

ORIGINAL RESEARCH ARTICLE

Tech and me: an autoethnographic account of digital literacy as an identity performance

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This paper is an autoethnographic account of developing digital literacy, as seen through references to identity, both in direct and indirect relationship to digital technology. Conceiving of digital literacy as a process that includes identity change, and identity as constituted by actions performed, posts from my blog focusing on educational technology written between 2011 and 2019, are analysed and coded. An initial analysis uses a framework, which sees digital literacy as an interaction between skills, practices and identity. The findings highlight not only the importance of identity but also the need for a more detailed understanding of identity than the one provided by this model. Findings related to identity are then analysed further. In the process, four specific and contradictory themes are revealed - technology advocate, technology sceptic, technology adept and technology novice. In addition, the importance of other identity markers in relation to technology is explored. In the context of individuals and organisations prioritising the enhancement of digital literacy, this paper suggests that the role of identity in such enhancement is critical and is not sufficiently captured in current research and discussion.

Keywords: performative identity; digital skills; autoethnography; identity

Introduction

The ongoing digitisation of society and business enables new ways of living, producing and consuming ... To remain competitive in this global digital market and to maintain our overall welfare, European industry is shaping and converting to this new digital society. (European Round Table of Industrialists 2017, p. 2)

In the midst of 'the fourth industrial revolution' (Schwab 2017), it is a priority for organisations, groups and individuals to ensure that they have the skills needed to succeed in a society that is increasingly dependent on digital technology. Various concepts have been developed to position these skills and provide ways of addressing their development, often analysing the skills into categories (van Laar et al. 2017).

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However, there is relatively little research into the processes behind attaining these skills. One model that does focus on the process is the digital literacy 'pyramid' adopted by JISC (Sharpe and Beetham 2010), which is used as the theoretical framework for this study, with identity forming the apex of the pyramid.

As a starting point for exploring this topic, an ideal approach is one of the autoethnography, analysing my own process of becoming more digitally literate and related identity change. My self-conscious efforts in this direction started in the autumn of 2007, when I noticed that nearly everyone I knew under 30 was using a new tool called Facebook. Social media struck me as a world-changing innovation; one that would have big consequences for us all, including for me and my work teaching students of professional qualifications. In addition, my children were then 7 and 4 years old, and I wanted to understand the world they were growing up in better. This started many years of conscious experimentation with technology, personally, professionally and academically. As analysed in this paper, this was a process of identity change as much as anything else.

However, there is a lack of existing research connecting digital literacy, and its related concepts, directly to the studies of identity, suggesting a gap. This paper aims to address that gap using my blog as source data. My research questions are:

- What has been my experience of becoming more digitally literate?
- · How has this process affected my personal and professional identity?

Literature review and theoretical framework

The literature review covers two areas – identity and digital literacy. It demonstrates the approach taken to each topic in this study and how they are linked.

Identity

The focus of this study is very much on process and considers identity as performative. Goffman (1990) developed this concept using the metaphor of the stage. He argued that the way we act out our identity is divided into 'frontstage', where we interact directly with our 'audience', and a less formal 'backstage', where we are with our peers and can 'let down our guard'. It is important to understand that Goffman does not see this performance as something different to the 'real person' and therefore somehow false. It is neither a case of a 'person' performing a 'character' nor the case that the person'backstage' is somehow more real than the person 'frontstage'. Rather, all of these are different ways of 'performing identity'.

Goffman's work was developed in a more radical direction by Judith Butler. Focusing especially on gender, she argued that:

Gender ought not to be construed as a stable identity or locus of agency from which various acts follow; rather, gender is an identity tenuously constituted in time, instituted in an exterior space through a *stylized repetition of acts*. (Butler 2006, p. 179, author's italics)

To generalise her argument, as she does, identity is a 'signifying practice', whereby culturally intelligible identities are built and maintained over time by repetition and invocation of rules, but where the rules can and do change. This explicitly does not mean that 'anything goes'. As she emphasised in a recent interview:

The performative theory of gender that I proposed then accepted that we are all born into social norms and conventions that define our genders, but that we can also craft our genders within that scene of constraint. (Jaschik 2017)

An interesting example of this framework being used in an education context is a study of perceptions of being 'good at Maths'. On this, Darragh (2015) argued that:

We become a mathematics learner in a performative manner, and it is the repetition of 'performances' in mathematics learning contexts that generates our recognition of ourselves in certain ways as learners of mathematics. (p. 85)

And his study demonstrates the importance of students' mental 'performance scripts' and whether they recognised themselves in these scripts.

For the purpose of this study, therefore, 'being digitally literate' is considered as an 'identity performance', constituted by its various acts and reflection on them. It will draw on social categories in order to be culturally intelligible, but may in the process adopt, reject or amend those categories.

Digital literacy and technology

'Digital literacy' is the most commonly used term for proficiency with digital technology (Spante *et al.* 2018). A recent UNESCO report (Law *et al.* 2018) adopted a comprehensive definition:

Digital literacy is the ability to access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital technologies for employment, decent jobs and entrepreneurship. (p. 6)

The economic and technical focus of this has been noted (Chetty *et al.* 2018), and indeed there seems little room here for questions about identity. The technologies themselves are not defined and are assumed to be neutral – what matters is using them for economic benefit. This understanding is also reflected in common definitions of technology such as that of the Collins dictionary (n.d.):

... methods, systems, and devices which are the result of scientific knowledge being used for practical purposes

This is a view labelled as intrumentalism by Feenberg (1999) – technology does not alter our ends but shortens the path to them and thus does not require philosophical reflection. Other schools of thought (e.g. Marxism) also see technology as neutral but outside human control and leading towards inevitable ends. However, most philosophers of technology see it as anything but neutral, although there are a wide range of views as to the implications of this. As Tiles and Oberdiek (1995) put it:

... we all, quite unconsciously, embody our ideologies, interests and values in the technologies we make and employ. (p. 126)

As our most pervasive technologies now are digital ones, this broader understanding of technology has implications for how we think of digital literacy:

Digital literacy involves more than the ability to use software or operate a digital device, it also includes a large variety of complex cognitive, sociological, and emotional skills that end-users need in order to function effectively in a digitally driven environment. (Chetty *et al.* 2018, p. 10)

Some recent models have attempted to recognise the breadth of 'cognitive, social and emotional skills' (JISC n.d.; van Laar *et al.* 2017), for example by including innovation, creativity and collaboration. There has also been an emphasis in some recent work on 'critical digital literacy', encouraging individuals to move between 'technical mastery' and 'critical disposition' as needed (Pangrazio 2016). Seen this way, digital literacy is not only a matter of learning how to use tools but also challenging whether the tools themselves are appropriate and benign.

However, the approaches above do not provide a suitable framework for this study for two reasons. First, they do not cover identity change as an aspect of digital literacy. JISC (n.d.) does include 'digital identity' as a category but this is defined as:

The capacity to develop and project a positive digital identity or identities and to manage digital reputation (personal or organisational) across a range of platforms...

This is identity as it is expressed and perceived online, to be distinguished from identity as discussed here, which refers to how we see ourselves in relation to technology.

Second, most models seek to describe what digital literacy *is*, whereas the focus of this study is the *process* of digital literacy development. The Sharpe and Beetham (2010) model is one of the few which provides a framework for this process.

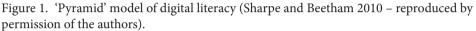
Linking digital literacy and identity

There have been limited studies to date of the links between digital literacy and identity. Burnett (2011) highlighted the importance of trainee teachers' 'narratives of the self' (Giddens 1991) for their adoption or otherwise of digital technology when teaching. The same study also noted:

There is a need for ethnographic and phenomenological research to further investigate the relationship between digital literacy and identity in and beyond educational contexts. (p. 446)

For the purpose of this study, the two concepts are linked by the model adopted as theoretical framework, which is represented as Figure 1. The model divides digital literacy into four, related, aspects – access, skills, practices and identity. It shows a mechanism for progression 'up' the pyramid in gaining access, learning skills, developing practices and changing identity, as well as movement 'down' the pyramid, as developing an identity as someone who is 'good with technology' may





provide motivation and a basis for developing practices and learning skills. Identity change is part of the process:

Digital literacies are both constitutive of and expressive of personal identity. (Littlejohn, Beetham, and McGill 2012, p. 5)

However, the conception of identity in this model seems quite limited. The examples used by Sharpe and Beetham (2010) include creating a learning environment and planning a learning journey, which are not operating at the level of significant identity change.

Indeed, taking a performative view of identity, changing practices will by definition change our identity. As Butler (2006) states:

There is no self that is prior to the convergence or who maintains 'integrity' prior to its entrance into this conflicted cultural field. There is only a taking up of the tools where they lie, where the very 'taking up' is enabled by the tool lying there. (p. 185)

These tools are not just the technology itself, but the cultural and social symbols that go with them – the figure of the 'geek' or 'tech-savvy person', for example. Digital literacy and identity are therefore inextricable and the links between them can be formulated as follows:

- 1. Changing our practices will, by definition, change the way we perform our identity;
- 2. Reflection on the changed identity may motivate us to change our practices further;
- 3. All of this happens within a specific social context and will draw on the resources of that context, both practical and symbolic.

This is the process which the current study aims to describe and analyse 'up close'.

Methodology and methods

Autoethnography is

a research method that, to the best of its/our ability, acknowledges and accommodates mess and chaos, uncertainty and emotion. (Adams, Jones, and Ellis 2014, p. 20)

It is thus well-suited for studying an issue as personal and complex as identity. The style adopted is that of 'analytical-interpretive' writing (Chang 2016, p. 146) as the intention is to draw on my own experience to connect with a much broader discussion around digital literacy. While autoethnography has been used to examine a number of related issues, including academic identity (Learmonth and Humphreys 2012), teaching online (Lewis 2018), the experience of online networked learning (Bali *et al.* 2015) and identity in career transitions (Black and Warhurst 2019), it has not been used with a specific focus on identity in relation to technology.

As noted by Chang (2016, p. 72), relying on memory can carry many issues, and to help address these, as well as provide a good sense of development, I decided that my source data should consist of my own blog posts, written over several years. I started my blog 'Learningshrew' in 2011 as part of my studies towards a Masters in Online & Distance Education and have written 104 posts to date. The blog was intended to disseminate the results of my studies, provide a tool for reflection, model the use of digital technology in my learning and scholarly practice and learn from experience about the use of digital tools. The posts cover a wide range of topics, including Massive Open Online Courses (MOOCs), e-portfolios, assessment and broader societal concerns, providing a rich, contemporary source of data.

Of the 104 posts, 26 were excluded as irrelevant to this topic. The remaining posts were coded with references to digital skills, digital practices or identity - the categories drawn from my framework (Sharpe and Beetham 2010). Access and awareness were less of an issue for me and not included in this analysis. The references were then collated and analysed.

My initial coding identified 86 references to identity, 74 to practices and 45 to skills. Most references to skills were related to my first 3 months studying the MA, when I was reflecting on the tools used by other students which were unfamiliar to me. However, it quickly became clear that the most fruitful area to focus on was the 'identity' category, where the references were most numerous and revealing, to see what themes could be extracted (Creswell 2014). Eight themes were initially identified, shown with the number of references:

- References not directly relevant to technology (24)
- Educator (18)
- Adept (12)
- Advocate (8)
- Sceptic (7)
- Learner (6)
- Blogger (6)
- Novice (4)

Upon reflection, it became clear to me that Advocate/Sceptic and Adept/Novice represented key tensions in my development, and these became the focus of my analysis, although the other themes are also discussed.

Results

The first section of findings applies the theoretical framework to analyse the relationships between skills, practices and identity. The next four sections explore the contradictory themes identified. The final section considers other identity references and how they linked to my engagement with technology.

Skills, practices and identity

The blog provides evidence of development across a spread of skills, practices and identity, as would be predicted by my theoretical framework. There is also evidence that, as the model suggests, the process is not linear but iterative. This process can be seen up close in a post which deals with becoming a blogger, describing the Master's programme giving me the motivation to start the *practice* of blogging:

However, my OU course (module H808) requires that we keep a blog to facilitate reflection, and it also provides a ready-made 'starter' audience – my tutor and fellow students... (2011)

It also describes the process, in this case running alongside the practice, of learning the *skills* to maintain my blog, using a colleague's suggested technique of 'fiddling about':

So far, by 'fiddling about', I have managed to set up my WordPress blog, choosing a theme to make it look better, linking it to my Twitter feed, adding pages about me and the blog itself, and finding out how to create private posts. (2011)

The post begins with the step, I had recently taken, of updating my Twitter bio (and at that time I clearly felt the need to explain what a Twitter bio was):

On Twitter, we can write a short description which summarises us – our personal brand as we want other users to see it. This explains the significance of the Twitter description I posted a couple of weeks ago, which begins: 'Tutor, course designer, blogger, Chartered Accountant, MA student...' The new, and surprising, word is 'blogger'. In less than eight weeks, blogging has become not just something I do but part of my identity, my personal brand – who I am. (2011)

I did not know the digital literacy framework then, but clearly it had only taken a few weeks for me to go through the cycle of starting to blog, working on acquiring the skills to make my blog better and revising my view of myself to incorporate being a blogger. As the persistence of my blog, and, more recently, writing for other blogs shows, the cycle has continued since – defining myself as a blogger helps motivate me to keep the practice of blogging going, and to pick up tips as to how to do it better.

As noted earlier, four of the themes seemed particularly significant and contradictory and were therefore selected for more detailed analysis.

Technology advocate

We [learning technologists] are not so much professionals as evangelists, missionaries from the future. It's a tough calling – we need a good understanding of both

learning and technology, we need to showcase the best use of technology in our own lives and work, we need to be constantly developing our own skills and we need to spread the word, so that others can also realise the benefits technology can offer in their teaching and learning. (2011)

This theme was particularly pronounced in my earlier writing. Phrases used include 'believer in e-learning', 'belonging through Twitter' and 'an enthusiast for new technology'. There is an underlying assumption here that technology is, or at least can be, a force for good, and the role of the professional in this field is to convince others of these benefits. There is perhaps a hint that 'our' job is to overcome the laziness or inertia of those who refuse to adopt new technologies, despite the clear benefits. Later, I continued to refer to the benefits of being 'an open, networked teacher and learner' (2015), a term implying the positive use of digital technologies, even if not explicitly stating it.

Technology sceptic

So are we [students on the MA course] really in the vanguard of a new age, who will ultimately be vindicated? Or are we just a slightly weird bunch of people with unusual interests? (2011)

Maybe it is the stage I have reached in my thinking, or maybe a general trend, but I find myself more and more coming across the work of a group I might call 'techno-sceptics'. (2014)

There is a general move in my thinking from enthusiasm to scepticism. Having said that, there were elements of scepticism from the beginning, as the first quote from one of my earliest posts shows. I call myself a 'Big tech sceptic', a 'MOOC sceptic' and an 'idealistic edtech type'. I explained why I was deleting my Facebook account (2013), and later on I expressed my hostility to the company in much stronger terms:

... we now have a company, a corporation remember, committed to maximising profits for their shareholders – with the capability to measurably influence the emotional state of over two billion people, without any of them actually being aware of it. If that doesn't scare you, I'm not sure you have been paying attention. (2017)

In a significant example of identity change, I also discuss joining the Open Rights Group, a campaign group for online privacy and rights, using a canonical geek reference to *The Matrix*:

This is what can happen – when you take the red pill sometimes you feel compelled to try and change things. (2016)

In this cluster of references, there is a recognition that technology can be a force for evil as well as good, and a key aspect of being digitally literate is being able to exercise some discrimination over which one is the case.

Technology adept

I am comfortable with the common web tools like Twitter and Google Reader and am reasonably good with Excel and PowerPoint. I feel I know where to look if I need help or instructions. At work, I am a go-to person on these matters... (2011)

In several posts, I use language that expresses my identity as someone who is comfortable in using technology. I describe myself as an 'early adopter', an 'innovator' and 'tech-savvy'. In one post, I issued a heartfelt challenge to all those involved in education, partly borne out of frustration at the lack of quality advice and guidance my children were receiving at school:

... I would, in all humility, like to pose a question to all educators: your students' practice will most likely include professional engagement with the Web and learning to do this well may be one of the most important skills they need to learn. Are you in any position to teach and role model this if you yourself do not engage professionally with the Web in some form or other? (2015)

Here I am presenting myself not only as a role model in use of the Web but also as an example for other educators to follow.

Technology novice

Here I am trying to describe my first experience of a MOOC. I found it so bewildering that I wrote an allegory comparing it to a civilised dinner party that had suddenly morphed into a large and noisy gathering.

And then there were people like me, having a look round and wondering what on earth was going on -I caught glimpses of quite a few of them. The trouble is, I never really was one for large parties (and I suspect many of these others weren't either). (2013)

Reading it back now, what comes through is a sense of unease, particularly as another post shortly afterwards observed:

In other words, the modern economy is going to be increasingly working like a MOOC. We had better get used to it. (2013)

This was the most surprising theme to me coming out of the analysis. Amidst the confidence with technology, there is a sense of unease too. I describe myself as 'feeling old' and a 'newcomer to technology' as well as a 'digital immigrant' (Prensky 2000) – a term I would certainly never use now that I am aware of the research debunking this idea and demonstrating its harmful effects (Pangrazio 2018). It seems that I was not (and am still not) immune from fear and doubt about my own capability with technology.

Links to other identity references

Finally, considering identity references which did not have obvious links to technology, and after eliminating duplicate and similar references, 21 different descriptions were identified. The most common reference was to myself as an educator and related terms. There are 18 such references in my blog compared with eight for the second most common term blogger. Being an educator clearly was and is central to my identity, informing the way I approach the topic and think about its use. The references to myself as a blogger are not surprising, but the identification was clearly important to me. Others range over my professional roles, personal beliefs and family situation.

It is striking that there were times when aspects of my identity explicitly informed my analysis of issues with technology. My most-read post by far is 'Does e-learning save money?' (2012), which drew on my background as a Chartered Accountant to analyse the generic cost structures of e-learning compared with face-to-face education. 'Technology debates – Revisiting consciousness, mystery and faith' (2014) drew on my understanding of faith perspectives from my education in theology to shed light on debates about human consciousness and artificial intelligence. As a book lover, in several posts, I discuss some of the books I read exploring the impact of digital culture. My identity as a parent informs many blog posts, and in my account of a conference where I was the keynote speaker, I note how many of the questions I was asked were about whether children are exposed to excessive amounts of technology and if so how we can help them deal with it (2016).

Discussion

My first research question was what has been my experience of becoming more digitally literate? Analysis of blog posts written over nearly 8 years suggests that it has overwhelmingly been an experience of identity change and fluidity. The analysis bears out the general value of my theoretical framework, showing that it is possible to separate aspects of digital literacy relating to skills, practices and identity, and that there is an interrelationship between them, albeit a complex and nonlinear one. With regard to identity, my work with technology has profoundly changed my sense of who I am in a way that has been recognised by others ('I am the go-to person on these matters'). It has taken some very specific and public forms, including roles I have done at work, how I describe myself on social media and giving presentations to a range of audiences.

In fact, what strikes me with hindsight is that maintaining a blog was in itself a critical way in which I 'performed' the identity of a digitally literate person. As noted above, I refer to myself as a blogger eight times, suggesting some level of self-consciousness around this. My references to *The Matrix*, for example, could be seen as appropriating relevant cultural categories to my sense of being part of the 'geek' culture.

So, although the model is adequate to describe many aspects of my journey, the identity aspects, which specifically address my second research question, require a more developed view, supplied in this study by the idea of identity as an ongoing and changing performance. My identity development was not linear and, in particular, my relationship to technology was shown in four main ways, which are contradictory and can be represented as two overlapping spectrums (see Figure 2).

It would be neat to characterise my blog as showing movement from one category to another and maybe use the tool as a way of categorising people. But this does not fit the evidence. All four categories have arisen from one blog, and the progression has not been linear from one end to the other. Perhaps my more wide-eyes enthusiasm that all technology was good has been tempered, but I am still a believer that technology can solve problems as well as create them. My relationship with technology is periodically undermined by lack of confidence and a feeling that others are more adept than I am. *All these aspects have been and continue to be part of my development*. This is why the diagram shows a continual movement back and forth between these identities rather than a journey from one to the other.

These tensions reflect the debates that are raging in contemporary society. A torrent of popular books cheerlead for digital technology (e.g. Friedman 2017), protest against it (e.g. Foer 2017) or, most commonly, see benefits but with some misgivings (e.g. Fry 2018). What these works usually fail to acknowledge is that this is the continuation of philosophical debates which go back centuries. Mitcham (2014) summarised the debate, roughly chronologically, into 'ancient scepticism', 'enlightenment optimism' and 'romantic uneasiness' but saw the enlightenment optimism as currently the dominant attitude – technological advance is morally beneficial because it improves the physical wellbeing of humanity. That said, the ambiguous outlook of 'romantic uneasiness' has in recent times become far more prevalent, even being articulated by leading technology practitioners (e.g. Lanier 2010; Smith and Browne 2019).

At both a personal and societal level, all of this implies that, rather than dividing people into categories, or seeing digital literacy as a movement towards a 'desired state', we should envisage the digital literacy journey as a process of fluid identity performance, moving from one end of a spectrum to another and back again. Those seeking to enhance their digital literacy need to be prepared to engage in identity transition, acknowledging that at certain times and in certain contexts, they will feel optimistic about the ability of technology to solve problems, and at other times, it will feel like technology creates them. Sometimes we feel adept and at times insecure. We will continually move through these stages and will never 'arrive'. If nothing else, the ever-changing nature of technology, its impact on society and the resulting need for lifelong learning (van Laar *et al.* 2017) will make certain of that.

The fluid nature of identity development and the lack of an endpoint also suggest the importance of the concept of identity play to the development of digital literacy:

... identity play is essentially a process of exploration, in which deviation and detour are common fixtures. (Ibarra and Petriglieri 2010)

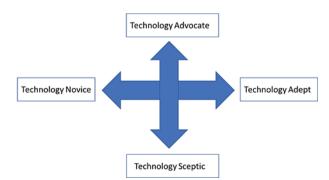


Figure 2. Relationship between different aspects of identity in relation to technology.

This suggests that identity changes in relation to technology should be developed in a spirit of experimentation and discovery, away from immediate pressures to achieve particular goals. It may require space to experiment away from the 'day job', as indeed was the case with my blog, which referred to my job but was not focused on it, and this brought a degree of freedom to my exploration.

Finally, I also noted that technology became integrated with other aspects of my identity – as a Chartered Accountant, educator, book lover and parent. This is paralleled by the research suggesting that leadership development can usefully take place 'across multiple domains' (Hammond, Clapp-Smith, and Palanski 2017). Changes in identity in relation to technology will also affect all the different areas in which we operate in our personal and professional lives. Interestingly, this is one of the key points made in a blog post which influenced me early in the process, considering ways in which different people may want to make use of technology:

But let's say you aren't into the latest technology, but, rather, are a dress maker. Well, then you probably won't care one bit about the latest cell phones, or whether you've gotten poked on Facebook today or not, but you probably will want to check out BurdaStyle, where they practice open source sewing. (Scoble 2008)

This was the advice I took to heart in relation to education. Digital literacy can begin with what you already are and do, and becoming better at it.

Conclusion

The originality of this study consists in three areas. First, it is an autoethnographic account that specifically focuses on identity change in relation to technology. Second, it connects the literature on identity, and in particular performative identity, to discussions of digital literacy. This is used to analyse the source data and develop a new model to describe identity fluidity in relation to developing digital literacy, which is the third point of originality. It is suggested that any significant change in terms of digital literacy requires addressing these issues, and that the role of identity change in digital literacy is under-researched and often undervalued.

The key limitation of this study is that, as an autoethnography, it is drawn from the experience of one person and one data source, and therefore, we need to be very cautious about generalising the results. The aim is to promote the understanding of the process in one situation and suggest areas for follow-up. A clear next step would be to broaden out this study and examine whether other accounts of developing digital literacy also involve identity change and fluidity, and if so how this can be described. Findings from such a study may have the potential to enhance the many programmes intended to improve digital literacy across educational and corporate environments.

References

- Adams, T. E., Jones, S. H. & Ellis, C. (2015) *Autoethnography*, Oxford University Press, New York, NY.
- Bali, M., et al., (2015) 'What makes a cMOOC Community Endure? Multiple participant perspectives from diverse cMOOCS', *Educational Media International*, vol. 52, no. 2, pp. 100–115. doi: 10.1080/09523987.2015.1053290

- Black, K. & Warhurst, R. (2019) 'Career transition as identity learning: an autoethnographic understanding of human resource development', *Human Resource Development International*, vol. 22, no. 1, pp. 25–43. doi: 10.1080/13678868.2018.1444005
- Burnett, C. (2011) 'Pre-Service Teachers' Digital Literacy Practices: Exploring Contingency in Identity and Digital Literacy in and out of Educational Contexts', *Language and Education*, vol. 25, no. 5, pp. 433–449. doi: 10.1080/09500782.2011.584347
- Butler, J. (2006) *Gender Trouble: Feminism and the Subversion of Identity*, Routledge, New York, London.
- Chang, H. (2016) Autoethnography as Method, Routledge, Abingdon.
- Chetty, K., *et al.*, (2018) 'Bridging the digital divide: measuring digital literacy', *Economics*, vol. 12, no. 23, pp. 1–21. doi: 10.5018/economics-ejournal.ja.2018-23
- Creswell, J. W. (2013) *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*, 4th edn, Pearson Education Limited, Harlow.
- Darragh, L. (2015) 'Recognising 'good at mathematics': using a performative lens for identity', Mathematics Education Research Journal, vol. 27, no. 1, pp. 83–102. doi: 10.1007/ s13394-014-0120-0
- European Round Table of Industrialists. (2017) *Building and Transforming Skills for a Digital World*, [online] Available at: https://ert.eu/documents/building-and-transforming-skills-for-a-digital-world/
- Feenberg, A. (1999) Questioning Technology, Routledge, London, New York, NY.
- Foer, F. (2017) World Without Mind: The Existential Threat of Big Tech, Jonathan Cape, London.
- Friedman, T. L. (2016) *Thank You for Being Late: An Optimist's Guide to Thriving in the Age of Accelerations*, Penguin Books, London.
- Fry, H. (2018) *Hello World: How to be Human in the Age of the Machine*, Transworld Digital, London.
- Giddens, A. (1991) *Modernity and Self-Identity: Self and Society in the Late Modern Age*, Polity Press, Cambridge.
- Goffman, E. (1990) The Presentation of the Self in Everyday Life, Penguin Books, London.
- Hammond, M., Clapp-Smith, R. & Palanski, M. (2017) 'Beyond (just) the workplace: a theory of leader development across multiple domains', *Academy of Management. The Academy* of Management Review, vol. 42, no. 3, p. 481. doi: 10.5465/amr.2014.0431
- Ibarra, H. & Petriglieri, J. L. (2010) 'Identity work and play', Journal of Organizational Change Management, vol. 23, no. 1, pp. 10–25. doi: 10.1108/09534811011017180
- Jaschik, S. (2017) Judith Butler on Being Attacked in Brazil, [online] Available at: https://www. insidehighered.com/news/2017/11/13/judith-butler-discusses-being-burned-effigy-andprotested-brazil
- JISC. (n.d.) *Building Digital Capabilities: The Six Elements Defined*, [online] Available at: http:// repository.jisc.ac.uk/6611/1/JFL0066F_DIGIGAP_MOD_IND_FRAME.PDF
- Lanier, J. (2010) You Are Not a Gadget: A Manifesto, Allen Lane, London.
- Law, N., et al., (2018) A Global Framework of Reference on Digital Literacy Skills for Indic ator 4.4.2, UNESCO Institute for Statistics, Montreal, [online] Available at: http://uis.unesco. org/sites/default/files/documents/ip51-global-framework-reference-digital-literacy-skills-2018-en.pdf
- Learmonth, M. & Humphreys, M. (2012) 'Autoethnography and academic identity: glimpsing business school doppelgängers', *Organization*, vol. 19, no. 1, pp. 99–117. doi: 10.1177/ 1350508411398056
- Lewis, K. A. (2018) 'A digital immigrant venture into teaching online: an autoethnographic account of a classroom teacher transformed', *Qualitative Report*, vol. 23, no. 7, pp. 1752–1772, [online] Available at: https://nsuworks.nova.edu/tqr/vol23/iss7/19
- Littlejohn, A., Beetham, H. & McGill, L. (2012) 'Learning at the digital frontier: a review of digital literacies in theory and practice. (Report)', *Journal of Computer Assisted Learning*, vol. 28, no. 6, pp. 547–556. doi: 10.1111/j.1365-2729.2011.00474.x

- Mitcham, C. (2014) 'Three ways of being-with technology', in *Philosophy of Technology: The Technology Condition: An Anthology*, 2nd edn, eds. R. C. Sharff & V. Dusek, John Wiley & Sons, Chichester, pp. 523–538.
- Pangrazio, L. (2016) 'Reconceptualising critical digital literacy', Discourse: Studies in the Cultural Politics of Education, vol. 37, no. 2, pp. 163–174. doi: 10.1080/01596306.2014.942836
- Pangrazio, L. (2018) Young People's Literacies in the Digital Age: Continuities, Conflicts and Contradictions, [online] Available at: https://ebookcentral.proquest.com/lib/lancaster/detail. action?docID=5596870
- Prensky, M. (2001) 'Digital natives, digital immigrants', On the Horizon, vol. 9, no. 5, pp. 1–6. doi: 10.1108/10748120110424816
- Schwab, K. (2017) The Fourth Industrial Revolution, Penguin, London
- Scoble, R. (2008) 'Scoble has a productivity problem', *Scobleizer*, 27 May, [online] Available at: https://scobleizer.blog/2008/05/27/scoble-has-a-productivity-problem/
- Sharpe, R. & Beetham, H. (2010) 'Understanding students' use of technology for learning: towards creative appropriation', in *Rethinking Learning for a Digital Age*, eds. R. Sharpe & H. Beetham, Taylor and Frances, New York & Abingdon, pp. 85–99.
- Smith, B. & Browne, C. A. (2019) *Tools and Weapons: The Promise and the Peril of the Digital Age*, Hodder & Stoughton, London.
- Spante, M., et al., (2018) 'Digital competence and digital literacy in higher education research: systematic review of concept use', Cogent Education, vol. 5, no. 1, article no. 1519143. doi: 10.1080/2331186X.2018.1519143
- Tiles, M. & Oberdiek, H. (1995) *Living in a Technological Culture: Human Tools and Human Values*, Routledge, London and New York.
- van Laar, E., *et al.*, (2017) 'The relation between 21st-century skills and digital skills: a systematic literature review', *Computers in Human Behavior*, vol. 72, pp. 577–588. doi: 10.1016/j. chb.2017.03.010