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Technology and Literacy – Reflections for the Next Century of Education

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Why this is not an education paper.
What does technology and literacy have to do with Philosophy and Theology?

What Is Literacy?
During the past we’d recite poetry to one another and sing by the piano if we were fortunate enough to know how to read and play; now we watch TV, create ‘active worlds’ online and talk with friends on Skype. There have always been ‘new literacies’ to use a term from Lankshear and Knobel¹, and given that, we clearly continue to live in a multiply literate world. We are in the middle of a critical literacy ‘boom’, one need only read the newspapers to see that even journalists and politicians like to write about it. Education based academics are now even applying terms like ‘multi-literacies’, a modern reaction to the multiple ways we read ourselves and the external world in an over stimulated, fast paced society. After all, isn’t everything we interpret from what we see, feel, touch and smell a reading of the world, the self or the other? Such ‘reading’ becomes by default, a form of literacy, because today, we have created technology that combines all senses into forms of communication. Just think of education and specialist technology, enabling the disabled to engage in the world like never before by communication which utilises stylised JavaScript translated on sophisticated browsers and transmitted across the globe.

So where did literacy come from? It is important not to separate education from its roots. It came of course from Philosophy, only we called it critical theory, a component of which was literary criticism, a rigorous method of analysis originating from the Frankfurt School in Germany during the 1930’s, a school spawn of a previous philosophical era of linguistic analysis, mathematical application, scientific discovery and technological advancement. Critical theory also originated in schools of theology as part of the methodology for scriptural analysis, which derives from the attempt to determine the literary relationship between the history of the synoptic gospel. (Which gospel has primacy etc?)

Literacy no longer means the ability to read and write like before, and in a world divided economically, as some indulge in high levels of computer literacy, some die never understanding how to connect the letters of their own language – and yet they read the world too and write on it with their actions. To be versed in many literacy practices is an objective of educators for the best interests of students, because on this basis, an educator can reach more diverse ranges of students. As the theory goes, we each interpret the world differently…but surely there is a medium? With the

proliferation of new technologies and teaching theories during the past century, we hear our government ministers now use the word, 'basics'. What do we as educators do? As the gap between wealthy and poor nations grows, are we occidental nations leaving the people who most need to learn how to become more literate behind? Think of our own nation and ask the same question? If we limit the proliferation of new literacies and limit the access citizens have to it, then how do we compete with the knowledge economies of the rest of the world? If we base our response to these questions in ethics, we have a platform from which to respond.

I wish to apply the thought of the philosopher Emmanuel Levinas\(^2\) in this context. That is, to use his interpretation of ethics as a focus for the selective suspension of current political structures and debates on education. If this is suspended, I am left with a theoretical space to discuss the potential for enriched communication space and collaborative civil action for mapping education during the next century, a century fraught with suffering, poverty, environmental fragility, abuse of power through ignorance and an ever increasing population of learners and thinkers who will continue to mould the future for the next generations to come. It is in this regard; at least from my perspective, that I wish to treat contemporary debates with integrity and seriousness, as in truth, we have only one life, and pass our actions and inactions on to others. There is, as such, an inherent ‘responsibility’, in Levinas’ words that we have toward each other and for the ways we mould the world, and that responsibility, as Levinas explained, ‘beckons us to respond to the other’. The problem is that often people don’t like change and are comfortable in their familiar environments particularly in a rapidly changing world. The answer is in civil action and democracy and lots of personal fortitude just like the Buddhist monks in Burma at the moment. A difficult task in a world which values particularly knowledges and marginalises UNDERSTANDING and ACTION.

Levinas’ philosophy bridges a gap between philosophy and theology that engages us in a language of infinite possibilities for human action. By that I mean, a ‘re-enchantment (for want of a better term) of the Western world’, a body of people and nations, that takes responsibility for the things we’ve become aware of since the dawn of technological advancement. Rather than speak in a negative way about debates on the ‘basics’, I wish to highlight the importance of this assertion in our contemporary culture because knowledge IS socially constructed and so learning needs to be a developmental process, even in secondary school when students choose electives and begin to specialise. It must prevail then, that for such knowledge to be taught, a curriculum needs to be designed on the basis of UNDERSTANDING, not just learning for life.

So how does my exploration of technology and literacy relate to the role Arts and Sciences play in our interpretation of curriculum?

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I wish to outline this relationship in the following context:

The Arts and Sciences have a theological and philosophical grounding. In an increasingly secularized society, polarized by fundamentalisms of thought and action, ethics becomes a common language for collaboration and building for a ‘sustainable’ future; though one would hope for a future more than just ‘sustainable’. Since the dawn of the Enlightenment, increasing specialization of learning areas has occurred as part of a scientific rationalization of the world. Though such exploration has been crucial to our developing understanding of ourselves and the world, perhaps we need to re-focus on the education we give to the whole person, so that when a young person does choose how to specialize in future, they specialize understanding the ‘big picture’. If we separate the Arts and Sciences, we get two worlds that communicate different languages and live simultaneously, but never connect. Understanding that Science is Art and indeed that Art is a Science re-connects learning with the world and the possibilities for humanity. The role and responsibility of educators is to inform budding minds of the poetry of nature, the beauty of the earth - that there is no true science without the arts, and indeed, no true art without science in its ethical context. That without this vital interpretation of the relationship between the arts and sciences, there is symbolic and actual violence, whether intentional or not. This provides a context for working toward peace in thought and action and learning from the consequences of violence. Learning from history.

Science is to be contextualized thus, in its historical origins, stemming from Plato’s academy. The Arts and Sciences are in fact, inseparable. That a true scholar needs to be versed in the Arts before they can properly grasp the sciences in their full context. That Plato’s positioning of the gymnasium, completes a profile for scholars, which respects the development of the whole person, spirit included – hence, the ‘academy’, ‘Akademeia’ – a sanctuary, not just a school. A community, a space and place that supports individual differences and abilities would be the contemporary ideal. Education is an embodying process which grounds the individual in the world and assists them to comprehend their place in it and how they belong, not as an economic entity building a financial future, but as a contributor to communities and to humanity. It is in this regard that technology and literacy practices occurring in schools provide individuals with common social tools to mediate their world of the arts and sciences with the rest of the world and participate to the best of their ability in society. These common social tools for communication model developmental social boundaries for public life as young people build collaboratively through life in what they do and say and how they demonstrate their understanding of the world.

As early as the 18th Century, Rousseau in his Discourses on the Arts and Sciences espoused strong views on the acquisition of knowledge during a

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time of great separation of the Arts and Sciences – a time of empirical progress in the sciences and state intervention in the support for that scientific development. This necessary and awkward scientific development has continued into this century and this development AND Rousseau’s alarm, teach us today, of the need for a balance between Rousseau’s love for nature and the way we, as a democratic society mould technologies and technological development of the future.

This context raises the benchmarks for scholars to connect their thinking to the state of the world and literally take responsibility for it in a collaborative and vigilant manner, differently from ways previously understood in history. We are now an informed culture and young people require MORE in their learning. We have the answers and now we need ACTION. Imagine a curriculum that was understood and respected by participants in it? One that has a clear structure with flexibility for review and reflection – like a constitution, through referendum. A curriculum that advocates the education of the whole person AND respects the differences of each individual and one that upholds a ‘rule of law’ (that no one is above the democratic process by which the curriculum structure has been put in place). Imagine a curriculum that is presided over by elected representatives – voted by the public, and that such representatives work locally, nationally and globally, like a UN of education. We in Australia have an opportunity to create a model for the world, but are we ready for it?

Given this interpretation of the inseparable relationship between the Arts and Sciences we then need to think about the way we interpret the role of literacy and technology in curriculum.

Dewey and Pragmatism

With our recent history of globalisation and the proliferation of international trade, education has never been more commodified. Even teachers are commodified on a global scale, offering their expertise against the Australian dollar in other countries whose education systems struggle to attract teachers in ‘tough’ areas. The impact of such commodification has given consumers liberating rights for their children by way of the choice of education institution, however, the freedom to choose has heirarchalised values attributed to schools and teachers causing rifts between institutions and access youth/families have to them. We see the impact of this heirarchalisation in the media most days when often some educators are knocked, as are some institutions also through attempts to rate schools based on ‘results’. This symbolises a break down between governments and civil society, (though some brilliant work is occurring in some institutions which rank highly).

We see schools under increasing pressure to produce results for funding also, a disaster for the young people walking out of those institutions and into the real world with ‘high results’, but limited capacity to apply their
learning to out of school contexts. We have a social responsibility for youth. We also see encouragement of youth from low socio-economic areas to take up a trade, rather than tertiary education because youth feel the financial strain of their future before they aspire to fulfil their mind’s desire. This is not to devalue the quality of having a trade, but rather to highlight that trades men and women contribute to society in a way that impacts upon the way we shape the world. Imagine a civil society that was more informed in their learning, no matter their occupation? That is a democratic dream to aspire to I believe, because the type of society you can shape from having such citizens, is one we can all be truly contribute to to build a better world. Do we need further consolidation of economic rationalism? With the privatisation of profit based institutions, is it any wonder the federal government needs to legislate across all education institutions on a national curriculum basis? That is not to say that all education should be public, but to be clear about why we offer different institutions as part of our liberal society. For that matter, doesn’t it make sense that if we want to connect as a world, we need to use the technology we have available to use today, to find common languages to communicate as we respect our differences? Imagine how many private schools would benefit from seeing some of the wonderful work occurring in public schools across the nation. In Habermas’ words, such endeavours open institutions to greater possibilities for communicative action AND democracy. Dewey was writing about this in the word of his time 100 years ago!

Science, Occidental Values and Technological Advancement

With the Enlightenment agenda of scientific discovery, the primacy of science, a rift between the arts and sciences produced a culture of scientific dominance, of raw technological advancement, and a new sense of human vulnerability due to new knowledge of our capabilities as humans with science. We can work with this knowledge for the good or the bad, and sometimes we learn from mistakes along the way. Despite our growing awareness of human and natural fragility, advancement has continued to a point where world leaders are calling for change and scientists are looking for new answers, like how to sustain our environment. Meanwhile in the classroom many teachers feel threatened by the ways technology is being implemented in the classroom and rightly so! Surely technology should be used in a socially constructive way, not in a disconnecting way and teachers with experience prior to computing see the difference in the way people connect today compared to yesterday. Many happy to develop their skills, many asking questions about how it should be used. Schools rush to update to the ‘latest’ equipment to market themselves to nervous parents, and parents asking if that is really what they value for their children?

Ethics has suddenly become ‘trendy’ particularly to secular audiences AND vital to our survival as a species. Schools are demanding science and maths

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teachers, newly graduated ‘specialists’ to impart upon youth post-Enlightenment applications of mathematical and scientific thinking, perpetuating graduates unskilled in ‘whole learning’ and limited in their ability to think and act in the world as a result of their fractured education whetted by economical drive. Science graduates often don’t want to be teachers because the occupation isn’t lucrative enough and yet the system can’t acquire enough science teachers to feed the allocation of funding in the area. And so the scientific paradigm perpetuates itself into this century whilst households contribute in such limited ways to the future of the planet. What good is a house, if you won’t be able to power it environmentally in 20 years? Does this not suggest something about a shifting paradigm occurring now for younger generations, that value is about to be placed in new ‘economies’, green ones, because, rather than work at this vision for a future diligently and thoughtfully, we’ll just recognise we need to survive. When will humanity learn there is more potential to our existence than mere survival as a species? We have learned great things from science, now we need to integrate it, and we can use technology as a social tool to do that, changing the ways we shape curriculum of the future.

As our world has changed then, does it not make sense to change the context of the content we teach students? This is my point in relation to the relationship between Arts and Sciences, and the impact this change has upon the way we implement technology in curriculum. This does not mean that all of a sudden students become graduates of the Arts and Humanities, but rather, students become graduates of education for the ‘whole person’ which incorporates the Arts and Sciences. Regardless of whether the student develops a career in microbiology, forklift driving or hairdressing, there is an ethical responsibility to inform students of the role of ethics in the relationship between the Arts and Sciences, and the impact of that relationship without ethics. Educators need to teach students to understand and communicate their awareness of it as future citizens. This is about empowering the future to act with awareness in an environment that is becoming increasingly fragile. For if you cannot warn of the impact of social inaction, or action which has occurred as a result of scientific supremacy, and teach students what causes greater fragility of the earth, how then, can you expect to believe that the legacy we leave is a quality of life liveable? There is thus a responsibility (in Levinas’ words) we have to future generations, one that needs to be stepped up now in a formalised (pragmatic way in Dewey’s words) way as a result of great social collaboration.

Technology in schools is not about dependency; it is about using it in socially constructive way. In this regard, using it as a literary communication tool to educate the world. This doesn’t mean we all turn into cyborgs and live to 130 with mechanical hearts, all speaking the same language and becoming a number. It means simply, to use the technology as a literary tool to impute for young minds, a sense of ethics in the world. By making decisions about how we want to use technology, we place sensible limits on it because we have considered carefully its PLACE in curriculum and assigned it a socially constructive role in assisting the development of young minds and communities. Technology, like all scientific discoveries, presents an opportunity to communicate such ethics in a very broad way, and
democratically. This does not mean every child in every nation speaks English, as browsers translate for example. It is imperative that cultural differences in a globalised world are preserved and respected for what they bring to the human community.

In the classroom it could look as simple as this:

Whilst teaching Yr 9, many students of whom had missed much primary schooling due to childhood neglect, I was confronted by my need as an educator to engage these students in literacy practices, to assist them with an avenue for communication and find creative ways to provide for students, a moment of expression in a life that felt like a persistent cloud of familiar darkness for them. As many had not hand written for a long time, I had to devise colourful, kinaesthetic experiences for the students to collaborate over that also gave them opportunities to apply their learning as individuals, thus building their confidence to communicate; something stable in their lives, and achievement. In that situation I was fortunate, I was granted $50,000 and installed a state of the art computer lab, changed units of work, collaborated with staff to familiarise them with the new technology, which ultimately assisted students to engage in the world of literacy, beyond books and writing which they readily resisted. The behaviour of troubled students decreased as they began to write/type and illustrate narratives about their lives and their dreams of justice and democracy. They began to construct models of the world which then gave them opportunities to think about how they wanted to be in the world. This would not be so easy to achieve in the third world, or in Utopia, NT and what would have made it better if I could have wired my class up to a class in another country doing the same thing, so the students could connect across the globe and share their experience in a safe online community space. In this regard, the wealthy nations and schools have the potential to literally change the experiences of poorer nations and schools, through the use of technology. In this regard the issue of access to technology needs to be addressed globally and much of this battle needs to be fought politically given the violence occurring in so many nations filled with repressed people. We also need to address the energy we use to power technology in education institutions. The ways in which data is stored is not environmentally friendly, it's a disaster waiting to happen. The power we use to generate technology is further down the line and already a disaster. Should necessity always have to be the mother of invention? Or, could a desire to build a beautiful world, bring about these inventions, before alarm bells begin ringing?

Education must go on and be supported to do so, regardless of a nation’s political and economic situation, and in this regard, global civil community have a lot of power in their hands. This is about what Freire calls, “Education for Critical Consciousness”⁵. This is evidenced as increasingly, wealthier schools engage with initiatives in the third world, taking technology to the third world, teaching teachers and students how to use the technology and staying in contact!

How does this link to the role of the Arts and Sciences in curriculum? It is about enabling young people a context for learning which properly prepares them for the future, whatever career path, or civil role they take in life.

As you can see, then, the role the Arts and Sciences have in the interpretation of curriculum, is not just important, it’s profound. Software applications available to many students continually bridge a literacy gap between the Arts and Sciences as they engage in cross-curricular activities, enabling students forms of communication previously not possible. These forms of communication are new forms of literacy, and some institutions have better access to these literacy tools than others. Approaches to improving literacy standards for students, then, is not always about pedagogy in the classroom, but about the way that access to technology can be provided to students. As educators we are then in a better position to assist students to experience understanding and connection in the world through communication or ‘transference’ as Bourdieu would say. The student becomes a conscious participant and moulder of their environment and indeed a young citizen.

We see successful applications of technology through the implementation of online communications Learning Management Systems like Blackboard and Moodle in primary, secondary and tertiary institutions. Each system, the application of social constructivist theory, stemming from theorists such as Vygotsky’s pioneering work on ‘the zone of proximal development’. In the 1930’s, could he have imagined how his work has been appropriated today? His ‘zone’ now incorporates cyber space. Systems like Blackboard become not the centre for technological dependency, but rather a common language, collaborative tool for students and teachers; a very balanced approach to giving technology and its inherent literacies a role in curriculum that needs to reflect an ethical relationship between the Arts and Sciences. We can see this balanced approach to interpretation of how to implement technology in curriculum reflected for example in Victoria’s Principles of Learning and Teaching P-12 by the Government Schools Flagship Strategy (teachers) – which offers guidelines for teachers, and also in The Victorian Essential Learnings Standards, which offers guidelines for student objectives that teachers can work with. In such initiatives, there is flexible change to the interpretation of the relationship between the Arts and Sciences, and in Queensland for example, the junior science syllabus incorporates some of the history of science into its framework, but still there lacks the ethical relationship between the arts and sciences that I have referred to in this paper. National Curriculum objectives have the potential to fulfil the relationship between the Arts and Science across the country, a model we can offer to the world.

I have established that literacy no longer means the ability to read and write like before and will refrain from going into detail about further software programs, their application and capabilities. For now, it is important to establish

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that literacy is fluid and ever changing, as is technology, and such changes now need to reflect new awareness of the ethical relationship between the Arts and Sciences. However, there is always the ‘basics’, learning how to read and (hand) write in a particular native language, let alone a second language. Nowhere has this change been more apparent than in the media intensity on English curriculum across the nation. Sadly, much interpretation of Derrida’s theories is misleading, and as a result a culture of apathy toward his works has developed, and also, a fundamentalist-like following has ensued, a culture readily accepting misguided interpretations of his work without the basic premise of critique and actual reading of his primary texts has occurred. Many English teachers are not versed in the theories they stand to advocate. We must remember here, that his views on the text for Deconstruction are not those generally and presently applied in education institutions. His work derives from critical literacy movements of philosophy and theology which began in France and Germany last century and much later, a key aspect to his work, was to identify and contextualise theoretical movements attempting to describe the nature of writing and subject/object relations. This is more than just establishing the relationship between the author and the reader, and how that relationship impacts on the world and vice versa for example. Derrida was concerned with all of human history. Refraining from too much detail in this paper I will highlight his work as follows: In “Writing and Difference” Derrida on Edmond Jabes writes,

“A powerful and ancient root is exhumed, and on it is laid bare an ageless wound (for what Jabes teaches us is that roots speak, that words want to grow, and that poetic discourse takes root in a wound”).

Derrida refers to the love of the letter among other things, a point highlighted in Veling’s essay, Listening to “The Voices of the Pages and Combining the Letters” - “The Spiritual Practices and Reading and Writing”9, the idea that students and teachers engaging in texts together can be formative spiritually, and in this sense also, model for young people, a sense of social ethics. This process occurs no matter the medium of connection, and in this regard, no matter the technological medium – even though it can be said that nothing compares to face-to-face relations. In this context however, I refer to the global learning network. It is evident thus, that there was far more to Derrida’s work on Deconstruction, than has currently been applied in English curriculum. I refer here to spiritual and ethical influences in curriculum development and the demystification of language and learning that has occurred because of misguided interpretations of his work in English curriculum across the country, further compounded by the insurgence of technology into assessment requirements. The pendulum has swung too far one way and needs to steady itself against the findings of experience. The voice of experience calls for a measured role for technology, and a reverence for connecting with learning

and understanding. Has curriculum lost its heart and soul because the economy bullied it? Has economy made curriculum powerful instead of a medium for social justice?

**Australia – The National Agenda for Curriculum**

Given the above, it is clear that there is a context for modelling the use of technology in schools, and also, for modelling approaches to literacy today. Democracy and the importance of modelling pragmatically, a future for our nation, which ENABLES the citizens to continue to live in relative peace, is a valuable goal. Let us remember, however that when the government plans and drafts initiatives such as the “Quality Teacher Framework”\(^\text{10}\), that the intention is to bring greater valuing to our occupation, not to make life harder for us, by the implementation of empirical theory and economic rationalisms that limit our democratic freedoms to support community and family and live fulfilling lives beyond our vocations in Education Institutions. Civil society needs to do more to work with government. Teachers need support and continual development, just like any other member of society. Education policy, curriculum development needs to take into account ethics as well and this is my key point as regards the National Agenda for Curriculum, let the non-political mediate a democratic process. A process which accounts for an ethical relationship between the Arts and Sciences nation wide.

**State Autonomy, School Autonomy – Complications for Future Generations (Not just a pedagogical approach)**

Revisiting Derrida on Difference for a moment, and thinking about how the Adelaide Declaration on National Goals for Schooling in the 21st Century\(^\text{11}\) (and the Hobart Declaration\(^\text{12}\)) has impacted upon Federal Government policy in recent years, it makes sense that we need to retain autonomous, flexible creativity in our states and institutions. In recent months the Federalist Paper 213 “The Future of Schooling in Australia” has been published and reflected some of my points below, but it would be good to see that its content contained some of the art/science literacy issues raised in this paper. It is in this regard that:

- Separation of powers (states and territories/schools) is integral to the process of democracy.
- A framework IS necessary as a common language, which enables generations of youth, and educators more empowered participation in society.
- Australia can learn from models in other nations, NZ, UK and Canada for example and create a model to assist other nations.

\(^\text{10}\) Australian Government Quality Teaching Programme

\(^\text{11}\) The Adelaide Declaration on National Goals for Schooling in the 21st Century
• That politics need not interfere with learning, but rather teaches, as civil leaders, direct learning in negotiated collaboration with others and this is an area that requires greatest development NOW, as Federal and State initiatives make haste across the country. Such initiatives need to be represented in the media not as devaluing educators and education and increasing the regulation of education as an institution, but rather, raising the democratic profile of learning communities and giving educators opportunities for greater civic and democratic participation in the cultural enrichment of our nation. Such initiatives then are communicated broadly as not just a pedagogical approach to education, but rather such initiatives are about the way the occupation connects professionally with society. Such change is just as much about politicians and academics as it is about classroom teachers. Just as democracy models, teachers have voices of their own. After all, ‘The Quality Teaching Programme’ is about boosting the role of educators and how society values educators, and not undermining the social value of their work. This is about eliminating a sense of the top-down approach to education, formulating an outstanding national model with school and state autonomy and space for policy makers across states to discuss initiatives, relying on the collaborative experience of educators, to get the job done without having their hands tied by those above. Teachers also have civil links to parent communities whose voice is often silenced in the process of developing curriculum also. Australia is one nation fortunate enough to have an excellent body of parent representatives in each state to communicate proposed developments with. There is thus a role for civil community, educators and politicians in assisting the learning communities of the future. The structures are actually all in place, but need to work more specifically based on some of the issues I have raised in this paper. Technology and the relationship between the Arts and Sciences.

The Literacy Agenda – New Ways of Reading Literacy Today

There are thus changing forms of literacy today, and there is now an economic divide between suburbs and nations on levels of basic literacy and I have alluded to ways that educators can act to advocate curriculum development during the next century. Do we really want a nation that attributes economic value to particular knowledges? What about economic value attributed to understanding?

The classroom needs to be one of the safest environments in the world for young scholars to experience and experiment with their knowing, understanding and reflecting, becoming empowered developmentally to participate in the world with that same spirit of authenticity that was modelled for them in the classroom by the educator’s willingness to model integrity and experimentation with thinking/learning. The result of which for students, is a ‘critical incident’ when a student suddenly knows how to connect and communicate in an environment and ‘just does it’, whether, written, spoken, visual, etc. We must never forget the roots for textual analysis and critique; a history of philosophical and theological works outlined by Philosophers such as Paul Ricoeur, who wrote about the role that interpretation plays “From Text to
Action”12 Drawing on the works of many theorists, and listening to debates on English curriculum (the subject area most concerned with literacy issues as that area impacts upon all other areas in the school), there exists a philosophical framework for literacy learning, based on a fine scholastic tradition of language theory. What is required is a fuller understanding of these traditions, in lieu of our changing world and its heritage, not just an education-based understanding, yet another form of specialist knowledge that cannot offer full understanding. Democracy has also enabled curriculum design to incorporate differentiation like never before. It is important to retain some tradition and push forward to the future, with ethics always as the medium for action.

Where To From Here?

I have thus provided a theoretical reflection on a framework for technology integration in curriculum design, which assists educators to stabilise learning communities in a world of constant development and subsequent new literacies. By positioning the relationship between the Arts and Sciences in an ethical framework for curriculum delivery, the impact on technology and literacy teaching practice is potentially infinite. We can demonstrate a role for ethics (in this case civil action) in decision making, interpretation and understanding of curriculum design and delivery, collaboration and negotiation on a local and global scale. There are massive social consequences for applying a learning context as I have alluded to in this paper.

What will syllabi of the future look like?
What will the curriculum of our future look like?

We’ve already changed the way we communicate dramatically during the last 20 years and how can we ethically assist repressed peoples and nations to live a better quality of life? As a human collective we share a responsibility thus.

How we understand the relationship between the Arts and Sciences impacts upon the way we model the role of literacy and technology in curriculum. Using ethics as a model for technological integration raises issues of social justice, access for all and in turn, how can you give the repressed a lap top and not feed them and assist them better to survive?

We Could Be Role Models

We could be role models for the rest of the world if we explore the critical turn to the importance of an integrated understanding of teaching and learning the arts and sciences, using technology and literacy as a causal nexus for curriculum development. The driving force for such action is an ethics of responsibility for the other, a conscious building and shaping of the world for

13. Hobart Declaration on Schooling 1989
the benefit of future generations. The challenge is, how are we going to do it now? Not another book on models for curriculum development I hope.....Levinas would argue that it begins with the face to face and Dewey would argue to get pragmatic about democracy, Habermas would assist us to remember to stay open to the possibilities of communicative action. Using Dewey's model for action and remembering the role of ethics (in this sense, civil action), there are countless restorative and enriching possibilities for curriculum development during the next century.

This paper is an extract of my current academic pursuits which I have not yet broadly released.
References


Hobart Declaration on Schooling 1989

Australia Government Quality Teaching Programme

The Adelaide Declaration on National Goals for Schooling in the 21st Century

http://www.dpc.vic.gov.au/CA256D8000265E1A/page/ListingHome+Page+NewsThe+Future+of+Schooling+in+Australia+%E2%80%93+a+report+by+Australia%27s+States+and+Territories%21OpenDocument