *Prospect: An Australian Journal of TESOL*, 5(3), 7–16.
- Fyfe, M., & Cook, H. (2019). Parents behaving badly. *Sydney Morning Herald*, Good Weekend, 20 April 2019 (pp. 18–22).
- Gillen, J., & Kucirkova, N. (2018). Percolating spaces: Creative ways of using digital technologies to connect young children's school and home lives. *British Journal of Educational Technology*, 49(5), 834–846.
- Gillett-Swan, J., & Sergeant, J. (2017). Voice inclusive practice, digital literacy and children's participatory rights. *Children and Society*, 32(1), 38–49. Retrieved from <https://onlinelibrary.wiley.com/doi/pdf/10.1111/chso.12230>.
- Gudmundsdottir, G., & Hatlevik, O. (2018). Newly qualified teachers' professional digital competence: Implications for teacher education. *European Journal of Teacher Education*, 41(2), 214–231.
- Hague, C. & Payton, S. (2010). *Digital literacy across the curriculum: A Futurelab handbook*. Retrieved from [https://www.futurelab.org.uk/sites/default/files/Digital\\_Literacy\\_Handbook](https://www.futurelab.org.uk/sites/default/files/Digital_Literacy_Handbook).
- HarperCollins. (1999). *Collins English Dictionary*. Declaim. Glasgow: HarperCollins Publishers.
- Heidegger, M. (1962). *Sein und Zeit*. London: SCM Press.
- Hobbs, R., & Coiro, J. (2019). Design features of a professional development program in digital literacy. *Journal of Adolescent & Adult Literacy*, 62(4), 401–409.
- Jones, C., Ramanau, R., Cross, S., & Healing, G. (2010). Net generation or digital natives: Is there a distinct new generation entering university? *Computers & Education*, 54(3), 72–732.

- Kelentrić, M., Helland, K., & Arstorp, A. (2018). Professional digital competence framework for teachers. *The Norwegian Centre for ICT in education, 2017*. Retrieved from [https://edudoc.ch/record/131449/files/pfdk\\_framework.pdf](https://edudoc.ch/record/131449/files/pfdk_framework.pdf).
- Lill, J. (2013). Helicopter ad for Sexpo riles Christians after it flies over Brisbane school. *The Courier-Mail*, July 31. Retrieved from <https://www.couriermail.com.au/questnews/helicopter-ad-for-sexpo-riles-christians-after-it-flies-over-brisbane-school/news-story/a253807b64ab3d991c06f501ec7e5461?sv=14817a5eb66f2f78a03cd17fbe58d989>.
- Lyotard, J. (1933). *The postmodern condition: A report on knowledge*. Translation from the French by Geoff Bennington and Brian Massumi. Minneapolis: University of Minnesota Press. Retrieved from <https://faculty.georgetown.edu/irvinem/theory/Lyotard-PostModernCondition1-5.html>.
- Maher, D., & Young, K. (2017). Use of mobile devices to support young people with disabilities. *Advances in Communication and Media Research*, 101–125.
- McCoy, B. (2016). Digital distractions in the classroom phase II: Student classroom use of digital devices for non-class related purposes. *Faculty Publications, College of Journalism & Mass Communications, 90*. Retrieved from <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1091&context=journalismfacpub>.
- Online Etymology Dictionary. (2019). *Inform*. Retrieved from [https://www.etymonline.com/word/inform#etymonline\\_v\\_6458](https://www.etymonline.com/word/inform#etymonline_v_6458).
- Orgad, L., & Reijers, W. (2019). A dystopian future? The rise of social credit systems. Robert Schuman Centre for Advanced Studies Research Paper No. RSCAS 2019/94.
- Orwell, G. (1949). *Nineteen eighty-four*. New York: Houghton Mifflin Publishing Company.
- Patmanthara, S., & Hidayat, W. (2018). Improving vocational high school students digital literacy skill through blended learning model. *Journal of Physics: Conference Series, 1028*(11), 1–12.
- Pinar, W. (2019). *What is curriculum theory?* London: Routledge.
- Purcell, K., Raine, L., Heaps, A., Buchanan, J., Friedrich, L., Jacklin, A., ... Zickhur, K. (2012). *How teens do research in the digital world*. Pew Research Center. Retrieved from <https://www.pewinternet.org/2012/11/01/how-teens-do-research-in-the-digital-world/>.
- Queensland Curriculum and Assessment Authority. (2019). *Knowledge frameworks of Aboriginal and Torres Strait Islander peoples*. Retrieved from <https://www.qcaa.qld.edu.au/about/k-12-policies/aboriginal-torres-strait-islander-perspectives/resources/frameworks>.
- Ranieri, M., Bruni, I., & Kupiainen, R. (2018). Digital and media literacy in teacher education: Findings and recommendations from the European Project e-MEL. *Italian Journal of Educational Research, 20*, 151–166.
- Ravneberg, B., & Söderström, S. (2017). Inclusive education and the effects of assistive technologies. In B. Ravneberg & S. Söderström (Eds.), *Disability, society and assistive technology* (pp. 56–65). London: Routledge.
- Redecker, C. (2017). *European framework for the digital competence of educators*. Luxembourg: Publications Office of the European Union.
- Scott, J. (1999). Geographies of trust, geographies in hierarchy. In M. Warren (Ed.), *Democracy and trust* (pp. 273–289). Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511659959.009>.
- Selwyn, N. (2008). From state-of-the-art to state-of-the-actual? Introduction to a Special Issue. *Technology, Pedagogy and Education, 17*(2), 83–87. <https://doi.org/10.1080/14759390802098573>
- Selwyn, N. (2011). Editorial: In praise of pessimism—The need for negativity in educational technology. *British Journal of Educational Technology, 42*(5), 713–718. <https://doi.org/10.1111/j.1467-8535.2011.01215.x>
- Somekh, B. (2007). Taking the sociological imagination to school: An analysis of the (lack of) impact of information and communication technologies on education systems. *Technology, Pedagogy and Education, 13*(2), 163–179.
- Swift, J. (1726). *Gulliver's travels/Travels into several remote nations of the world. In four parts. By Lemuel Gulliver, first a surgeon, and then a captain of several ships*. London: Benjamin Motte.

- van Valkenberg, W. (2017). *Digital competence of educators*. Retrieved from <https://www.e-learn.nl/2017/12/24/digital-competence-of-educators>.
- Wikipedia. (2019a). *Town Crier*. Retrieved from [https://en.wikipedia.org/wiki/Town\\_crier](https://en.wikipedia.org/wiki/Town_crier).
- Wikipedia. (2019b). *Wolf*. Retrieved from <https://en.wikipedia.org/wiki/Wolf>.
- Young, K. (2018). CO-CREATE: Teachers' voices to inform special education teacher education. *Issues in Educational Research*, 28(1), 220–236.