CHAPTER 14

Technology and Education—Why It's Crucial to be Critical

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Introduction

Critical analyses of technology and education appear to be enjoying a modest renaissance of late. A few conferences in this area have recently chosen "A Critical Perspective" (or similar sentiment) as their stated theme. It also seems that more articles, books, blogs, and tweets are being written by academics looking to take a critical stance on the topic. I would stop short of concluding, however, that we are in the midst of some sort of "critical turn" that might atone for previous decades of technological "boosterism," hyperbole, and outright evangelism. Instead, I suspect that it is simply easier in this age of online retrieval to root out critical work if one is that way inclined. It is likely that I am now coming across more critical work in this field primarily because I am looking for it and/or it is being pushed algorithmically toward me. It is highly probable that any real increase in the critical literature is being mirrored by an even greater expansion of (over) positive commentary. Collections of writing such as *Critical Perspectives on Technology and Education* are to be welcomed, but they should not be taken as proof that such views are now in the ascendant.

This was certainly the conclusion I drew having presented an early version of this chapter as a keynote to a fairly prominent "learning technology" conference. As the conference theme was set broadly along the lines of "being critical," I had expected this to be a fairly uncontentious presentation. The

audience reaction, however, proved a little more fractious. Even my most supportive colleagues noted that I had quickly managed to "split the room." This was confirmed in the social media chatter accompanying the conference proceedings. Here some attendees were taking offence at my suggestion that academic work on learning technology could be more critically minded and politically focused in the work it seeks to do. Others felt that I was picking on them personally, and had set out to make them "feel bad." A few declared indignantly that learning technology was a perfectly critical field and they had long engaged in important political work. A couple of commentators even dismissed the talk as being harmfully retrograde and antitechnology. All in all, what I had intended to pitch as a light-hearted provocation had attracted a surprising degree of hostility and denial. To quote one social media contributor, I was "putting a depressing pall onto the beginning of the conference." As another "below the line" comment concluded:

> did anyone feel like "well why the hell am I here then?" I hope it wasn't that depressing . . . man it was like woa! we all tech wannabes should pack our bags and go feed cattles.

In hindsight, such reactions were probably not *that* surprising. Eighteen months before, I had been invited to address another "Ed-Tech" conference on a similar vaguely critical theme (this time, in essence, that we should not assume the future to be any less problematic than the present). Again, what I had intended as a fairly uncontentious set of observations had also prompted a noticeable level of back-channel furor. Take, for instance, the following series of rapidly tweeted retorts:

> November 25, 18:05 p.m.
> Really not impressed with much of @neil_selwyn's keynote opener #CONF—How can a message tellin boundary pushers to stop be gud?
>
> November 25 18:11 p.m.
> this is not only dangerous angle—undermine those flaming the revolution but IMO a horrible mood to set for #CONF
>
> November 25 18:14 p.m.
> IMO if those at ground level didnt push for change then we wud be even further behind where we are #CONF
>
> November 25 18:16 p.m.
> Iv put immense effort into boundary pushing and hav impactd locally, national and internation. I will cont #CONF

Of course, everyone is entitled to their (crudely expressed) views. Yet such knee-jerk reactions suggest that the academic study of technology and education has clearly not progressed *that* far from its boosterist past. This is an area that still appears to be attracting those who fancy themselves as "boundary pushers," responsible for "flaming the revolution," and making an "impact." Crucially, these are people who do not appear wholly comfortable when encountering criticism of their boundary pushing and innovation. If these commentators are to be taken at face value, then opposing voices can be discounted simply for not being in tune with the educational technology project—as "undermining," "horrible," and simply not "gud."

I am not expecting this particular chapter to provoke quite as much hostility. Most readers who have made it to the end of a book titled *Critical Perspectives on Technology and Education* are going to be a like-minded bunch. In fact, I am assuming that many readers will find little in this chapter that they will feel is remotely novel, controversial, or upsetting. So why is any of this worth writing/reading for yet another time? The pragmatic answer to this is that I was asked by the book editors to write this chapter. Yet more substantially, I do feel that these are arguments that bear repeating as often as possible to *everyone* engaging in the academic study of technology and education. So if you feel that the rest of this chapter is old hat, self-evident and/or teaching-your-grandmother-to-suck-eggs then at least take it as an invitation to get out and spread these ideas yourself. I genuinely hope that you have more luck than me in "stating the obvious." If, on the other hand, your immediate reaction is to take to Twitter in disgust then perhaps it might be more productive to resist the urge for a moment. Instead, take this as a challenge to talk through some alternate ways of approaching our field and our work . . . these are discussions that certainly need to "cont."

The Need to be Critical about Technology and Education

The lack of a sustained critical perspective throughout the academic study of technology and education will be self-evident to anyone with even a passing interest in the literature. This belies the fact that there is clearly much to be critical about. For instance, technology and education remains an area of academic study, policy making, commercial activity, *and* popular debate where promises of what might/could/should happen far outstrip the realities of what actually happens. As the editor of a leading educational technology journal bemoaned recently, "the revolution is always about to happen" (Latchem, 2014, p. 5). Indeed, the forever-delayed technological transformation of education has been a leitmotif of the past hundred years (Cuban, 1986; Watters, 2015, forthcoming). In one sense, there is an obvious need

to critique the vast amounts of resourcing, funding, and human effort that this "no show" continues to divert. Yet academic criticism is also necessitated by the ways in which digital technologies are now entwined deeply with the politics of contemporary education—not least ongoing neoliberal and corporate reforms of educational provision and practice. The political economy of the multibillion dollar ed-tech sector is as complex as it is fast changing. All told, digital technology is hardly the benign, neutral presence in education that we are often assured it to be. As such, this is a cornerstone of the politics and ethics of contemporary education that demands the closest scrutiny of which the academic community is capable.

Of course, most academics whose work touches upon technology and education are fully aware of these issues. As is often the case with academics, most educational technology specialists are publically concerned, open minded, politically aware (if not politically active), and likely to be ideologically left-of-center. In pointing out that this field needs to be more critical, the suggestion is *not* being made that a majority of people working in it are happy-go-lucky, unthinking dupes. What *is* being suggested, however, is that many people appear content to turn their critical faculties down considerably when engaging in their professional work.

The fact that academic research and writing often fails to address adequately the social, political, economic, and cultural complexities of technology and education should be seen as a genuine shortcoming. Instead, the academic study of technology and education most often finds itself consigned to the status of a "service subject" that produces neat and tidy "applied" academic evaluations concerned with developing more efficient ways of "doing technology." This is not work that speaks routinely to the complexity of social contexts and interconnectedness of social phenomena. As such, this is certainly *not* usually taken by people outside the field to be the stuff of serious intellectual work. This marginal standing is reflected in the tendency for educational technology academics to be located often within "support" units and divisions, such as cross-faculty Teaching & Learning Divisions or departmental E-Learning Units. Physically as well as intellectually, then, the field of technology and education is often found to be operating on the peripheries of academe.

Rather than accepting this lowly status with a resigned shrug, it is time for a more forceful response. In short, we need to accept that academic work in the area of technology and education is currently falling short of what should now be a significant and substantial area of contemporary educational scholarship. Thus it is clearly time for interested academics to strive toward a more prominent role in engaging with the "bigger picture/s" of

technology and education. The academic study of technology and education should not simply be working in the "service" of the practical application of technology for teaching and learning. Instead, the academic study of technology and education should be developing as much along the lines of critical social science as it does in the guise of a cognitive learning science. This needs to be the site of work that better addresses the political, economic, social, cultural, and historical "messiness" of technology and education. The point that I am trying to make here is straightforward enough. Given the time, effort, resources, and brainpower that are being dedicated to the academic study of technology and education, surely it is worth trying to up our game and establishing this as a site of substantial and authoritative scholarly work? There are many things required for this to happen—one of which is developing a critical "bite" that to date has been evident only sporadically in mainstream scholarship in this area.

Ways to be Critical of Technology and Education

So how might this be achieved? As the breadth of chapters in this book demonstrate, there are certainly a number of ways in which academic work can take "critical" stances toward technology and education. On one hand is writing and research that develops a counterpoint to the orthodoxy that the educational application of digital technology is an essentially "good thing." In this sense, taking a critical approach does not have to involve a rigid, dogmatic adherence to a particular political viewpoint or specific philosophical tradition. Indeed, there is undoubted value in simply pursuing what Popkewitz (1987) describes as "critical intellectual work," that is, attempting to move "outside the assumptions and practices of the existing order and struggling to make categories, assumptions and practices of everyday life problematic" (p. 350).

This is perhaps best described as pursuing a "dictionary definition" of critical scholarship—that is, being objective; producing detailed and contextually rich analyses; engaging in objective evaluation; and taking time to investigate any situation in terms of its positives, negatives, *and* all areas in between. This involves being inherently skeptical but never transcending into outright cynicism. This involves being prepared to ask dull but difficult questions of how digital technologies find a place in educational settings and educational contexts. As Sonia Livingstone (2012) puts it, this problematizing of technology and education usually pursues three basic lines of inquiry: What is really going on? How can this be explained? How could things be otherwise? As these questions imply, a critical approach also

involves speaking up for, and on behalf of, those voices usually marginalized in discussions of what technology and education "is" and "should be." As Michael Apple (2010) contends, the role of all academics working in the area of education should be to act as "critical secretaries" of "the voices and struggles of those who on a daily basis face the realities of life in societies so deeply characterized by severe inequalities" (p. 97).

Many of the chapters included in this book could be said to be imbued with this spirit of asking basic but challenging questions of technology and education. Take, for instance, the following recurring concerns:

- What is actually new here?
- What are the unintended consequences or second-order effects?
- What are the potential gains? What are the potential losses?
- What underlying values and agendas are implicit?
- In whose interests is this working? Who benefits in what ways?
- What are the social problems that digital technology is being presented as a solution to? Why at this time?
- How responsive to a "technical fix" are these problems likely to be?

As some of the contributions to this book demonstrate, questions such as these can often make for writing and research that is more insightful and involved than the "what works and why" approach that often results from the "applied" study of technology and education.

Of course, academic work can be critical of technology and education with a capital "C." Here, then, there is also room for the application of the concerns of Critical Theory. Stemming from the work of the Frankfurt School—and particularly theorists such as Adorno, Habermas, Marcuse, and Horkheimer—this approach fosters analyses of technology and education that are driven by broader critiques of capitalism and domination. Using critical theory can lead the study of technology and education in a number of important directions. Above all, critical theory encourages making sense of technology and education as a set of profoundly political processes and practices that are framed in terms of issues of power, control, conflict, and resistance. This encourages a desire to foster and support issues of empowerment, equality, social justice, and participatory democracy.

While the concerns of critical theory are perhaps more prescriptive than the broader dictionary definition mode of critique just outlined, there is much that can be taken from this big C tradition. Above all, critical theory supports academic inquiry that frames technology and education as a field of political engagement, testing out dominant logics and assumptions, and exploring the differences between potentiality and actuality. These values

are summed up succinctly in Amin and Thrift's (2005, p. 221) four-point agenda for critical scholarship:

- First—a powerful sense of engagement with politics and the political;
- Second—a consistent belief that there must be better ways of doing things than are currently found in the world;
- Third—a necessary orientation to a critique of power and exploitation that both blight people's current lives and stop better ways of doing things from coming into existence;
- Fourth—a constant and unremitting critical reflexivity toward our own practices: no one is allowed to claim that they have the one and only answer or the one and only privileged vantage point. Indeed, to make such a claim is to become a part of the problem.

A number of academics have applied these concerns to matters of technology and education—notably North American scholars such as Douglas Kellner and Andrew Feenberg. The past work of these authors demonstrated ably how every instance of technology and education is entwined with issues of domination, inequality, and exploitation. This work also fostered valuable suggestions about how alternate cooperative forms and participatory arrangements of technology and education might advance social struggles and the liberation from domination. While critical theory studies of technology and education thrived briefly during the 1990s, their popularity has since subsided. Yet with these concerns currently reemerging in other areas of digital media scholarship (see for example the work of Christian Fuchs and David Berry), there is no reason why technology and education could not be following suit.

Impediments against being Critical of Technology and Education

Of course, none of this is *quite* as easy as it sounds. Unlike many other areas of the social sciences, it seems that approaching technology and education along critical lines is not a natural and/or advantageous position for all academics to adopt. Thus regardless of the potential strengths of these approaches, we need to duly note that it often might not pay to pursue critical studies of technology and education—whether for pragmatic or more philosophical reasons.

In a pragmatic sense, for instance, there is perhaps little incentive for academics working in the area of technology and education to "rock the boat" or "bite the hand that feeds." Notwithstanding the prevailing air of

austerity that now looms over all sectors of higher education, these continue to be relatively good times for academics specializing in technology-related studies. "What to do about digital technology?" remains a high-profile issue in the minds of vice chancellors, promotion panels, and research funders alike. From a self-interested point of view, it makes sense for anyone associated with technology and education to perpetuate the idea that digital technology *does* (or at least *might*) make a difference. These are the "real-world" agendas that give the academic study of technology and education its currency and value—not least in terms of keeping researchers and lecturers in employment when so many other areas of academia are facing outright redundancy.

Of course, a self-interested positivity is certainly not confined to technology and education. It could be argued that the entire "industry" of higher education has been forced to become less critical in order to retain at least a modicum of relevance and esteem in contemporary society. As Alison Hearn has argued, contemporary higher education is now predicated around ambitions to produce human capital rather than critical thinkers; to foster bland, managerially friendly versions of creativity, innovation, and knowledge rather than critical thinking. In these ways, being seen to take an avowedly critical stance toward one's area of specialist knowledge is a much more risky position than it would have been even ten years ago. Hearn (2013) concludes:

> These activities necessarily involve questioning ourselves, risking the stability of our own social worlds and personal relationships and, as a result, always require courage. (p. 274)

This is not to suggest that academic researchers and writers steer clear of the critical study of technology and education solely to ensure their professional survival. In the minds of many academics, the educational application of digital technology is an inherently forward-looking endeavor where critical analyses of the present and/or past are simply not relevant. This stems, at least in part, from the fundamental desire amongst most educational technologists to improve education through the implementation of digital technology. For many academics, then, technology and education is approached as an inherently "positive project." Indeed, I suspect that most people working in this area are driven to some degree by an underlying belief that digital technologies are capable of improving learning and/or education in some way. Accordingly, the de facto role of any academic involved in technology and education is presumed to be one of finding ways to make these technology-based "enhancements" happen and—to

invoke another phrase often used in the field—to "harness the power" of technology.

Indeed, the academic study of technology and education has long been infused with an air of this productive positivity. As Donald Ely (1999) observed, throughout the latter half of the twentieth century, educational technologists have often positioned themselves as "change agents" of some sort who were dissatisfied with the status quo and whose work was therefore driven primarily by improving systems and fixing problems. Of course, there is nothing wrong per se with wanting to do good in the world and thereby adopting a positive outlook on life. Yet this positivity becomes problematic when it spills over into an excess of belief, hope, and speaking from the heart rather than the head. Indeed, the academic study of technology and education continues to be blighted by a prevalence of what Duncan-Andrade (2009) terms "hokey hope" (i.e., a naïve view that somehow things will get better, despite the lack of evidence to warrant this view) accompanied by a fair amount of "mythical hope" (i.e., a "profoundly ahistorical and depoliticized denial of suffering that is rooted in celebrating individual exceptions" (p. 184). In this respect, the pursuit of more critical lines of inquiry tend to get short shrift.

Conclusion

To reiterate a point made earlier, books such as this do not mark a resurgence of critical perspectives into the mainstream academic study of technology and education. For all the reasons just outlined, critical studies of technology and education may always be swimming against the tide of popular opinion. Yet as this chapter has argued, sustained critique is required if technology and education is to become a genuinely significant area of academic endeavor. One of the obvious strengths of the critical approach is the ability to work with (and work around) the uncertain and often contradictory realities of technology and education. Yet this clearly remains an uncomfortable position for some people to assume. As George Siemens (2013) observed when justifying his decision to stop giving keynote presentations to educational technology conferences:

> There has been growing creep of "rockstar-ism" in education where we look for "the person" to give us "the solution"... I've answered many questions from audience members with "I don't know" and "that depends." People seem to find this unsatisfying. We like our so-called rock stars in the education and technology field. We like clear answers. And it's not healthy for us or for our field. (n.p)

From here on in, then, academic research and writing would be well advised to strive to infuse popular, professional, and political understandings of technology and education with uncertainty, contradiction and critique. Indeed, for academic studies of technology and education to assume a position of increased authority then this *has* to become an area of more dissensus and disagreement. The study of technology and education should not be an exercise in feeling smug that one is on the same page as everybody else. Instead, more sustained and substantial efforts are needed to push the kinds of studies featured in this book closer to the mainstream of technology and education scholarship. As this book has demonstrated, there are plenty of degrees of criticality—one is neither wholly "critical" or wholly "uncritical." Whether one is simply "thinking otherwise" *or* pursuing a slavish adherence to the Frankfurt school, there is plenty of room for all of these positions and stances. Now, as we enter the second half of the 2010s, I would argue that any academic who is working in the area of technology and education should feel obliged to be critical, or at least justify why they have chosen not to be critical.

Of course, a critical approach does not make academic work inherently superior to other less critical work. Moreover, critical studies will never be the most self-affirming approach to take when it comes to researching and writing about technology and education—especially when compared to the breathless adoration of all things digital that media academics all too easily slip into. As Geert Lovink (2011) acknowledges, any critical study of digital media is grueling, unglamorous, "boring," and "unsexy" (p. 63). These disincentives notwithstanding, there are clear benefits to be had from well-crafted critical studies finding a more prominent place within the academic study of technology and education. To conclude with a reputed statement from the theoretical physicist John Archibald Wheeler, we should remember that "reality is defined by the questions we put to it." Of course, it is unlikely that our academic studies of technology and education will match Wheeler's pioneering work in the fields of quantum mechanics, general relativity, and nuclear fission. Nevertheless, if we are genuinely concerned with improving the state of technology and education, then *all* academics would be well advised to continue asking critical questions in order to achieve critical outcomes.

References

Amin, A., & Thrift, N. (2005). What's left? Just the future. *Antipode, 37*(2), 220–238.

Apple, M. (2010). Len Barton, critical education and the problem of "decentred unities." *International Studies in Sociology of Education, 20*(2), 93–107.